



New product introductions  
from Avnet Abacus: Summer 2020

# NPI solutions

Welcome to the NPI brochure from Avnet Abacus, our round up of the latest product and technology innovations to enhance your design. Click on the pictures to view full product details and datasheets.

## Featured manufacturers



# AVNET<sup>®</sup> ABACUS

For more information about any of the new products featured here, contact one of our technical specialists in your local language at [avnet-abacus.eu/ask-an-expert](http://avnet-abacus.eu/ask-an-expert)

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## AMPHENOL ICC – BERGSTAK HS™ SERIES 0.50MM MEZZANINE CONNECTOR



[VIEW PRODUCT DETAILS](#) 

The Amphenol ICC BergStak HS™ 0.50mm connector is a flexible solution designed for high speed and high density, parallel board-to-board applications with various heights in different sizes. The BergStak HS™ 0.50mm connector series meets the 25Gb/s and 32Gb/s performance requirements

### Features and benefits

- Available in 50 positions
- Available in 12mm stack height
- 5mm and 8mm stack heights, and up to 120 pin configurations available upon request
- Housing and terminal profile optimised to 25Gb/s and 32Gb/s
- Supports high speed performance up to 32Gb/s
- Extension of standard BergStak® 0.50mm
- Supports higher speed applications from PCIe® gen. 3, PCIe® gen. 4 to PCIe® gen. 5
- Vertical versus vertical mating configuration
- Suitable for parallel board stacking applications
- 50 position sizes, 12mm stack height available
- Varying positions and height specification meets 25Gb/s and 32Gb/s requirements
- 0.50mm double-row contact pitch conserves printed circuit board space
- High density for all electrical applications needs
- Scoop-proof feature housings
- Prevents reverse mating
- Multiple plating options available
- Satisfies different application requirements
- Multiple packaging options available
- Suitable for various feeding processing
- PCB locator pegs
- Facilitates ease and accuracy during manual assembly
- RoHS compliant and lead-free
- Meets environmental, health and safety requirements

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## AMPHENOL ICC – BERGSTAK® 0.50MM SELF-ALIGNMENT BOARD-TO-BOARD CONNECTORS



[VIEW PRODUCT DETAILS](#) 

The Amphenol ICC FCI Basics BergStak® 0.50mm self-alignment connectors comes with a stack height of 3mm and 50 positions extendable across 20 to 60 positions in increments of 10. It has a unique self-alignment feature that supports blind mating

### Features and benefits

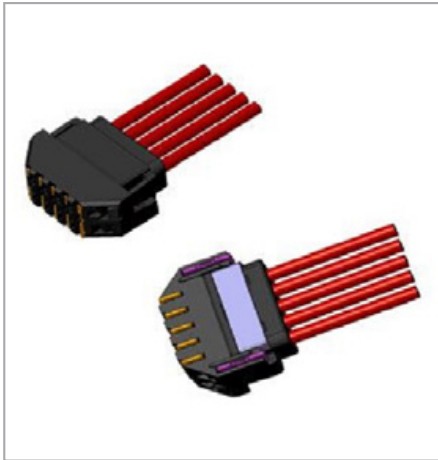
- 0.50mm pitch
- Self-alignment feature
- Housing with drainage feature
- 0.50mm double row contact
- High density connector
- 20 to 60 positions in increments of 10
- Application flexibility
- Self-alignment feature
- Supports blind mating
- Housing with drainage feature
- Can be exposed to wash process after installation
- Scoop-proof housings
- Ensures terminals are not damaged during mating
- Supports speed performance up to 5Gb/s
- Meets PCIe® gen. 2 standards
- RoHS compliant, halogen and lead free
- Meets health, safety and environment requirements

### Applications

- Automotive camera
- 5G AAU
- Home automation IoT devices
- Factory automation camera embedded computer

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## AMPHENOL ICC - CROSS-MATE™ WIRE-TO-BOARD CONNECTOR SYSTEM



[VIEW PRODUCT DETAILS](#) 

The Amphenol ICC Cross-Mate™ series is a wire-to-board system that offers compact design and active latching for applications requiring good mating retention. The particular cross section of the mating area guarantees a reliable 4 point contact interface with an improved current rating up to 2A per contacts. The Terminal-Position-Assurance (TPA) guarantees that the contact is properly mounted into the cable housings eliminating functional problems due to wrong connector assembly. The Cross-Mate™ series is available in 2 to 12 positions per row with horizontal configurations.

### Features and benefits

- Active latch
- 4 point contacts
- Terminal-Position-Assurance (TPA)
- Active latch
- Reliable connection with board connectors with strong retention
- Current rating up to 2A per contact
- Meets higher power Amps performance
- Eliminate mistake of wrong contact assembly into cable housing
- High reliability even in harsh environments
- Touch-proof featured
- Protect operator from touching powered contact

- Multiple header configurations (vertical and right angle)
- Flexibility in application and design

### Applications

- Consumers
- Industrial and instrumentation
- Medical
- Automotive

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## AMPHENOL ICC - D09S70S6PX00LF SERIES D-SUB PART CONNECTOR



[VIEW PRODUCT DETAILS](#) 

The Amphenol ICC D09S70S6PX00LF series is a D-sub SMT input output connector that features right angle surface mount termination and UNC 4-40 threaded insert.

### Features and benefits

- Comes with five shell size and housing design
- Most popular rugged and sturdy I/O connector
- Has a D-shaped shell design
- Supports the need for polarisation
- Meets DIN 41652 and MIL-C-24308 dimensional standards
- Interchangeable and intermateable with other brands of D-sub connectors
- Uses machined as well as stamped contacts
- Suitable for signal and high-end applications
- High density D-sub connectors can accommodate more number of contacts in the basic shell sizes
- Answer to the increasing need for higher density packaging
- Power connectors available in both full and mixed layout for PCB and cable applications

## AMPHENOL ICC - ECONOSTIK™ 2.54MM HEADERS



[VIEW PRODUCT DETAILS](#) 

The Amphenol ICC EconoStik™ 2.54mm is an economical range of 2.54mm unshrouded headers. It is available in single-row and double-row with vertical through-hole, right-angle through-hole, and vertical SMT terminations. EconoStik™ 2.54mm is a standard 0.64mm square header with high-temperature resin and 1µ" gold plating in contact and tail. It supports up to 50 mating cycles. Suitable for mid-end applications, EconoStik™ 2.54mm can be used in various board-to-board applications such as industrial control, test equipment, metering, POS machines, set-top box, surveillance equipment and vending machines.

### Features and benefits

- 0.64mm square headers
- Consistent and better mating performance with different types of receptacle
- High-temperature plastic
- Reflow compatible
- 1µ" gold contact plating and tested to 50 mating cycles
- Economical option
- Customised mating and tail lengths
- Custom polarisation available

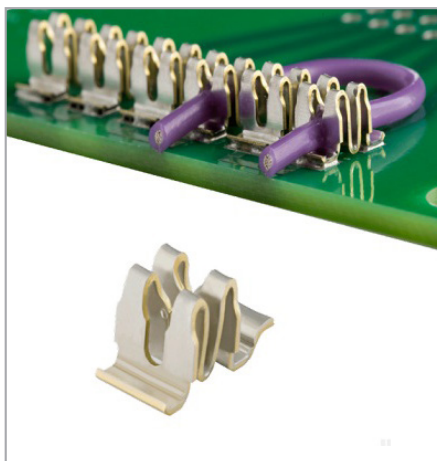
- RoHS compliant and lead-free
- Meets environmental, health and safety requirements

### Applications

- Consumer

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## AMPHENOL ICC - GRIPLET® MINIATURE IDC CONNECTOR



[VIEW PRODUCT DETAILS](#) 

The Amphenol ICC Griplet® miniature IDC connector offers a robust solution for miniature IDC wire-to-board connections. Its low profile and compact design makes Griplet® an ideal connector where space is tight and ease of installation is important. Four points of wire contact plus strain relief ensures highly reliable connection when wire is applied and insulated directly to a PCB, to maximise cost efficiency.

### Features and benefits

- Accommodates multiple wire sizes from 30AWG to 16AWG
- Comprehensive solution for all application needs
- Four points of wire contact
- Ensures highly reliable connection
- Enables harsh and industrial market applications with direct connection between individual wires and PCB
- Accommodates multiple wire sizes
- Reduced total applied cost compared to solder or crimp processes
- Post applied insulative housings
- Custom-made housing for automatic pick and place

- Multiple terminal delivery options:
  - > On reel/continuous strip
  - > Stitched on pitch within disposable pick and place carrier
- Automated application
- Customisable pitch

### Applications

- Industrial and instrumentation
- Automotive

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## AMPHENOL ICC - MINITEK® PWR 5.7 CONNECTOR SYSTEM



[VIEW PRODUCT DETAILS](#) 

The Amphenol ICC Minitex® Pwr 5.7 is a flexible and comprehensive solution for power application with a high current rating up to 23A per contact and wire gauge range from 16AWG to 12AWG for wire-to-board application. Minitex® Pwr 5.7 features polarised mating geometry, this helps to prevent mismating. It offers a wide operating temperature, ranging -40°C to +105°C, making it suitable for a wide range of applications. The scoop-proof housing prevents terminals from damage.

### Features and benefits

- 5.7mm pitch power contacts
- High current rating up to 23A per contact
- Solutions for wire-to-board applications
- 2.54mm and 5.08mm pitch
- High temperature compatibility
- Selective contact loading option
- FMLB and LMEB contacts
- Various termination types available
- NFF 16-101/102 and EN45545-2 certified
- Rear plug up option
- Wide range of accessories available
- Adequate spacing for routing PCB trace
- Facilitates custom loading
- Reliability and no arcing damage on contact resting position

- Grounding option
- Flexible PCB mounting options
- Suitable for railway applications
- Extended mating applications via shroud on rear side of PCB
- Enhances connector suitability and flexibility

### Applications

- Communications
- Data
- Consumers
- Industrial and instrumentation
- Military

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## AMPHENOL SV MICROWAVE - HIGH FREQUENCY ADAPTERS



[VIEW PRODUCT DETAILS](#) 

The Amphenol SV Microwave newest additions of high speed RF adapters (40+ GHz) are ideal for testing applications where the utmost precision and accuracy is key. Current interface configurations include our high frequency SMPM, SMPS, 2.92mm, 2.4mm and 1.85mm series.

### Features and benefits

- Excellent performance DC to 65GHz
- Air dielectric; captivated center contact
- Ruggedised construction for repeatability and reliability

### Applications

- Instrumentation
- Military/aerospace
- Satellite Communication Equipment (SATCOM)
- Cable assemblies
- Test and measurement

## HARWIN - GECKO-MT 1.25MM PITCH MIXED LAYOUT CONNECTORS



[VIEW PRODUCT DETAILS](#) 

The Harwin GECKO-MT range combines the 1.25mm pitch GECKO signal connector system with mixed technology layouts, adding 10A power contacts to the range. The smallest and lightest mixed-layout connector available for high-performance applications, GECKO is the ideal choice when SWaP matters most. Featuring cable-to-board, board-to-board and cable-to-cable options, the initial launch includes pin-layouts of 1+8+1 or 2+8+2 contact configurations. Stainless steel jackscrews are available in both standard or reverse-fix, ensuring secure connection, and lightweight metal hoods give additional cable protection and shielding.

### Features and benefits

- 2A per contact (all electrically loaded; 2.8A per individual contact)
- 4-finger patented contact design to maintain electrical contact through high vibration and shock
- Beryllium copper contact for improved temperature range: -65°C to +150°C
- 1,000 mating cycles durability
- Weight and space saving over micro-D connector products

### Applications

- PCB mount connectors
- Cable mount connectors
- Pre-crimped contacts

## HARWIN - S0911/12-46R SERIES EMC/RFI BOARD LEVEL SHIELDING CLIPS AND CANS



[VIEW PRODUCT DETAILS](#) 

The Harwin shield can and clip range is based on the concept of fast assembly and component protection. Designed for use within an existing SMT circuit board layout, these products are a simple and cost-effective method of shielding vulnerable or EMI-radiating board components. By using a push-action, the removable shield can is held in place with SMT-mounted spring clips, so no additional secondary soldering operation is required. All soldering takes place on the clip, at the same time as the rest of the PCB components. This eliminates the risk of heat damage and hot spots (caused by hand soldering) affecting the more expensive components located under the can. The devices under the can are also now accessible at any time, by simply pulling out the can from the clips. Rework and module replacement can be completed, and the can is simply pushed back into place again. Shield cans are available in three different material thicknesses (0.3mm, 0.2mm and 0.15mm) to assist matching to different EMI/RFI characteristics. Clips are supplied in a variety of shapes and sizes for added design flexibility.

### Features and benefits

- No soldering required for can assembly
- SMT clips supplied on tape and reel
- Fast and simple push-fit with SMT clips
- Easy to remove in a single action
- Re-usable can once removed
- Choice of material thicknesses
- Ready-made can sizes and clips available from stock

### Applications

- Energy
- Telecommunications
- Industrial
- Motorsport
- Space
- Aviation, defence and security



## HIROSE - FX27 SERIES HIGH-SPEED TRANSMISSION FLOATING CARD EDGE CONNECTOR



[VIEW PRODUCT DETAILS](#) 

The Hirose, FX27 series of floating card edge connector supports applications requiring PCI express gen. 1 (2.5Gbps) high-speed transmissions. The structure of the FX27 series features a flexible stacking height, dependent on the interposer PCB length. By using an interposer, a stacking height of 22mm (minimum) can be achieved. In addition, a wide self-alignment guide range of  $\pm 0.7\text{mm}$  allows for easy mating in X and Y directions.

### Features and benefits

- Contact positions: 40, 60, 80, 100, 120
- Pitch: 0.8mm
- Rated current: 0.5A/contact
- Rated voltage: 100VAC/141VDC
- Stacking height: 22mm min.
- Operating temperature:  $-55^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$
- Floating rating: 0.6mm max. in X and Y directions
- High-speed transmission: 2.5Gbps (PCIe-gen. 1)

- Customisable interposer PCB
- Pick and place mounting (suction tape attached as standard)
- RoHS complaint

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## HIROSE - FH52K SERIES



[VIEW PRODUCT DETAILS](#) 

The Hirose FH52K series satisfies the needs of severe automotive requirements. The connector can withstand higher operating temperatures than the standard FFC/FPC connectors, with a temperature range of up to  $+125^{\circ}\text{C}$  compared to the FH52 series.

### Features and benefits

- $+125^{\circ}\text{C}$  heat resistant connector to satisfy automotive requirements
- Robust lock structure with unique contact design
- Increased FPC/FFC retention force with tabs
- Easy visual inspection and enhanced PCB retention force with L-shaped metal fittings
- Board area under the connector is available for PCB patterning
- Compatible with automatic mounting
- RoHS compliant, halogen-free product

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## HIROSE - IX INDUSTRIAL™ SERIES ROBUST COMPACT AND HIGH-SPEED I/O CONNECTORS



[VIEW PRODUCT DETAILS](#) 

Hirose's ix Industrial™ series of connectors is ideal for space-constrained industrial applications requiring high-speed signal transmission up to 10Gbps. The connector series reduces installation space by up to 75% compared to RJ45 solutions. Supporting CAT5e (1Gbps) and CAT6A (10Gbps) cabling, the ix Industrial™ series I/O connector features an optimised EMI/ESD shielding design for safe and secure data transmission up to 10Gbps.

### Features and benefits

- Number of contacts: 10
- Current rating: 1.5A (all pins)/3A (pin no.1, 2, 6 and 7 only)
- Voltage rating: 50VAC/60VDC
- Mating cycles: 5,000
- RoHS compliant
- Operating temperature: -40°C to +85°C

### Applications

- Factory automation controllers
- Servo amplifiers
- Industrial robotics
- Servers
- Programmable logic controllers
- Security systems

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## MOLEX - 105411, 105417, 105418 SERIES MEGA-FIT WIRE-TO-WIRE, DUAL-ROW POWER CONNECTORS



[VIEW PRODUCT DETAILS](#) 

The Molex Mega-Fit power connectors deliver 25A per circuit through fully protected header pins and receptacle terminals while offering unique keying options to ensure proper mating during termination.

### Features and benefits

- Power-dense design with high-current terminals, tight pitch and row spacing
- Positive locking housing
- Tin-plated contacts available
- Sacrificial contacts
- Fully isolated header pins and receptacle terminals
- Tangless terminal design
- Terminal interface with six independent points of contact (split-box terminal design)
- Polarisation peg to engage with PCB

### Applications

- Home appliance
- Telecommunication/networking
- Industrial
- Commercial vehicle

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## MOLEX - 171692, 200456, 105415, 76823 SERIES MEGA-FIT TPA POWER CONNECTORS



[VIEW PRODUCT DETAILS](#) 

Molex Mega-Fit power connectors deliver 25A per circuit through fully protected header pins and receptacle terminals while offering unique keying options to ensure proper mating during termination.

### Features and benefits

- Power-dense design with high-current terminals, tight pitch and row spacing
- Positive locking housing
- Tin-plated contacts available
- Sacrificial contacts
- Tangless terminal design
- Terminal interface with six independent points of contact (split-box terminal design)
- Polarisation peg to engage with PCB

### Applications

- Home appliance
- Telecommunications/networking
- Industrial
- Commercial vehicle

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## MOLEX - 200241 SERIES SINGLE-ROW MEGA-FIT POWER CONNECTORS



[VIEW PRODUCT DETAILS](#) 

Molex Mega-Fit power connectors deliver 25A per circuit through fully protected header pins and receptacle terminals while offering unique keying options to ensure proper mating during termination.

### Features and benefits

- Power-dense design with high-current terminals, tight pitch and row spacing
- Positive locking housing
- Tin-plated contacts available
- Sacrificial contacts
- Fully isolated header pins and receptacle terminals
- Tangless terminal design
- Terminal interface with six independent points of contact (split-box terminal design)
- Polarisation peg to engage with PCB

### Applications

- Home appliance
- Telecommunication/networking
- Industrial
- Commercial vehicle

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## MOLEX - 200277, 201444, 201447 SERIES NANO-FIT POWER CONNECTORS



[VIEW PRODUCT DETAILS](#) 

Molex Nano-Fit power connectors deliver both fully protected header terminals and a small package, while also offering keying options to ensure proper mating and Terminal Position Assurance (TPA) retainers to prevent terminal backout.

### Features and benefits

- Smallest fully isolated headers in the market
- Multiple mechanical keying and color-coded options
- Optional TPA (Terminal Position Assurance) retainer
- Terminals available in gold and tin plating
- Retention tang and contact rib
- Terminal interface with 4 points of contact
- Ultra-low mate force terminal
- Positive-lock housing with anti-snap design
- Fully isolated terminals

### Applications

- Consumer/home appliance
- Telecommunications/networking
- Automotive
- Lighting
- Aerospace and defense
- Industrial
- Medical

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## MOLEX - 204608, 211888, 211937, 211942 SERIES COEUR CST HIGH-CURRENT SYSTEM



[VIEW PRODUCT DETAILS](#) 

The Molex Coeur CST high-current interconnect system delivers up to 200A of current through 3 diameter sizes (3.40mm, 6mm and 8mm) and offers a wide range of configurations, connecting PCBs, busbars and cables.

### Features and benefits

- Capable of 30A to above 200A current rating
- Multiple contact beams
- Provides the same profile height even when the number of contacts varies
- One common contact design in all CST sockets regardless of form factor sizes
- Float mechanism allowing for 1mm of float
- Previous housing features available
- Terminal retention housings
- 1/0 AWG crimp contacts for 8mm form factor
- Fully shrouded female and male contacts
- Male pin has minimal protrusion above the socket housing when mated
- Pick-and-place cap on SMT sockets

### Applications

- Data/computing
- Telecommunications/networking
- Industrial
- Data storage

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## MOLEX - 36922 SERIES OFF-THE-SHELF (OTS) DITTO DISCRETE WIRE CABLE ASSEMBLIES



[VIEW PRODUCT DETAILS](#) 

Molex OTS Ditto discrete wire cable assemblies are available in a variety of circuits and cable lengths to facilitate both prototyping and global preproduction.

### Features and benefits

- Positive dual lock
- V-0/glow wire combination resin
- UL 1061 discrete wires for cable assemblies
- Meets 2015/863/EU RoHS compliance
- Reflow options available
- Pin-to-pin mapping from receptacle to PCB header
- Custom assemblies for production also available
- TPA
- Assembled in ISO/TS16949-certified facilities
- OTS Ditto discrete wire cable assemblies deliver 4.2A to 5A with a 3mm pitch (positive lock)

### Applications

- Consumer
- Automotive

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## MOLEX - 36924 SERIES OFF-THE-SHELF (OTS) MINI-FIT SR. DISCRETE WIRE CABLE ASSEMBLIES



[VIEW PRODUCT DETAILS](#) 

Molex OTS Mini-Fit Sr. discrete wire cable assemblies are available in a variety of circuits and cable lengths to facilitate both prototyping and global preproduction.

### Features and benefits

- Terminal Position Assurance (TPA) retainer required on housings
- Dual-beam (female) terminal design
- Silver-plated contacts offer significant cost-savings over gold-plated systems. Avoid the need to manually lubricate
- High amperage (46A to 50A) isolated contacts mitigate fretting corrosion

### Applications

- Consumer
- Networking
- Medical
- Commercial vehicle
- Industrial

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## MOLEX - 43030, 43031 SERIES MICRO-FIT 18AWG GOLD-PLATED TERMINALS



[VIEW PRODUCT DETAILS](#) 

Molex Micro-Fit gold-plated terminals combine high performance with premium housing features to ensure reliable connectivity. The Micro-Fit 3.0 connector system provides an unrivaled range of options to overcome any engineering challenge.

### Features and benefits

- Fitting nails and solderable clips available
- SMT, press-fit or surface mount compatible versions available
- High-temperature LCP headers
- Fully polarised housings
- Positive latching
- Fully isolated terminals
- Optional Terminal Position Assurance (TPA) feature
- TPA terminals and terminals with locking tangs available
- 30AWG to 18AWG terminals available
- Blind-mating wire-to-wire and wire-to-board connectors
- Uses eye-of-the-needle press-fit design
- Accepts standard Micro-Fit female and male crimp terminals

- Self-aligning feature molded into housings
- Reduction in engagement and disengagement forces
- Available in 22AWG to 24AWG and 26AWG to 30AWG
- 10A RMF terminal available
- Available with factory-applied lubricant

### Applications

- Consumer
- Telecommunications/networking
- Medical
- Sustainable energy
- Automotive

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## MOLEX - 79540 SERIES DUAL-PORT USB-A AND USB-C SMART CHARGER



[VIEW PRODUCT DETAILS](#) 

Molex USB smart-charge modules lead the market by combining automotive-grade durability and off-the-shelf availability through distribution.

### Features and benefits

- Electric performance
- Modern features
- Quality connector styles
- Safety protection
- Charging profiles supported

### Applications

- Commercial vehicle
  - > Construction equipment
  - > Farm equipment
  - > Trains
  - > Aeroplanes
- Automotive
  - > Cars
  - > Pickup trucks
  - > SUVs

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# Connectors

## MOLEX - 79758 SERIES MICRO-LOCK PLUS WIRE-TO-BOARD CONNECTOR SYSTEM



[VIEW PRODUCT DETAILS](#) 

The Molex 79758 series is the smallest wire-to-board 'potting' connector with 3mm high potting material to safeguard contact and latch areas in applications requiring environmental protection.

### Features and benefits

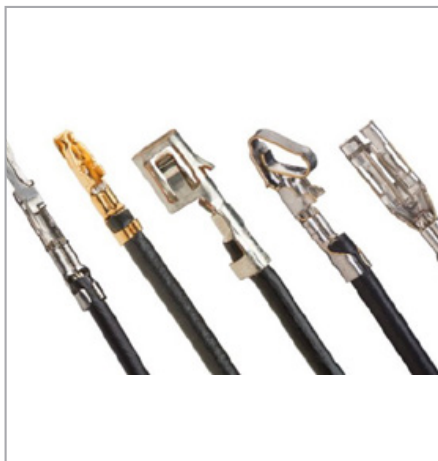
- Withstands up to +105°C operating temperatures
- Tin-Bismuth terminals
- Smallest 1.25mm-pitch vertical header with positive lock and potting capability
- Added walls to protect positive lock from being immersed in potting material
- Positive lock immersed in potting material
- Prevents ingress of dust and moisture
- Robust metal solder tabs
- Wide positive latch that delivers audible click
- Robust metal solder tabs

### Applications

- Industrial
- Consumer

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## MOLEX - 79758 SERIES PRE-CRIMPED LEADS



[VIEW PRODUCT DETAILS](#) 

The Molex range of pre-crimped leads offers a simple, cost-effective solution for pre-production and prototype requirements. These leads are offered in female-to-female and male-to-male configurations in lengths of 150mm and 300mm.

### Features and benefits

- Pre-crimped and fully tested cables
- Available in 150mm and 300mm lengths
- Leads crimped on both ends
- UL listed cables
- Available for most popular Molex families
- Decrease time to market
- Works well for all prototype and pre-production requirements
- Allows for wire-to-wire applications and when cut in half, wire-to-board applications
- Assures high-quality approved materials
- Helps customers choose the right connector before investing in application tooling

### Applications

- Wire-to-wire applications

[BUY NOW](#) 

# Connectors

## MOLEX - CLIK-MATE CONNECTOR SYSTEM GOLD-PLATED VERSIONS



The Molex rugged CLIK-Mate wire-to-board system provides secure electrical contact, low insertion force and mating assurance in a wide variety of configurations, circuit sizes and current options.

### Features and benefits

- Dual in-line package with surface-mount technology
- Single/dual row, vertical/horizontal configurations and tin/gold plating with multiple color options
- Dual inner positive locks
- Click sound and feeling when mated
- Tuning-fork style contact design
- Bottom-entry mounting version

### Applications

- Consumer
- Automotive
- Lighting
- Industrial
- Medical

[VIEW PRODUCT DETAILS](#) 

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## MOLEX - HDMI TYPE-A CONNECTORS



The Molex compact HDMI type-A connectors feature up to 48Gbps bandwidth with 8K resolution display and various configurations, offering design flexibility to consumer, industrial and medical customers.

### Features and benefits

- Supports 8K resolution display
- Up to 48Gbps bandwidth
- Mylar surface
- 0.75 $\mu$ m gold plating thickness
- Insert mold process design
- Flange option
- Available in different lead lengths
- Compatible with HDMI v1.4 and v2.1
- Fully shielded design
- 10,000 mating cycles
- Friction lock

### Applications

- Consumer
- Industrial
- Medical
- Connected home

[VIEW PRODUCT DETAILS](#) 

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# Connectors

## MOLEX - MINI-FIT SIGMA



[VIEW PRODUCT DETAILS](#) 

The Molex Mini-Fit connector family delivers up to 13A, while blind-mating and terminal position assurance options provide a versatile connector system for a wide range of applications.

### Features and benefits

- Fully isolated terminals
- Polarised mating geometry
- Receptacles and plugs accept both standard Mini-Fit and Mini-Fit plug crimp terminals
- Positive locking housings
- Prevents crimp terminals from accidental unmating produced
- Terminals feature a patented, elongated dimple design
- Select series offer up to 1,500 mating cycles with gold terminals; standard series support 100 mating cycles with gold-plated terminals; 75 mating cycles with tin-plated terminals
- Self-aligning interface
- Backshell option available

- Terminal Position Assurance (TPA) with secondary locking feature

### Applications

- Automotive
- Commercial vehicle
- Consumer
- Data/communications
- Home appliance
- Industrial
- Industrial automation
- Medical

[BUY NOW](#) 

## MOLEX - OTS MULTICAT DISCRETE CABLE ASSEMBLIES



[VIEW PRODUCT DETAILS](#) 

Molex OTS MultiCat discrete cable assemblies with precision-machined contacts deliver high power, superior durability and proper connection via Connector Position Assurance (CPA), making them effective in multiple industry categories.

### Features and benefits

- 2-piece hermaphroditic backshell
- UL10669 discrete wires
- Manual mating/unmating
- Mating cycles: at least 500
- MultiCat cable assembly delivers a 16A to 40A current rating with Connector Position Assurance (CPA) in a small package
- Assembled in ISO/TS16949- certified facilities
- Meets 2011/65/EU RoHS compliance
- Solid mass contact

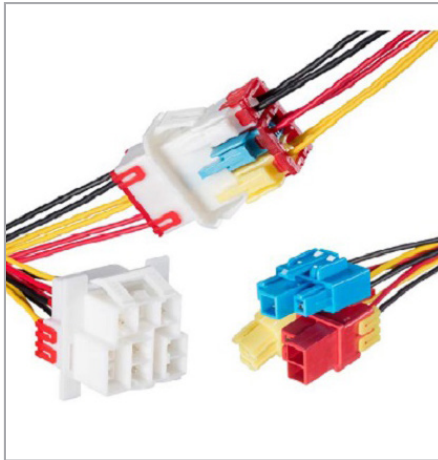
### Applications

- Aerospace and defence
- Commercial aircraft cabins
- Industrial automation
- Medical
- Telecommunications

[BUY NOW](#) 

# Connectors

## MOLEX - VERSABLADE WIRE-TO-WIRE CONNECTOR SYSTEM



[VIEW PRODUCT DETAILS](#) 

The Molex VersaBlade wire-to-wire connector system enables reliable signal and power transmission at 300V and 15A with superior mating reliability, polarisation and easy harness assembly.

### Features and benefits

- Polarised housing and terminal dimple
- Glow-wire-capable housing (optional)
- Wide, flat-blade tab terminals
- Variety of Terminal Position Assurance (TPA) types
- Housing lance: plastic hook captures the hole on terminal
- Friction and positive lock
- Multi-branched wiring capabilities
- Snap-in mounting ears (optional)
- Dual-row system
- Terminals can be crimped with two wires

### Applications

- Consumer/home appliance
- Data/computing
- Medical

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## TE CONNECTIVITY - M12 X-CODE FIELD INSTALLABLE CABLE PLUG



[VIEW PRODUCT DETAILS](#) 

TE Connectivity's M12 X-code FI connector is easy to install in the field without the chance of dropping parts into places where they can not be recovered from. The cable leads can be stripped at arbitrary length (so no measuring upfront required) and will be terminated for optimal performance by the TE patented lever technology combined with the automatic wire cut off function integrated in the connector. This unique standardised tool-less connector series enables you to reduce assembly time to the cable and cable braid.

### Features and benefits

- Insulation Displacement Contacts (IDC)
- Automatic wire cut-off function integrated in connector
- Speed up to 10GB/s
- Fast, error-free installation because of reliable IDC contacts, automatic wire cut-off function integrated in the connector and tool-less installation.

### Applications

- PLC
- Servo drive
- Industrial Ethernet switches
- Industrial wireless access points
- Industrial machinery
- Robotics

## TE CONNECTIVITY - SFP56 SERIES ZSFP+ STACKED INTERCONNECTS



[VIEW PRODUCT DETAILS](#) 

TE Connectivity's zSFP+ stacked interconnects are designed to transfer data rates at up to 56Gbps PAM-4 while offering high faceplate density for hyperscale data centers and networking switch applications. The stacked portfolio can accommodate 3 row belly-to-belly applications for increased density and maximum PCB space savings.

### Features and benefits

- Each of the products in TE's SFP portfolio of I/O interconnects is designed to transfer data at speeds of up to 28Gbps NRZ and 56Gbps PAM-4 signal
- The stacked portfolio can accommodate 3 row belly-to-belly applications for increased density and maximum PCB space savings
- Shares the same mating interface and cage dimensions with the entire SFP28 portfolio
- Allows for a simple upgrade path from 28Gbps to 56Gbps applications
- Enhanced airflow cage design can provide great thermal performance and can be customised to address customer's LED light pipe requirements

### Applications

- Switch
- Server
- Router
- Storage
- Test equipment



## AAVID - M45 SERIES MAX CLIP BOARD LEVEL COOLING



[VIEW PRODUCT DETAILS](#) 

Aavid Max Clip standard heat sinks are designed to be a labour saving option for board level cooling. Max Clip heat sinks work with multiple devices and can be customised for specific applications.

### Features and benefits

- Easy to customise resulting in eligibility for design registration
- Many other tooled extrusion profiles available in addition to this initial offering
- Solder pins for robust attachment
- Reduced assembly time (no drilling or tapping)
- Superior thermal contact using clip force (device to sink)
- Many clip options available for a variety of device sizes
- Dual-sided mounting/multiple device attachment options
- Integrated clip designed into heat sink eliminating need for mounting hardware

## C&K - ILS SERIES INTEGRATED LED TACT SWITCH



[VIEW PRODUCT DETAILS](#) 

The C&K ILS range of illuminated tact is available in different heights and features an integrated LED in the THT soldering leads.

### Features and benefits

- 6mm to 7mm square form factor
- 3 different heights (7mm, 7.2mm, 8.5mm)
- Integrated LED (choice of 5 colors: green, blue, red, white, yellow green)
- 180gf and 250gf actuation force
- Life cycles of 100K cycles

### Applications

- ID scanners
- Video broadcast systems
- Servers (clouds, AI, crypto currency mining)
- Software defined radios receivers
- Guitar effect pedals
- Portable diagnostic devices
- Health monitoring devices

## C&K - KSC-OF SERIES OVERLOAD FRIENDLY TACT SWITCHES



[VIEW PRODUCT DETAILS](#) 

The C&K KSC-OF is a KSC configuration with J leads, a soft actuator and a raised cage, where customers can use the top of that cage as the mechanical stop for its interface.

### Features and benefits

- Life cycles of 300K cycles at 20N
- Increased overload value of 200N one time
- 6.2mm x 6.2mm square form factor
- Soft actuator
- 1.65N and 4N
- IP67
- 5.1mm height

### Applications

- Industrial
- Consumer
- Medical
- Automotive

## C&K - RTF SERIES 7.2MM CODED ROTARY DIP SWITCH



[VIEW PRODUCT DETAILS](#) 

The C&K RTF series offers the most compact 7.2mm x 7.2mm low profile rotary DIP switches, available with different actuators and different terminations. Rated IP67.

### Features and benefits

- Most ultra compact footprint rotary DIP in the market at 7.2mm x 7.2mm
- Many options available, giving customers more choice for easy design in (4 designs of actuators and 5 designs of terminations)
- IP67 which is suitable for any water-resistant application
- Stainless steel cover provides solid structure and robustness
- RoHS compatible and compliant
- Available in tube or tape and reel giving flexibility to customer's production needs

### Applications

- Industrial automation
- Server and telecommunications
- Consumer headsets
- Banking ATMs
- Retailers POS
- Fire alarms
- Smoke detectors
- ELCB

## C&K - TF3 SERIES MINIATURE SNAP-ACTING SWITCHES



[VIEW PRODUCT DETAILS](#) 

C&K's TF3 miniature snap-acting switches (full disconnection – gap >3mm) are an extension of its snap switch range. With the larger disconnection gap, they are suitable for high power amperage applications while providing necessary safety.

### Features and benefits

- SPST NO contact configuration in a compact body size; ideal for space saving or restricted space applications
- Ideally suited for high power applications (up to 25A) with full disconnection gap >3mm
- Fully enclosed, ensuring safety is fulfilled in high electrical rating applications
- Available in pin plunger and lever versions making integration into customer designs easier
- Qualified to the most updated UL61058-1 certification

- RoHS compatible and compliant

- Direct compatibility with competitors like crouzet and ZF

### Applications

- High power tools: lawn mowers, leaves blowers
- HVAC applications: chillers, air handling units
- Factory automation: robotics

## FUJITSU - FTR-K5 SERIES AUTOMOTIVE RELAYS



[VIEW PRODUCT DETAILS](#) 

The Fujitsu FTR-K5 relay is the second in a range of EV (Electrical Vehicles) and PHV (Plug-in Hybrid Vehicles) components that Fujitsu Components is currently developing for its e-mobility customers. Among them are manufacturers of e-cars, e-trucks, e-boats, and other heavy-duty e-vehicles. Fujitsu's first automotive grade e-mobility relay for charging applications was the FTR-K1 - a 3.3kW relay suitable for 16A and 250VAC - which was released in 2017. The FTR-K5 version extends the range to 6.6kW or 32A at 250VAC, cutting charging times in half by doubling the load specifications.

### Features and benefits

- 1 pole 40A, 1a contact
- 32A 250VAC switching which corresponds 6.6kW standard charger
- 40A continuous power supply
- Vibration resistance and shock resistance meet automotive relay specification standards
- Operable at up to +105°C ambient temperature
- High temperature:
  - > between coil and contact creepage distance 8.8mm (conform to IEC61810-1 277 enhanced insulation)
  - > between coil and contact withstand voltage 5000VAC

- Selectable from flux free and plastic sealed plastic parts: UL flammability 94V-0Through hole

### Applications

- EV/PHV on-board charger (standard charger AC line)

## OMRON - G3VM SERIES DIP4 HIGH CURRENT TYPES



[VIEW PRODUCT DETAILS](#) 

The Omron G3VM series is DIP4 high current types. The G3VM series MOSFET relays in DIP 4-pin packages that achieve the low ON resistance and high switching capacity of a mechanical relay.

### Features and benefits

- Load voltage: 20V, 30V, 40V, 60V, 100V, or 200V
- 20-V relay: continuous load current of 3A max.
- 30-V relay: continuous load current of 4A max.
- 40-V relay: continuous load current of 2.5A max.
- 60-V relay: continuous load current of 3A max.
- 100-V relay: continuous load current of 2A max.
- 200-V relay: continuous load current of 0.7A max.

### Applications

- Communication equipment
- Test and measurement equipment
- Security equipment
- Industrial equipment
- Power circuit

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## OMRON - G3VM-21MT SERIES MOSFET RELAYS



[VIEW PRODUCT DETAILS](#) 

The Omron G3VM-21MT series MOSFET relays in module package with very low leakage current.

- Contribute to reduce the mounting space on the print circuit board by small package
- Current leakage when the main line is open and sub line is close: 1pA (maximum) at VOFF= 20V
- Contact form: 1a (SPST-NO) + T-switch function
- Surface-mounting

### Applications

- Semiconductor test equipment

## OMRON – G7EB SERIES AC480V/100A HIGH POWER PCB RELAYS



[VIEW PRODUCT DETAILS](#) 

The Omron G7EB series is AC480V/100A high power PCB relays. The series are high power and high temperature type power relay with 480VAC 100A current.

### Features and benefits

- 480VAC/100A high current switching capable
- Ambient temperature +85°C
- High impulse withstand voltage, 10kV
- Contact gap  $\geq 3.6$ mm (applied to VDE0126)
- Low initial contact resistance  $\geq 5$ m $\Omega$

### Applications

- Power conditioner inverter
- Industrial inverter
- UPS

## PANASONIC ELECTRIC WORKS – SFM SERIES 2POLE SAFETY RELAYS



[VIEW PRODUCT DETAILS](#) 

The Panasonic Electric Works SFM offers power contacts on both NO (6A) and NC (4A) side to control loads like valves directly without another relay in between. Contrarywise, the silver alloy contacts can handle low level loads down to 10V 1mA as well to support e.g. signaling boards in the railway sector. A very high shock and vibration resistance  $\geq 20$ g, low coil holding power of 100mW, an ambient temperature range from -40°C to +85°C and reinforced insulation  $\geq 5.5$ mm (V= 230V overvoltage category III, 6KV) on NO side contribute to an almost unlimited field of applications.

### Features and benefits

- Forcibly guided contact structure complies with EN 61810-1 and EN 61810-3, type A, enables detection of contact welding and construction of safety circuit
- All contacts qualified according to AC15 and DC13
- Very low profile: 7.8mm
- Insulation according to EN 60664-1: overvoltage category III, pollution degree 2, 250VAC
- Reinforced insulation: clearance and creepage  $\geq 5.5$ mm .217 inch (between NO and NC and between NO and coil)
- Basic insulation: clearance  $\geq 3$ mm .118 inch and creepage  $\geq 4$ mm .157 inch between NC and coil)
- Complies with IEC 61010 reinforced insulation standards

### Applications

- Emergency stop switches
- Machine safety engineering
- Safety control units
- Automation technology
- Elevators
- Escalators
- Safe sensor monitoring
- Standalone safety modules
- Safety sensor output

[BUY NOW](#) 



## TE CONNECTIVITY - TV-8 RATED OJT SERIES POWER RELAY



TE Connectivity's TV-8 rated OJT relays offer a compact and powerful design solution for applications that require high inrush current resistance. Offering about a 40% smaller size than similarly rated relays, the TV-8 rated OJT relays are miniature in size (15.2mm height), but big in performance. They can withstand up to a 117A inrush current and conform to industry safety standards with a UL TV-8 rating.

### Features and benefits

- UL TV-8 rating (HM type) and UL TV-5 rating (LM/DM type)
- 10A rating (HM type) and 5A rating (LM/DM type)
- Small size (18.2mm x 10.2mm x 15.2mm)
- 4000Vrms coil to contact dielectric strength
- Sensitive coil optional (LM type)

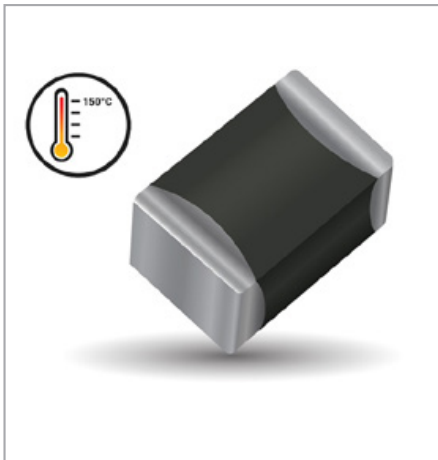
### Applications

- Lighting, smart plugs, appliances, industrial control

[VIEW PRODUCT DETAILS](#) 



## AVX - VGAH SERIES GLASS ENCAPSULATED HIGH TEMPERATURE AUTOMOTIVE VARISTORS



AVX (Ethertronics) VGH series high temperature +150°C multi-layer varistors are designed for under-hood and other high temperature automotive or industrial applications. Parts are AEC-Q200 qualified.

### Features and benefits

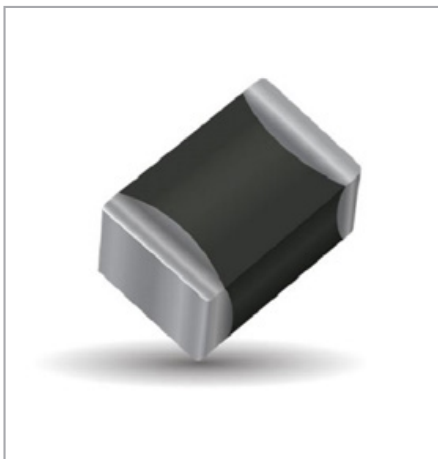
- AEC-Q200 qualified
- +150°C high temperature
- EMI/RFI filtering in the off-state

### Applications

- Under hood
- Down hole drilling
- Applications with temperatures up to +150°C

[VIEW PRODUCT DETAILS](#) 

## AVX - VLAS SERIES AEC-Q200 QUALIFIED MULTILAYER VARISTORS



AVX (Ethertronics) VLAS series low clamping automotive TransGuard® multilayer varistors are designed for applications where lower clamping to working voltage ratio is required. Parts are suitable for automotive, industrial and general applications. Parts are AEC-Q200 qualified.

### Features and benefits

- AEC-Q200 qualified
- Low clamping to working voltage ratio
- EMI/RFI attenuation

### Applications

- Infotainment
- ECU
- Displays
- Microcontrollers
- Low VC to VW ratio requirements

[VIEW PRODUCT DETAILS](#) 

## BEL FUSE CIRCUIT PROTECTION - OZRS SERIES RESETTABLE PPTC FUSES



[VIEW PRODUCT DETAILS](#) 

The Bel Fuse–Circuit Protection OZRS series of radial resettable PPTC fuses is designed for automotive applications.

### Features and benefits

- Very low resistance, very high hold current, solid state, radial leaded product ideal for up to 32V and operating temperatures up to +125°C.
- AEC-Q compliant
- Meets Bel automotive qualification

## BOURNS - 15KPA-SD-Q SERIES AEC-Q101 COMPLIANT TVS DIODES



[VIEW PRODUCT DETAILS](#) 

Bourns 15KPA-SD-Q series transient voltage suppressor diodes are designed for use in DC bus clamping applications and for the protection of sensitive electronic components against overvoltage transients. The 15KPA-SD-Q series offers superior performance with its high peak pulse power (10 $\mu$ s to 1,000 $\mu$ s) rating of 15kW and high peak pulse current (8 $\mu$ s to 20 $\mu$ s) rating of 1kA. It also achieves lower clamping voltage under surge, better performance stability and increased reliability compared to competing MOV technology.

### Features and benefits

- Maximum peak pulse power (10 $\mu$ s to 100 $\mu$ s): 15kW
- Maximum peak pulse current (8 $\mu$ s to 20 $\mu$ s): 1kA
- Standoff voltage: 16V to 66V
- RoHS compliant and halogen free
- AEC-Q101 compliant

### Applications

- High peak power applications
- High temperature applications
- Clamping diodes
- Load switching and lighting

[BUY NOW](#) 

## BOURNS - CB SERIES MINIATURE RESETTABLE THERMAL CUTOFF DEVICES



[VIEW PRODUCT DETAILS](#) 

Bourns CB series miniature resettable Thermal Cutoff (TCO) devices are the smallest TCO devices Bourns has produced and they are the next generation of axial leaded miniature resettable thermal cutoff devices.

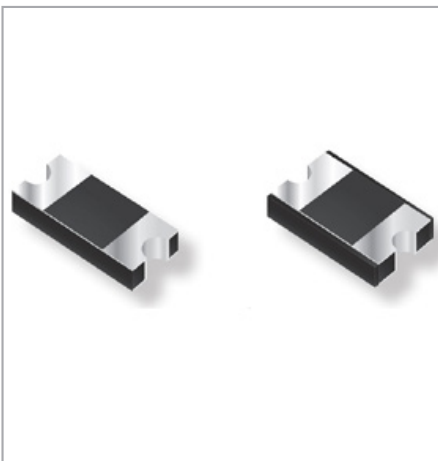
### Features and benefits

- Miniature Thermal Cutoff (TCO) device
- Smallest body size in product family
- Overtemperature and overcurrent protection for lithium polymer and prismatic cells
- Controls abnormal, excessive current virtually instantaneously, up to rated limits
- Wide range of temperature options
- High corrosion resistance

### Applications

- Battery cell protection for:
  - > Notebook PCs
  - > Tablet PCs
  - > Smart phones

## BOURNS - CD214A-S1X, CD214A-RS1X, CD214A-FS1X AND CD214A-R12000R SERIES RECTIFIER CHIP DIODES



[VIEW PRODUCT DETAILS](#) 

The Bourns CD214A-S1x, CD214A-RS1x, CD214A-FS1x and CD214A-R12000R series are available in a compact low profile surface mount package measuring 4.5mm x 2.2mm x 0.96mm, and are intended to be mounted directly onto an FR4 printed circuit board. The devices fit the SMA (DO-214AC) footprint. The Bourns CD214B-S2x and CD214B-S3x series are available in a compact low profile surface mount package measuring 5.2mm x 3.6mm x 1.1mm, for mounting directly onto an FR4 printed circuit board. The devices fit the SMB (DO-214AA) footprint.

### Features and benefits

- RoHS compliant
- Low profile
- Low power loss, high efficiency
- UL 94V-0 rated

### Applications

- Switch mode power supplies
- Portable equipment batteries
- High frequency rectification
- DC-DC converters
- Telecommunications

[BUY NOW](#) 

## BOURNS - CD-LAB11 TVS DIODE DESIGN KIT



[VIEW PRODUCT DETAILS](#) 

The Bourns CD-LAB11 TVS diode design kit contains AEC-Q101 compliant Transient Voltage Suppressor (TVS) diodes for surge and ESD protection applications to provide design engineers with a variety of overvoltage protection and load dump protection solutions across a range of rated currents and voltages for quick-turn prototype testing. Bourns TVS diodes are ideal for overvoltage protection of DC and AC buses in power supplies, DC-DC converters, inverters, communication lines and I/O interfaces used in telecom, industrial, consumer and portable electronic applications. These products are RoHS compliant.

[BUY NOW](#) 

## BOURNS - HCT SERIES AEC-Q200 COMPLIANT HIGH CLEARANCE/CREEPAGE DISTANCE ISOLATION POWER TRANSFORMERS



[VIEW PRODUCT DETAILS](#) 

Bourns HCT series compliant high voltage isolation push-pull transformers are driven by 3.3V to 5V input and deliver 3.3V to 15V up to 350mA output, configured in a variety of turns ratios in a compact size. The transformers are designed to support isolated interface power for CAN, RS-485, RS-422, RS-232, SPI, I2C, and lowerpower LANs in a range of applications such as Industry 4.0 and low/medium risk medical (sensors, communication PHYs, RS-485, metering), circuits requiring low DC power and any application that requires isolation from potentially hazardous voltages. The HCT series is built with a ferrite toroid core for high coupling factor and efficiency. The reinforced isolation, 8mm minimum clearance/creepage distance, and 4.2kV @ 60s voltage withstanding provide an elevated degree of isolation from high voltage hazards. These transformers are designed for isolation power supplies using Texas Instruments SN6501 and SN6505B isolation transformer drivers, are compatible with spread spectrum modulation for reduced emissions, and are compliant with IEC 60950-1, IEC 62368-1, IEC 60664-1 and AEC-Q200 standards.

### Features and benefits

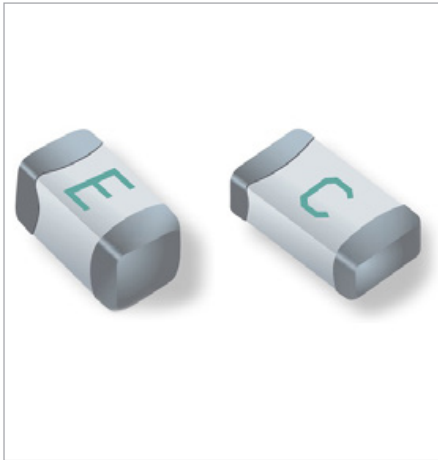
- Low profile (6.5mm) housing with >8mm clearance and creepage
- Complies with IEC 60950-1, IEC 62368-1 and IEC 60664-1
- Reinforced insulation for working voltage of 800V
- Designed for isolation power supplies using TI SN6501 and SN6505B isolation transformer drivers
- AEC-Q200 compliant
- RoHS compliant

### Applications

- RS-485
- CAN interface
- Digital input modules
- RS-232 isolation

[BUY NOW](#) 

## BOURNS - SF-0603HIA-M AND SF-1206HIA-M SERIES AEC-Q200 COMPLIANT SMD FUSES



Bourns introduced two series of AEC-Q200 compliant SMD fuses to complement its already successful line of SinglFuse™ SMD fuse products. The SF-0603HIA-M and SF-1206HIA-M series utilise Bourns' popular multilayer ceramic design for enhanced voltage and current handling capabilities in small 0603 and 1206 package sizes. Both families are fully compliant with Bourns' internal AEC-Q200 equivalent test procedures to ensure performance robustness in certain harsh environments including industrial, medical (low to medium risk), telecom and battery management systems applications, among others.

### Features and benefits

- High-inrush current withstand capability
- Time lag fusing speed
- EIA 0603 and 1206 footprints
- AEC-Q200 compliant
- UL 248-14 listed
- RoHS compliant and halogen free

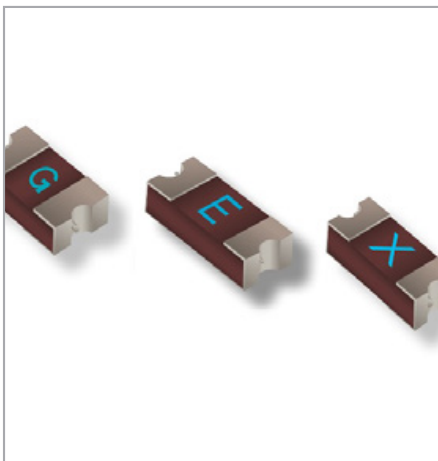
### Applications

- Industrial
- Medical (low to medium risk)
- Telecom
- Battery management systems

[VIEW PRODUCT DETAILS](#) 

[BUY NOW](#) 

## BOURNS - SF-1206SA-W, SF-2410FPA-W AND SF-2410FA-W SERIES AEC-Q200 COMPLIANT AUTOMOTIVE GRADE SMD FUSES



The Bourns families of AEC-Q200 compliant, automotive grade SMD fuses to complement its already successful line of SinglFuse™ SMD fuse products. The SF-1206SA-W, SF-2410FPA-W and SF-2410FA-W series are UL 248-14 listed, RoHS compliant and halogen free. All three series meet Bourns' internal AEC-Q200 equivalent test plan with more severe test conditions and larger sample sizes to ensure performance robustness in certain harsh environments. These families are intended for use in a variety of industrial, medical (low to medium risk), telecom and battery management systems applications.

### Features and benefits

- Fast acting and slow blow fusing speeds
- EIA1206 and 2410 footprints
- AEC-Q200 compliant
- UL 248-14 listed
- RoHS compliant and halogen free

### Applications

- Industrial
- Medical (low to medium risk)
- Telecom
- Battery management systems

[VIEW PRODUCT DETAILS](#) 

[BUY NOW](#) 

## BOURNS – SMA6J AND SMA6J-Q SERIES DISCRETE TVS DIODES



[VIEW PRODUCT DETAILS](#) 

The Bourns ESD/EFT/surge protection series, models SMA6J and SMA6J-Q are well suited for voltage transient and ESD protection in data lines and DC power supplies. Both series come in a compact, industry standard DO214-AC (SMA) package, with increased peak pulse power dissipation of 600W rather than the industry standard of just 400W, enabling designers to realise compact, high power density and power supply designs.

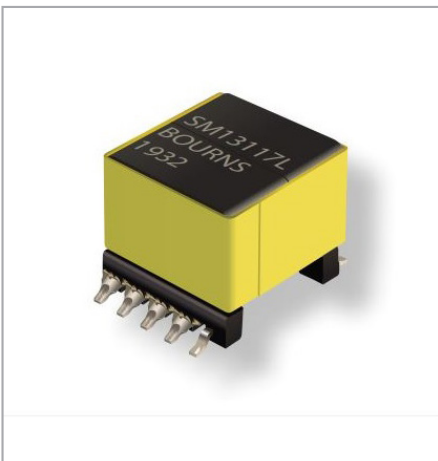
### Features and benefits

- Surface mount SMA package
- Standoff voltage: 5V to 43V
- Power dissipation: 600W
- RoHS compliant
- Protection of power buses
- Protection of I/O interfaces
- Overvoltage transient protection

### Applications

- Telecom
- Computer
- Industrial
- Consumer electronic

## BOURNS – SM13117EL SERIES POE FLYBACK TRANSFORMER



[VIEW PRODUCT DETAILS](#) 

Bourns has introduced the SM13117EL Flyback power transformer to support IEEE 802.3 compliant, integrated Power-over-Ethernet (PoE) Powered Device (PD) and Pulse Width Modulation (PWM) controller applications, providing DC-DC power conversion in isolated mode.

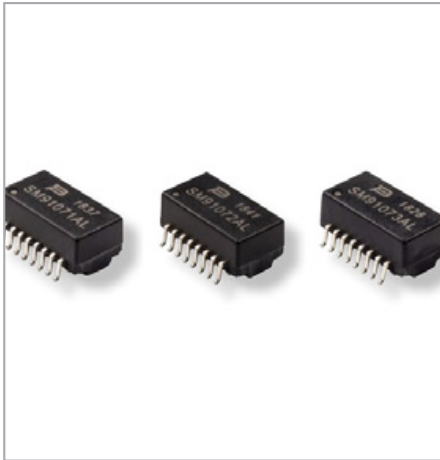
### Features and benefits

- 13W PoE
- 1.5k Vrms isolation voltage
- Supports IEEE 802.3 compliant, integrated
- PoE PD and PWM controllers
- UL 94V-0 rated bobbin
- UL 1446 class B insulation system
- RoHS compliant

### Applications

- VoIP phones
- WLAN access points
- Network cameras
- PoE powered devices

## BOURNS - SM91071AL, SM91072AL AND SM91073AL SERIES AEC-Q200 COMPLIANT LAN 10/100 BASE-T TRANSFORMERS



The Bourns signal magnetics SM91071AL, SM91072AL and SM91073AL are single-port LAN 10/100 base-T isolation transformer modules that include common mode chokes for noise rejection in Ethernet applications. They are designed to meet IEEE 802.3u standards, and are AEC-Q200 compliant. These LAN transformer offer a 1500VAC isolation voltage and an extended operating temperature range of -40°C to +125°C.

### Features and benefits

- Designed to meet IEEE 802.3u standard
- AEC-Q200 compliant, automotive grade
- Expanded temperature range: -40°C to +125°C
- RoHS compliant

### Applications

- Diagnostics

[VIEW PRODUCT DETAILS](#) 

[BUY NOW](#) 

## BOURNS - SM91508AL SERIES AEC-Q200 COMPLIANT SIGNAL-BMS TRANSFORMERS



The Bourns SM91508AL series is an additional BMS signal transformer. It is a single-channel isolation transformer module that includes a common mode choke for noise rejection in BMS signal applications. The SM91508AL supports serial daisy chain/IsoSPI communication and is AEC-Q200 compliant. This BMS transformer offers a 1000VDC working voltage, 3000VAC hi-pot isolation capability for 60 seconds and an extended operating temperature range of -40°C to +150°C.

### Features and benefits

- 1000VDC working voltage and hi-pot isolation voltage: 3000VAC
- Supports serial daisy chain/IsoSPI communication
- AEC-Q200 compliant, automotive grade
- Expanded temperature range: -40°C to +150°C
- RoHS compliant

### Applications

- Battery management systems

[VIEW PRODUCT DETAILS](#) 

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## BOURNS – SM91509AL SERIES AEC-Q200 COMPLIANT SIGNAL-BMS TRANSFORMERS



[VIEW PRODUCT DETAILS](#) 

The Bourns SM91508AL series is an additional BMS signal transformer. This dual-channel isolation transformer module includes common mode chokes for noise rejection in BMS applications. The model SM91509AL matches well with the Texas Instruments model BQ79606 in daisy chain communication and is AEC-Q200 compliant. It also offers a 1600VDC working voltage, 4300VDC hi-pot isolation and an extended operating temperature range of -40°C to +125°C.

### Features and benefits

- 1600VDC working voltage and hi-pot isolation voltage: 4300VDC
- Superior noise rejection with two chokes inside per channel
- Supports serial daisy chain/IsoSPI communication
- Matches Texas Instruments model BQ79606
- AEC-Q200 compliant, automotive grade
- Expanded temperature range: -40°C to +125°C
- RoHS and halogen free

### Applications

- Battery management systems

[BUY NOW](#) 

## BOURNS – SRP3012C/3020C/5020C/5030C/1245C/1265C SERIES HIGH CURRENT SHIELDED INDUCTORS



[VIEW PRODUCT DETAILS](#) 

Bourns SRP3012C, SRP3020C, SRP5020C, SRP5030C, SRP1245C and SRP1265C series high current, shielded power inductors, are designed to meet today's high current density requirements in various types of consumer electronics applications. These inductors are manufactured with a metal alloy powder core featuring low DC resistance, high heating/saturation current, low buzz noise, excellent temperature stability and shielded construction for low magnetic radiation.

The SRP3012C, SRP3020C, SRP5020C, SRP5030C, SRP1245C and SRP1265C series are a lower cost alternative to AEC-Q200 compliant models. They are well suited for DC-DC converters and power supplies in consumer, industrial, and telecom electronics applications.

### Features and benefits

- Shielded construction
- Metal alloy powder core
- High saturation current
- Low buzz noise
- RoHS compliant and halogen free

### Applications

- DC-DC converters
- Power supplies

[BUY NOW](#) 

## BOURNS – SRP4018FA SERIES AEC-Q200 HIGH CURRENT SHIELDED POWER INDUCTORS



[VIEW PRODUCT DETAILS](#) 

Bourns SRP4018FA series high current shielded power inductors are designed to meet today's high current density requirements in various electronics applications. This inductor series is manufactured with flat wire, two self-lead terminals and a metal alloy powder core featuring exceedingly low DC resistance, high heating/saturation current, low buzz noise, excellent temperature stability and shielded construction for low magnetic radiation.

The SRP4018FA series is AEC-Q200 compliant. These inductors are well suited for DC-DC converters and power supply applications in consumer, industrial, low/medium risk medical and telecom applications where higher inductor reliability and efficiency may be required.

### Features and benefits

- Shielded construction
- Metal alloy powder core
- High saturation current
- Low buzz noise
- Flat wire
- AEC-Q200 compliant
- RoHS compliant and halogen free

### Applications

- DC-DC converters
- Power supplies

[BUY NOW](#) 

## BOURNS – SRP6030VA/1040VA SERIES AEC-Q200 HIGH TEMPERATURE SHIELDED POWER INDUCTORS



[VIEW PRODUCT DETAILS](#) 

The Bourns SRP6030VA and SRP1040VA series are high temperature shielded power inductors, built with a new metal alloy powder formulation and round enamel coated copper wire. The new metal alloy powder formulation allows for an extremely high operating temperature of +180°C (incl. self heating) which makes these AEC-Q200 compliant inductors ideal for many high temperature environments. These inductors feature low DC resistance, high heating/saturation current, low buzz noise, excellent temperature stability and shielded construction for low magnetic radiation.

The Model SRP6030VA and SRP1040VA series are AEC-Q200 Compliant. These inductors are well suited for DC-DC converters and power supplies in consumer, industrial, low/medium risk medical and telecom applications where higher inductor reliability at elevated operating temperatures may be required.

### Features and benefits

- Shielded construction
- Metal alloy powder core
- High saturation current
- Low buzz noise
- High operating temperature: +180°C
- AEC-Q200 compliant
- RoHS compliant and halogen free

### Applications

- DC-DC converters
- Power supplies

[BUY NOW](#) 

## CTS - TCXO 535 AND 536 SERIES MINIATURE PRECISION CRYSTAL OSCILLATORS



[VIEW PRODUCT DETAILS](#) 

CTS' TCXO 535 and 536 series of crystal oscillators provide a frequency reference with low noise and high stability performance attributes targeted for the evolving 5G New Radio (NR) standard and chipset solutions for small cells and remote radio head applications that will support 5G architecture. The 535 and 536 have been designed to achieve low noise performance at high transmission frequency while remaining energy efficient.

### Features and benefits

- Clipped sine or HCMOS output
- Overall frequency stability  $\pm 4.6$ ppm
- Stability options:  $\pm 0.10$ ppm to  $\pm 0.50$ ppm
- Temperature range:  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$
- Voltage control option for frequency tuning
- Analog temperature compensation engine
- Fundamental crystal designs
- Optional enable function available
- Small ceramic surface mount package
- Tape and reel packaging

### Applications

- 5G, 4G, LTE
- Femtocells, RRU, BBU
- Military radio (manpack)
- Inflight entertainment
- Autonomous technologies
- Synchronous Ethernet
- IP networking
- Medical imaging
- Stratum 3
- IEEE 1588 timing
- Wireless communication
- Test and measurement

## EATON - HCM1AV2 SERIES INDUCTORS



[VIEW PRODUCT DETAILS](#) 

The Eaton HCM1AV2 family of inductors is the latest advancement in power magnetics designed to meet automotive electronics power and thermal handling requirements. Eaton's inductors use an advanced molded construction design for high current handling capabilities, better thermal dissipation characteristics and superior mechanical strength. The HCM1AV2 family has a wide variety of SMT footprints from 4mm to 23mm. The inductors are magnetically shielded for low EMI, and have low core loss and temperature stability over the operating temperature range.

### Features and benefits

- High current carrying capacity
- AEC-Q200 compliant
- Pressed powder constructions with low EMI

### Applications

- Body electronics
- Advanced driver assistance systems
- Infotainment and cluster electronics
- Chassis and safety electronics

## EATON - MCL AND WCL SERIES CHIP INDUCTORS



[VIEW PRODUCT DETAILS](#) 

Eaton's WCL family of chip inductors features a wire-wound construction on a ceramic core. They are low-profile components which offer an extremely high Q-factor, high current-handling capability, and are suitable for use in RF matching in antennas, Bluetooth/Wi-Fi devices, power amplifier circuits, resonance tuning in IF circuits, and more.

### Features and benefits

#### MCL (multilayer family)

- Lower profile
- Best balance between Q, DCR and inductance tolerance
- MCL are suitable for various applications such as:  
RF circuit matching choke/filters
- Resonance setting for mobile communication equipment

#### WCL (wire-wound family)

- Low DC resistance is possible
- Extremely high Q (quality factor) value
- Large currents can be supported
- WCL are suitable for:
  - > RF matching applications in antenna
  - > Power Amplifier (PA) circuits
- Resonance tuning applications in IF circuits

## EATON - MCLA SERIES AUTOMOTIVE GRADE MULTILAYER CHIP INDUCTORS



[VIEW PRODUCT DETAILS](#) 

Eaton's MCLA series automotive grade multilayer chip inductors are low profile, low dissipation inductors for high frequency filtering, impedance matching, and RF tuned circuits in automotive transmitting and receiving within a vehicle. They come in several industry standard footprints and offer high Q and high current capability. The chip inductors are available utilising either magnetic or non-magnetic core material structures.

### Applications

- ADAS
- Infotainment
- Wireless communications
- Wi-Fi, Bluetooth, satellite
- Antenna tuning
- On board compute

## EATON - WCLA SERIES AUTOMOTIVE GRADE WIRE WOUND CHIP INDUCTORS



[VIEW PRODUCT DETAILS](#) 

Eaton's automotive grade wire wound (WCLA) chip inductors are low profile, low dissipation inductors for high frequency filtering, impedance matching, and RF tuned circuits in automotive transmitting and receiving within a vehicle. They come in several industry standard footprints and offer high Q and high current capability. The chip inductors are available utilising either magnetic or non-magnetic core material structures.

### Applications

- ADAS
- Infotainment
- Wireless communications
- Wi-Fi, Bluetooth, satellite
- Antenna tuning
- On board computer

## FOX ELECTRONICS - C3VR SERIES LOW G SENSITIVITY CRYSTAL UNIT



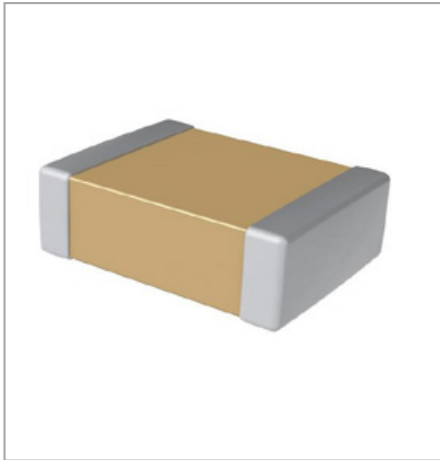
[VIEW PRODUCT DETAILS](#) 

Fox Electronics' C3VR series low G sensitivity crystal can improve dynamic performance of customer systems under harsh conditions. The C3VR has a maximum 0.2ppb/G acceleration sensitivity rating. It is not unusual to see an oscillator at rest, (no external vibration), outperform one under vibration by 30dB at 1G. The C3VR state-of-the-art resonator incorporates patented technology that allows the FOX C3VR product series to hold system performance nearly uniform on all axes.

### Features and benefits

- Low G sensitivity
- Tolerances down to  $\pm 10$ ppm
- Custom application inquiries invited
- Patented technology

## KEMET - CAN SERIES 250 VAC NON-SAFETY AC-RATED MLCCS



[VIEW PRODUCT DETAILS](#) 

KEMET's CAN series non-safety rated ceramic capacitors are designed for 250VAC applications where higher CV values are required but not available in safety certified MLCCs. These capacitors are qualified for continuous use under AC line conditions of 250VAC, 50Hz to 60Hz. Available in a variety of case sizes and industry leading CV values (capacitance/voltage), these devices exhibit low leakage current and low ESR at high frequencies.

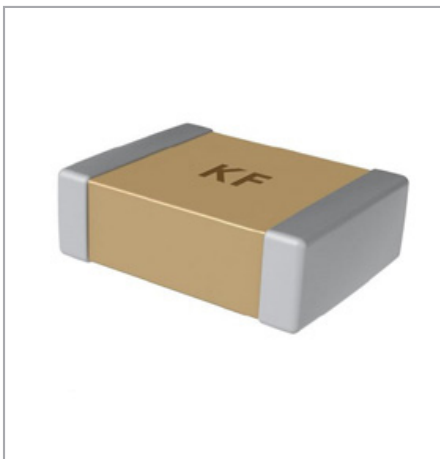
### Features and benefits

- Continuous AC voltage rating 250VAC, 50Hz to 60Hz
- Offers more than 50x capacitance versus safety rated MLCCs
- Base Metal Electrode (BME) dielectric system
- Operating temperature range: -55°C to +125°C
- Low ESR and ESL
- Lead (Pb)-free, RoHS, and REACH compliant
- Temperature stable dielectric

### Applications

- AC-DC converters
- AC filtering
- Power factor correction
- Power supply

## KEMET - CAS SERIES SMD MLCC CAPACITORS



[VIEW PRODUCT DETAILS](#) 

KEMET's CAS surface mount safety certified capacitors are specifically designed for interference-suppression AC line filtering applications. When comparing to radial leaded disc capacitors, the CAS surface mount form factor provides engineers the ability to miniaturise their designs with a higher density solution. Having internationally recognised safety certifications, these capacitors are well-suited for applications that require keeping potentially disruptive or damaging line transients and EMI out of susceptible equipment. They are also an ideal solution when needing to suppress line disturbances at the source.

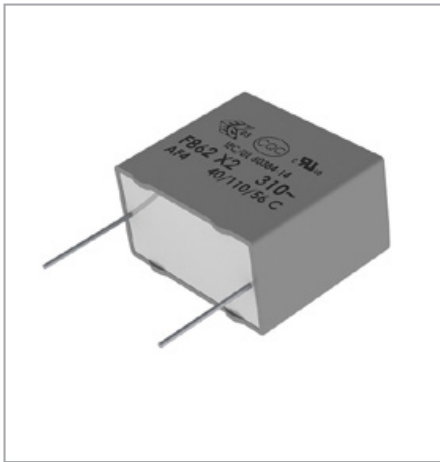
### Features and benefits

- Safety certified to IEC 60384-14
- Class X1/Y2, X2
- 250VAC rating
- 2.5kV and 5kV impulse voltages
- Reliable operation up to +125°C
- Available in C0G and X7R dielectrics
- Case sizes 1808, 1812, 2211, and 2220
- Capacitance offerings ranging from 3pF to 22nF
- Available capacitance tolerances from  $\pm 0.5\text{pF}$  to  $\pm 20\%$
- RoHS compliant

### Applications

- Line-to-line (class X) filtering
- Line-to-ground (class Y) filtering
- Antenna coupling
- Primary and secondary coupling (switching power supplies)
- Line disturbances suppression (motors and motor controls, relays, switching power supplies, and inverters)

## KEMET - F862 V054 SERIES METALLISED POLYPROPYLENE EMI SUPPRESSION FILM CAPACITORS



[VIEW PRODUCT DETAILS](#)

The KEMET F862 is constructed of metallised polypropylene film encapsulated with self-extinguishing resin in a box material recognised by UL 94V-0. The F862 series is ideal for harsh environmental conditions and meets the demanding automotive electronics council's AEC-Q200 qualification requirements.

### Features and benefits

- Approvals: ENEC, UL, cUL, CQC
- Rated voltage: 310VAC 50Hz to 60Hz
- Capacitance range: 0.1 $\mu$ F to 4.7 $\mu$ F
- Lead spacing: 15mm to 27.5mm
- Capacitance tolerance:  $\pm$ 20%,  $\pm$ 10%
- Climatic category: 40/110/56, IEC 60068-1
- Tape and reel in accordance with IEC 60286-2
- RoHS compliant and lead-free terminations
- Operating temperature range of -40°C to +110°C

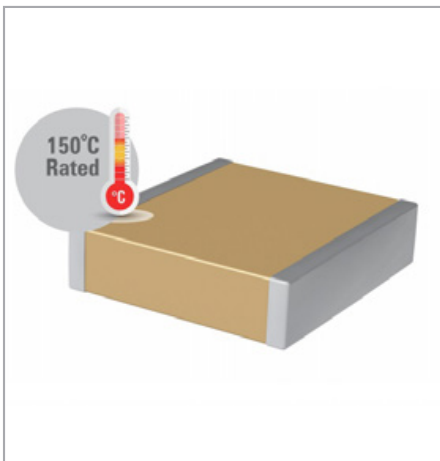
- 100% screening factory test at 1,900VDC
- Qualification based on AEC-Q200 guidelines

### Applications

- Typical applications include connection in series with the mains, capacitive power supplies and energy meters, with special emphasis in automotive applications for severe ambient conditions

[BUY NOW](#)

## KEMET - KC-LINK™ SURFACE MOUNT CAPACITORS IN 1812, 2220 AND 3640 CASE SIZES



[VIEW PRODUCT DETAILS](#)

The KEMET 1812, 2220 and 3640 case size is an extension of KC-LINK™ surface mount capacitor series. With this offering, KC-LINK is now available in EIA case size 1812, 2220 and 3640.

The very high ripple current capabilities make KC-LINK capacitors ideal for use with fast-switching Wide Band Gap (WBG) semiconductors, which enables power converters to operate at higher voltages, temperatures and frequencies, and achieve higher efficiency levels and greater power density. The devices are suitable for use in DC-Link, snubber and resonant applications.

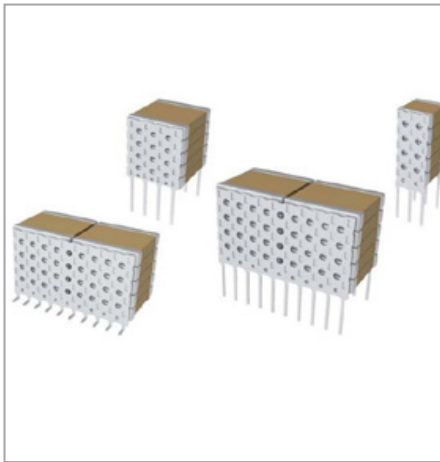
### Features and benefits

- EIA case sizes 1812, 2220 and 3640
- Capacitance values ranging from 4.7nF to 220nF and voltage ranges from 500V to 1700V
- Class I COG BME dielectric technology offers superior capacitance stability over temperature and voltage, combined with high ripple current capability
- Extremely low Equivalent Series Resistance (ESR) and Equivalent Series inductance (ESL)
- Operating temperature range of -55°C to +150°C, KC-LINK™ capacitors can be mounted near fast-switching semiconductors in high density power applications

- Commercial and automotive (AEC-Q200) grades, pb-free, RoHS and REACH compliant
- Flexible termination available for 1812 and 2220

[BUY NOW](#)

## KEMET - KPS-MCL LOW-LOSS HIGH TEMPERATURE VERTICALLY ORIENTED MLCC STACKS



[VIEW PRODUCT DETAILS](#) 

KEMET's KPS-MCL low-loss high temperature +200°C MLCC stacks complement the KPS-MCC series while using vertically oriented MLCCs to reduce ESR and increase power handling capability. Both the KPS-MCL and KPS-MCC series are ideal for harsh environment applications. Available in two case sizes, the KPS MCL low-loss series offers voltages up to 2,000V and capacitance up to 1.2µF. Each case size can be ordered in a straight pin, formed "L," or formed "J" configuration and with a silver (Ag) or solder coated (SnPb) termination finish.

### Features and benefits

- Low-loss
- Low ESR and ESL
- High thermal stability, high ripple current capability
- Straight pin lead wires for "through-hole" mounting
- Formed "J" and "L" lead wires for surface mounting
- Operating temperature range of -55°C to +200°C
- Case codes (Case sizes): 69 (2220) and 70 (2225)
- DC voltage ratings: 200V to 2,000V
- Capacitance offerings ranging from 11nF to 1.2µF
- Industrial grade

### Applications

- Industrial
- Down-hole
- Defense and aerospace
- Hybrid and Electric Vehicles (HEVs, BEVs)
- SMPS
- Input and output filtering on power supplies, often found on "capacitor banks"
- Snubber circuits and DC link
- Resonator circuits

[BUY NOW](#) 

## KEMET - MPXV SERIES METAL COMPOSITE POWER INDUCTORS



[VIEW PRODUCT DETAILS](#) 

The KEMET MPXV product offering enhances the company's METCOM range and is AEC-Q200 qualified for use in the automotive sector.

The power inductors provide efficient power conversion while minimising Electromagnetic Interference (EMI) and are ideal for use in DC to DC switching power supplies for the growing number of Electronic Control Units (ECUs) found in automotive systems. According to fortune business insights the automotive ECU market is forecast to reach USD 12.92 Billion by 2026, a CAGR of 11.9% in seven years.

### Features and benefits

- Metal composite powder
- Shielded construction, SMD configuration
- Inductance range from 0.10µH to 100.00µH
- Operating temperature up to +155°C
- Low acoustic noise
- Low magnetic flux leakage
- AEC-Q200 qualified

### Applications

- Automotive ECU applications such as:
  - > LED headlights
  - > Meter cluster panels
  - > Head-Up Displays(HUD)
  - > Electric Water Pumps (EWP)
  - > Electric Coil Pumps (EOP)
  - > Electric Power Steering (EPS)

[BUY NOW](#) 



## KEMET - MPXV SERIES AUTOMOTIVE GRADE METAL COMPOSITE POWER INDUCTORS



The KEMET MPXV metal composite inductors are ideal for use in DC to DC switching power supplies for automotive applications. The metal composite core has high saturation characteristics maintaining function in rush current mode and characterised by temperature stable inductance.

### Features and benefits

- Metal composite powder
- Shielded construction, SMD configuration
- Inductance range from 0.10 $\mu$ H to 100 $\mu$ H
- Operating temperature up to +155°C
- Low acoustic noise
- Low magnetic flux leakage
- AEC-Q200 qualified

### Applications

- LED headlights
- Meter cluster panels
- Head-Up Displays (HUD)
- Electric Water Pumps (EWP)
- Electric Oil Pumps (EOP)
- Electric Power Steering (EPS)

[VIEW PRODUCT DETAILS](#) 

[BUY NOW](#) 

## KEMET - MR SERIES ZERO-PHASE CURRENT TRANSFORMERS



The KEMET MR series are compact, molded-type, zero-phase current transformers are ideal for improving the sensitivity, compactness, and weight of electric shock prevention systems.

### Features and benefits

- High sensitivity
- Compact and light weight
- Laminated iron core
- RoHS compliant

### Applications

- Electric shock prevention from earth leakage breakers
- Short-circuit relays
- Ground fault circuit interrupters

[VIEW PRODUCT DETAILS](#) 

[BUY NOW](#) 

## KEMET - R41T SERIES AUTOMOTIVE GRADE Y2 CAPACITOR



[VIEW PRODUCT DETAILS](#) 

The KEMET R41T is constructed of metallised polypropylene film encapsulated with self-extinguishing resin, in a box of material meeting the requirements of UL 94V-0.

### Features and benefits

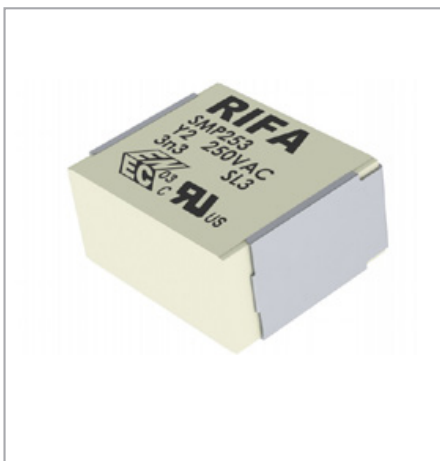
- Approvals: ENEC, UL, cUL, CQC
- Class Y2/X1 (IEC 60384-14)
- THB grade IIIB: +85°C, 85% RH, 1,000 hours at 300V URAC/1,500V URDC acc. to IEC 60384-14
- Rated voltage: 300VAC 50Hz/60Hz
- Capacitance range: 0.0047µF to 0.22µF
- Lead spacing: 15mm to 22.5mm
- Capacitance tolerance: ±20%, ±10%
- Climatic category 40/110/56, IEC 60068-1
- Tape and reel in accordance with IEC 60286-2
- RoHS compliant and lead-free terminations
- Operating temperature range: -40°C to +125°C
- Self-healing properties
- Automotive (AEC-Q200) grades available

### Applications

- Electromagnetic Interference (EMI) suppression filtering "line-to-ground" and "across-the-line" applications, requiring Y2/X1 safety classification
- Suitable for use in situations where failure of the capacitor could lead to danger of electric shock. Not for use in "series with mains" type applications

[BUY NOW](#) 

## KEMET - SMP253 SERIES METALLISED PAPER EMI SUPPRESSION CAPACITORS



[VIEW PRODUCT DETAILS](#) 

The KEMET SMP253 series metallised paper EMI suppression capacitors are multilayer, metallised paper, encapsulated and impregnated in self-extinguishing material that meets the requirements of UL 94V-0.

### Features and benefits

- High dv/dt capability
- Impregnated paper that ensures excellent stability and reliability properties, particularly in applications with continuous operation
- Approvals: ENEC, cULus
- Rated voltage: 250VAC 50Hz to 60Hz, maximum recommended
- DC voltage 1,500VDC
- Capacitance range: 0.001µF to 0.0047µF
- Size code: 5045, 12.7mm
- Capacitance tolerance: ±20%

### Applications

- For worldwide use as an electromagnetic interference suppressor in all Y2 applications, line-to-earth

[BUY NOW](#) 

## KEMET - T500 MNO2 200°C SERIES TANTALUM SURFACE MOUNT CAPACITORS



[VIEW PRODUCT DETAILS](#) 

The KEMET T500 is a high-temperature product that offers optimum performance characteristics in applications with operating temperatures up to +200°C. The T500 is classified as MSL (Moisture Sensitivity Level) 1 under J-STD-020: unlimited floor life time at ≤30°C/85% RH.

### Features and benefits

- Meets or exceeds EIA standard 535BAAC
- Weibull failure rate to B level available
- Standard gold-plated termination
- RoHS compliant
- Operating temperature range: -55°C to +200°C
- 100% steady-state accelerated aging at +200°C
- Voltage derating is 40% at +200°C
- Qualified at 1,000 hours of life test at +200°C
- Taped and reeled per EIA 481

- Meets MSL 1 requirements for Pb-free assembly according to JEDEC J-STD-020
- Surge current options available

### Applications

- Typical applications include coupling and filtering in down-hole, defense, and aerospace industries.

[BUY NOW](#) 

## KINGSTATE - KSSG1JB06-S, KSSGJ5B30-S, KSSGL4B12-S SERIES VERTICAL SMD BUZZERS



[VIEW PRODUCT DETAILS](#) 

With the rise of 'smart' devices, there is a requirement for acoustic components to be small. As customers try to minimise the PCB size, KINGSTATE has introduced a new range of vertical buzzers. Vertical type appliances only take a small space on the PCB board, so they are ideal for use in home appliances (white goods), industrial equipment, home medical care and portable devices. Available options range from a small power buzzer from 1.5V<sub>o-p</sub> (SMD type) to a larger power as 22VDC pin type.

### Features and benefits

- Vertical
- Suitable for small PCB space.

### Applications

- White goods
- Home medical care
- Industrial equipment
- Information system

## NICHICON – GY SERIES HYBRID CAPACITORS



[VIEW PRODUCT DETAILS](#) 

**GYA series:** introduction of rated voltage of 16V. The 16V product added to the GYA series line-up (25V to 63V) allows customers to optimise their designs.

**GYB series:** operating temperature of +105°C with a life expectancy of 10,000 hours. This high temperature, long life and high ripple current series was developed in response to rising demands in the consumer electronics and industrial machinery applications. The GYB series offers 1.2 to 1.4 times higher ripple tolerance than the GYA series and offers an extended lifespan guaranteed for 10,000 hours in a +105°C environment.

**GYC series:** operating temperature of +135°C with a life expectancy of 4,000 hours.

Previously, Nichicon had launched the GYA series (guaranteed operation for 4,000 hours at +125°C) and the GYB series (guaranteed operation for 10,000 hours at +105°C) of conductive polymer hybrid aluminum electrolytic capacitors. The newly launched GYC series increases the maximum temperature to +135°C, while maintaining the current series' size, rated voltage, and capacitance range. Additionally, the rated ripple current at +125°C is 1.30mes to 1.80mes greater than the GYA series.

### Features and benefits

#### GYA series

- High reliability, low ESR, high ripple current
- Long life of 4,000 hours at +125°C
- Adapted to the RoHS directive (2011/65/EU, (EU)2015/863)
- AEC-Q200 compliant

#### GYB series

- High reliability, low ESR, high ripple current
- Long life of 10,000 hours at +105°C

- Compliant to the RoHS directive (2011/65/EU, (EU)2015/863).
- AEC-Q200 compliant.

#### GYC series

- High reliability, low ESR, high ripple current.
- Long life of 2,000hrs to 4,000hrs at +135°C.
- Compliant to the RoHS directive (2011/65/EU, (EU)2015/863).
- AEC-Q200 compliant.

## PANASONIC INDUSTRY – ETQP-M SERIES METAL COMPOSITE TYPE POWER CHOKE COILS



[VIEW PRODUCT DETAILS](#) 

Panasonic Industry's ETQP-PM series metal composite type power choke coils are suited for filter, step-down and stepup circuits for DC-DC converters. They are AEC-Q200 compliant offering reliability when exposed to high temperatures along with a high tolerance to vibration.

### Features and benefits

- High heat resistance: operation up to +150°C including self-heating
- High-reliability: high vibration resistance as result of newly developed integral construction; under severe reliability conditions of automotive and other strenuous applications
- High bias current: excellent inductance stability using ferrous alloy magnetic material
- Temp. stability: excellent inductance stability over broad temp. range
- Low audible (buzz) noise: new metal composite core technology
- High efficiency: low DC resistance of winding and low eddy-current loss of the core
- Shielded construction
- AEC-Q200 compliant

### Applications

- Noise filter for various drive circuitry requiring high temp. operation and peak current handling capability
- Boost-converter, buck-converter DC-DC

[BUY NOW](#) 

## PUI AUDIO - AS04004MR-N50-WP-R SERIES MINI SPEAKER



[VIEW PRODUCT DETAILS](#) 

The PUI Audio N50 mini speaker employs high-grade neodymium magnetic motors to create the highest output possible, in the smallest form factor.

The 40mm diameter AS04004MR-N50-WP-R is the waterproof, high-temperature version of the popular AS04004MR-N50-R and is built with a silver-poly convex-capped-paper diaphragm, rubber surround, and acapped spider. A Kapton® former reduces moving mass for high sensitivity. The frame encapsulates the magnetic motor for durability and drop resistance.

### Features and benefits

- Silver poly cone and rubber surround
- High 84dB output at 1W/50cm
- Frame-encapsulated, high-temperature N50 neodymium motor
- Only 20.5mm thick
- 2.5mm of excursion

## PUI AUDIO - ASX11504-SW-R SERIES SILENT SUBWOOFER



[VIEW PRODUCT DETAILS](#) 

PUI Audio's ASX11504-SW-R silent subwoofer exciter, also referred to as a tactile transducer, is purpose-built to recreate ultra-low frequencies from 500Hz all the way down to 5Hz. It delivers all the bass, without much space, and with nearly none of the sound. Perfect for surround sound systems and gaming.

### Features and benefits

- Installs in minutes with spring-loaded push terminals and mounting holes
- 4ohm impedance and high 50W continuous power rating
- Creates bass without sound, perfect for home theater, industrial, and medical applications
- Able to create almost 90N of force

## PUI AUDIO - EXTREME SERIES SPEAKERS



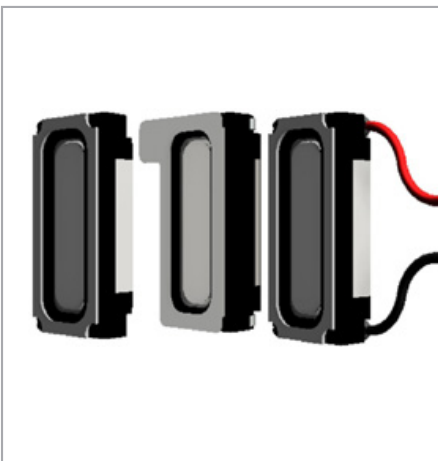
[VIEW PRODUCT DETAILS](#) 

PUI Audio's eXtreme series speakers are purpose-built for superior performance using Klippel-optimised motor designs. Forced-air vented voice coils combine with a high-grade neodymium motor for extreme power handling, extremely flat frequency response, and a surprising amount of bass when used with tuned-port or passive radiator assisted enclosures.

### Features and benefits

- Paper cone for warm natural sound and improved ruggedness
- Large voice coil diameter for high power handling
- Convenient mounting frame for easy integration
- Venting in the magnetic motor creates forced-air cooling limiting power compression
- Four-layer copper-clad aluminum wire for great transient response

## PUI AUDIO - MOBILE SERIES 12MM X 6MM SPEAKERS



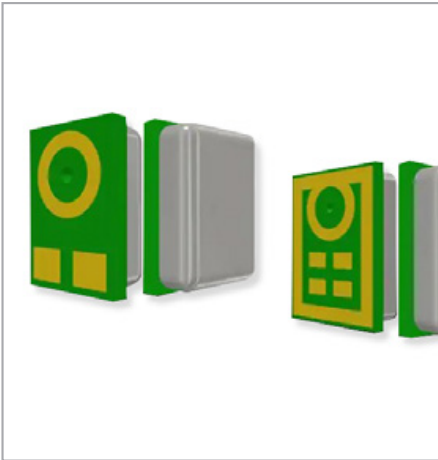
[VIEW PRODUCT DETAILS](#) 

The PUI Audio's mobile series line of speakers and receivers is sure to garner attention. Leveraging years of microspeaker development and speaker manufacturing know how, PUI Audio releases three 12mm by 6mm speakers that feature big sound and low distortion in the smallest footprint to date.

Each speaker is designed for IPx8 waterproof performance and can survive water depths of more than 1 meter for 30 minutes when properly mounted and sealed. Perfect for cutting edge mobile applications such as smart glasses, pendants, and smart watches. The AS01208MS-SC12-WP-R features spring contacts, convenient double sided tape for quick mounting, and a rear shock absorbing pad for interference fitment. For custom lead wire lengths, choose the AS01208MS-SC12-WP-R gold plated pads allow for easy soldering.

Quick prototyping is easily accomplished with the AS01208MS-SC12-WP-R. 100mm long 32AWG UL3302 pre tinned lead wires offer easy electrical connection.

## PUI AUDIO - WIDE-BAND MEMS MICROPHONES



[VIEW PRODUCT DETAILS](#) 

PUI Audio's line of premium, high fidelity MEMS microphones that cover the entire audio band from 20Hz up to 18kHz and up to 20kHz on some models while featuring industry best unit to unit consistency 1dB across the entire frequency response.

The bottom port AMM-2738-B-R features a super small 2.75mm x 1.85mm footprint, while standing only 0.9mm tall, for wearables with a 20Hz to 20kHz response.

The top port AMM-2742-T-R also features a 2.75mm x 1.85mm footprint, while standing only 0.9mm tall with a 20Hz to 20kHz frequency response.

Choose the ultra linear AMM-3738-B-R to capture sound the way it's felt and heard from 20Hz up to 10kHz. A rising response to 20kHz can also sense glass breaking.

For automotive applications, the AMM-3742-T-R has a dip in frequency response below 100Hz for reduced wind and road noise.

## SCHAFFNER - FN2580 POWER LINE FILTER FAMILY FOR LIGHTING EQUIPMENT



[VIEW PRODUCT DETAILS](#) 

The Schaffner FN2580 series offers 350VAC rating, making the filter ideal for typical single-phase applications (120VAC and 230VAC), or industrial applications when utilising phase to neutral voltage off three phase power. The parts are very compact and are designed specifically for lighting applications with enhanced EMC performance at target frequencies along with an extended operational temperature range.

### Features and benefits

- The filters have all the required safety approvals (UL, CSA, ENEC and CQC) and are compliant to REACH and RoHS directives.
- FN 2580 are specially developed for lighting application
- Offering high differential and common mode performance in low profile housing
- Cable outlets are flexible in terms of connection and make the assembly easy
- Voltage rating according to high voltage
- LED lighting market

### Applications

- Lighting equipment
- LED drivers
- Street lamps
- Industrial lighting
- Other applications with high demand for differential mode performance

## TDK - B2568\* SERIES MKP DC LINK POWER CAPACITORS FROM EPCOS



[VIEW PRODUCT DETAILS](#) 

The TDK B2568\* series of EPCOS MKP DC link power capacitors offers outstanding robustness under harsh environmental conditions. The capacitors are designed for voltages of between 900VDC and 3000VDC and cover a capacitance range from 50 $\mu$ F to 4000 $\mu$ F. Depending on type, the capacitors are dimensioned for currents of up to 100A. The ESL values range from 35nH to 80nH. Capacitors with ESL values of less than 20nH are available upon request. Thanks to the polyurethane filling, the windings have a high mechanical stability within the hermetically sealed can. The capacitors comply with climate class C and pass a THB test (Temperature, Humidity, Bias) at +85°C, 85 percent relative humidity with a rated voltage applied for 1000 hours. Condensation up to a certain level on the capacitors during operation is also permissible. In addition, the power capacitors meet all requirements concerning fire protection in rail vehicles according to EN 45545. Thanks to their great robustness and the high rated voltages, these capacitors are particularly suitable for IGBT-based converters in traction applications, as well as medium-voltage drives.

## TDK - B435707 AND B43727 SERIES OF EPCOS ELECTROLYTIC CAPACITORS



[VIEW PRODUCT DETAILS](#) 

The TDK B43707\* and B43727\* series of EPCOS aluminum electrolytic capacitors with screw terminals are designed for rated voltages of 400VDC or 450VDC and cover a capacitance range from 1800 $\mu$ F to 18.000 $\mu$ F. One particular feature of these series is the high CV which enables very compact dimensions. Depending on capacitance and voltage the capacitors measure in at just 51.6mm x 80.7mm to 76.9mm x 220.7mm (dxh).

### Features and benefits

- High CV product, i.e. ultra compact
- High reliability and high ripple current capability
- All-welded construction ensures reliable electrical contact
- PAPR terminals available (Protection Against Polarity Reversal)
- Version available with an optimised base cooling design (heatsink mounting) and featuring up to 2 times the ripple current capability
- Low-inductance design
- RoHS-compatible

### Applications

- Frequency converters
- Wind power converters
- Solar inverters
- Professional power supplies
- Uninterruptible power supplies



## TDK - B72214P2X COMPACT DISK VARISTORS FROM EPCOS



[VIEW PRODUCT DETAILS](#) 

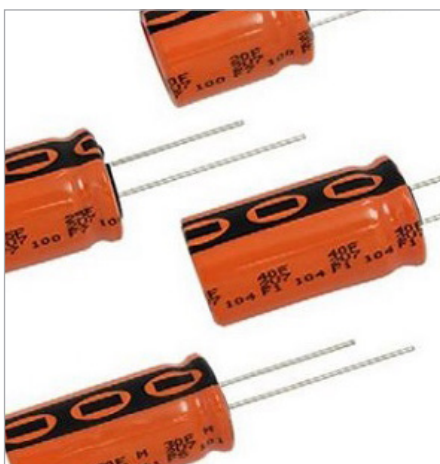
The TDK EPCOS compact S14 AdvanceD-MP series of metal oxide disk varistors features smaller dimensions with the same excellent performance as comparable S14 AdvanceD-MP types. The disk diameters of the B72214P2 varistors range from 13mm to 14mm, a reduction of approximately 3mm. Like their current S14 counterparts, these components offer a maximum surge current capability of 6kA at 8µs/20µs according to IEC 62368-1. The compact S14 series covers a wide operating voltage range from 130VRMS to 460VRMS. The multiple pulse varistors are designed to be used in power supplies as the primary protection against low-level repetitive surge currents. Their optimised design results in an improved derating performance over time. All types have UL, CSA, VDE and IEC approval.

### Features and benefits

- High performance with smaller disk diameter
- Wide operating voltage range 130VRMS to 460VRMS
- All types duty cycle @ 6kV/3kA = >10 pulses, according to IEC 62368-1; G.8.2 and IEC 60950-1; annex Q, IEC 61051-2
- All types in @ 3kA = >15 impulses according to UL 1449, 4<sup>th</sup> edition surge current generator (8µs/20µs), type 5 listed
- Multiple pulse handling capability

[BUY NOW](#) 

## VISHAY - 235 EDLC-HVR ENYCAP™ 3V RUGGEDISED ENERGY STORAGE CAPACITORS



[VIEW PRODUCT DETAILS](#) 

Vishay's 235 EDLC-HVR series of 3V ruggedised ENYCAP™ electrical double-layer energy storage capacitors has been created for energy harvesting and power backup applications in harsh, high humidity environments. 235 EDLC-HVR ENYCAP capacitors are the industry's first such high voltage devices to offer useful life of 2,000 hours at +85°C and meet the highest class of moisture resistance: the biased 85°C/85% RH 1,500-hour test.

### Features and benefits

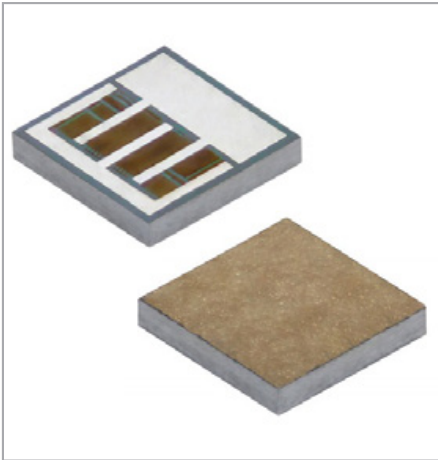
- Rated voltage: 3V
- Available in through-hole (radial) version
- Useful life: up to 2,000hrs at +85°C
- Ruggedised for high humidity operation
- Rapid charge and discharge
- Maintenance-free, no service necessary

### Applications

- Power backup
- Burst power support
- Storage devices for energy harvesting
- Micro UPS power sources
- Energy recovery

[BUY NOW](#) 

## VISHAY - IGBR SERIES HIGH POWER BACK-CONTACT THIN FILM RESISTOR



[VIEW PRODUCT DETAILS](#) 

The Vishay IGBR series is a thin film, high power, back-contact resistor family. With case sizes ranging from 0202 to 0808, the devices offer a miniature option for high power applications. The main features of the IGBR family are low inductance, small size, and single wirebond requirements.

### Features and benefits

- Low inductance
- Only one wire bond required- up to 6 mils diameter
- Moisture-resistant
- Small size

### Applications

- Gate resistor for IGBT-based power converters
- Current limiting for LED lighting
- High power
- Alternative energy
- Hybrid assemblies

[BUY NOW](#) 

## VISHAY - IHDF-1300AE-10 SERIES EDGE-WOUND THROUGH-HOLE INDUCTORS



[VIEW PRODUCT DETAILS](#) 

Vishay's IHDF edge-wound, through-hole inductor with rated current up to 72A and saturation current up to 230A is ideal for industrial and military applications. Featuring ferrite core technology and a low 15.4mm maximum profile, the IHDF-1300AE-10 operates over a demanding temperature range from -55°C to +125°C with low AC and DC power losses and excellent heat dissipation.

### Features and benefits

- Rated current up to 72A
- Saturation current up to 230A
- Features ferrite core technology for high efficiency where AC losses are critical
- Low 15.4mm maximum profile
- Operating temperature range from -55°C to +125°C
- Edge-wound coil provides low DCR of 1.1mm maximum

### Applications

- DC-DC converters, inverters, motor and switching noise suppression, and high power switch mode power supplies
- Industrial solar systems and charging stations for electric vehicles
- Military defense systems

[BUY NOW](#) 

## VISHAY - IHDM-1008BC-3A SERIES AUTOMOTIVE EDGE-WOUND INDUCTORS



[VIEW PRODUCT DETAILS](#) 

Vishay IHDM automotive grade edge-wound, through-hole are designed with a rated current up to 150A, and are ideal for under the hood applications. Featuring powdered iron alloy core technology, the IHDM-1008BC-3A provides stable inductance and saturation over a demanding operating temperature range from -40°C to +180°C with low power losses and excellent heat dissipation. Low DCR minimises losses and improves rated current performance for increased efficiency 30% higher rated current and 30% higher saturation current levels at +125°C compared to competing ferrite-based solutions. Soft saturation provides a predictable inductance decrease with increasing current, with stable inductance across the operating temperature range. Vishay can customise the device's mounting method, and performance, upon request. Options include bare copper, surface-mount, and press fit.

### Features and benefits

- High temperature continuous operation, up to +180°C with no aging
- Low DCR to minimise losses and reduce temperature rise
- Powdered iron alloy core technology provides stable inductance and saturation over operating temperature with satisfactory core losses

### Applications

- High current and high temperature applications
- DC-DC converters
- High current motor and switching noise suppression

[BUY NOW](#) 

## VISHAY - IHLE-505FH-51/5050FH-5A SERIES INTEGRATED E-SHIELD INDUCTORS



[VIEW PRODUCT DETAILS](#) 

Vishay expands its IHLE series of low profile, high current inductors featuring integrated e-shields for the reduction of EMI with commercial and automotive grade devices in the 5050 case size. The IHLE-5050FH-51 and IHLE-5050FH-5A lower costs and save board space by eliminating the need for separate board-level faraday shielding.

### Features and benefits

- Integrated e-shields reduce EMI
- High temperature operation to +155°C
- Offered in 5050 case size
- Coplanarity of their four terminals within  $\leq 100\mu\text{m}$
- AEC-Q200 qualified (IHLE-5050FH-5A)
- Handle high transient current spikes without saturation
- RoHS-compliant, halogen-free, and Vishay Green

### Applications

- Energy storage in DC-DC converters and high current filtering
- Desktop PCs, and servers; high current POL converters; low profile, high current power supplies; and battery-powered devices
- Automotive engine and transmission control units, diesel injection drivers, noise suppression for motors, windshield wipers, power mirrors and seats, entertainment/navigation systems, heating and ventilation blowers, and LED and HID lighting

## VISHAY - IHLP-1212AZ-5A, IHLP-1212BZ-A1 AND IHLP-1212BZ-5A AUTOMOTIVE GRADE INDUCTORS



[VIEW PRODUCT DETAILS](#) 

The Vishay IHLP-1212AZ-5A, IHLP-1212BZ-A1 and IHLP-1212BZ-5A series are low profile and high current inductors in the company's smallest automotive-qualified case size to date: the 3.3mm by 3.3mm 1212. Designed to save space in next-generation ADAS and sensor applications, the Vishay Dale IHLP-1212AZ-5A, IHLP-1212BZ-A1, and IHLP-1212BZ-5A combine high operating temperatures of up to +155°C with extremely low profiles down to 1mm.

### Features and benefits

#### IHLP-1212BZ-5A

- Shielded construction
- High temperature, up to +155°C
- Frequency range up to 1MHz

#### IHLP-1212BZ-A1

- Shielded construction
- Frequency range up to 5MHz
- Lowest DCR/μH, in this package size

#### IHLP-1212AZ-5A

- Shielded construction
- High temperature, up to +155°C
- Lowest DCR/μH, in this package size

### Applications

#### IHLP-1212BZ-5A

- Engine and transmission control units
- Diesel injection drivers
- DC-DC converters for entertainment/navigation systems

#### IHLP-1212BZ-A1

- Engine and transmission control units
- Diesel injection drivers
- DC-DC converters for entertainment/navigation systems

#### IHLP-1212AZ-5A

- Engine and transmission control units
- Diesel injection drivers
- DC-DC converters for entertainment/navigation systems

## VISHAY - LPSA 300/600/800 AEC-Q200 QUALIFIED HIGH POWER RESISTORS



[VIEW PRODUCT DETAILS](#) 

The Vishay LPSA 300/600/800 are the first high power resistors on the market to be offered with the AEC-Q200 automotive qualification. Designed for direct mounting on a heatsink, the LPSA 300, LPSA 600, and LPSA 800 deliver high power dissipation and pulse handling capabilities to help designers reduce component counts and lower costs in automotive applications.

- High power dissipation enables designers to replace multiple lower power components with a single resistor in applications that use a heatsink and require space savings
- High pulse capability allows designers to replace larger wirewound resistors to save board space

### Features and benefits

- AEC-Q200 qualified
- Designed for direct mounting on a heatsink
- Rated power of 300W, 600W, and 800W
- Pulse capability from 400J to 1500J for pulses from 0.05s to 0.5s
- High temperature operation to +175°C
- Broad range of resistance values from 0.03Ω to 900kΩ
- High isolation voltage up to 12kVRMS
- RoHS-compliant
- Non-inductive design
- Tolerances down to ±1%
- Superior automotive reliability test results (i.e., extensive temperature cycling at 1,000 cycles and 1,000 hours of operational life)

### Applications

- Precharge, high energy discharge, dummy load, or emergency discharge resistors for inverters, and converters in Electric Vehicles (EV), Hybrid Electric Vehicles (HEV), and Plug-in Hybrid Electric Vehicles (PHEV)

## VISHAY - MKP385E AUTOMOTIVE GRADE AC AND PULSE METALLISED POLYPROPYLENE FILM CAPACITORS



[VIEW PRODUCT DETAILS](#) 

The Vishay MKP385E series of automotive grade AC and pulse metallised polypropylene film capacitors is ideal for hybrid and electric vehicles. With a maximum operating temperature of +125°C (observing voltage derating), MKP385E series devices ensure compliance with IEC 60384-17 and AEC-Q200 revision D, while withstanding Temperature Humidity Bias (THB) testing of +60°C, 93% RH for 56 days at rated voltage.

### Features and benefits

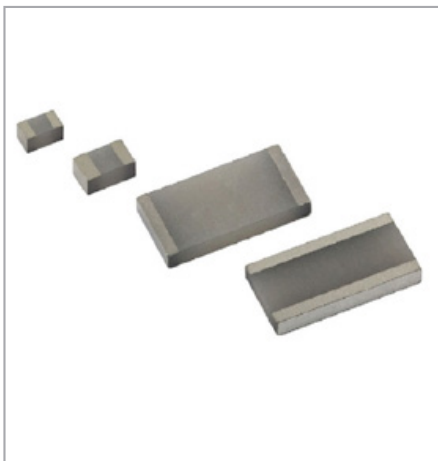
- Maximum operating temperature of +125°C (observing voltage derating)
- Ensure compliance with IEC 60384-17 and AEC-Q200 revision D
- Withstand THB testing of +60°C, 93% RH for 56 days at rated voltage
- Available in eight rated voltages from 400VDC to 2500VDC
- Devices with voltage ratings of 630VDC and below feature a mono construction
- Devices with voltages above 630VDC offer a series film construction
- Rated capacitance from 0.001µF to 15µF
- Low ESR down to 4m
- High ripple current capabilities up to 19.3A
- RoHS-compliant
- Customisable on request

### Applications

- High temperature and automotive applications such as onboard and inductive charging systems
- Battery management
- High pulse and high frequency currents
- Snubbing
- Resonant converters in hybrid and electric vehicles

[BUY NOW](#) 

## VISHAY - THERMAWICK™ THJP SERIES SMD THERMAL JUMPER CHIP



[VIEW PRODUCT DETAILS](#) 

The Vishay ThermoWick™ THJP series surface-mount thermal jumper chip allows designers to transfer heat from electrically isolated components by providing a thermal conductive pathway to a ground plane or common heatsink.

### Features and benefits

- Electrically isolated thermal conductor
- Aluminum nitride substrate with high 170W/m
- K thermal conductivity
- Reduces the temperature of connected components by over 25%
- Low capacitance down to 0.07pF
  - > Ideal for high frequency and thermal ladder applications
- Available in six case sizes from 0603 to 2512, with custom sizes available
  - > 0612 and 1225 cases feature long side terminations for additional heat transferring capability

- Available with lead (pb)-bearing and lead (pb)-free wraparound terminations

### Applications

- Power supplies and converters
- RF amplifiers
- Synthesizers
- Pin and laser diodes and filters for AMS, industrial, and telecommunications applications

## AIMTEC – AME3-HAVZ SERIES SMART HOME APPLIANCE 3W AC-DC CONVERTER



[VIEW PRODUCT DETAILS](#) 

The Aimec AME3-HAVZ is a 3W AC-DC converter, which is targeted at smart home and IoT applications. The AME3-HAVZ series features a compact size, high efficiency and reliability. It is Aimtec’s first converter to be designed to meet EN/UL 60335, a requirement for home appliances. This series follows our cost-effective product family manufacturing process and offers multiple safety features such as output short circuit, over current and over voltage protection. It also comes standard with a high 4,000VAC isolation for optimal performance.

### Features and benefits

- Universal input: 85VAC to 264VAC/120VDC to 370VDC
- Standby power consumption as low as 0.2W
- High isolation voltage up to 4,000VAC
- Output short circuit, over current, over voltage protection
- EN/UL62368, EN/UL60335, EN/UL60950
- EMI performance meets CISPR32/EN55032
- Class B (with internal filter)

### Applications

- Industrial
- Automation
- Test equipment

## ARTESYN – AGQ500 SERIES QUARTER-BRICK ISOLATED DC-DC CONVERTERS



[VIEW PRODUCT DETAILS](#) 

The Artesyn AGQ500 series quarter-brick isolated DC-DC converter provides a single, regulated and low noise output. The AGQ500-48S50 has a 50V/10A output. It has a telecom input range of 36VDC to 75VDC and is designed primarily for use with standard 48V telecommunications equipment supplies. The converter’s main application area is in low power and Remote Radio Head (RRH) telecommunications applications.

### Features and benefits

- Delivers up to 10A output current
- Ultra-high efficiency 94% typ. at full load
- Wide input range: 36V to 75V
- Excellent thermal performance
- No minimum load requirement
- Basic isolation
- High power density
- Low output noise
- Trim function: 50% to 114%

## ARTESYN – AXA SERIES 20W SINGLE OUTPUT 18VIN TO 75VIN DC-DC CONVERTER



[VIEW PRODUCT DETAILS](#) 

The Artesyn AXA series of high-input isolated DC-DC converters features an ultra wide 4:1 input voltage range of 18VDC to 75VDC and is primarily designed for use with nominal 48V supplies. There is a choice of five single output models, offering voltages of 3.3V, 5V, 12V, 15V or 24V. The converters are fully encapsulated in a compact 25.4mm x 25.4mm metal case incorporating an isolated baseplate and have a height of just 10.2mm. An optional clip-on heatsink is available for convection cooling. Standard features include 1,500VDC input/output isolation, remote ON/OFF and hiccup mode short-circuit protection.

### Features and benefits

- Package size: 25.4mm x 25.4mm x 10.16mm
- Ultra-wide 4:1 input range: 9Vin to 36Vin, 18Vin to 75Vin
- Very high efficiency up to 90%
- Operating temperature range: -40°C to +85°C
- Output voltage adjustable
- I/O isolation voltage 1,500VDC
- Remote ON/OFF control
- Metal case with isolated baseplate
- CSA/UL/IEC/EN 60950-1 safety approval

## ARTESYN – BDQ1300 SERIES 1/4-BRICK DC-DC CONVERTER



[VIEW PRODUCT DETAILS](#) 

The Artesyn BDQ1300 series quarter-brick is an isolated DC-DC converter that produces a single 12V nominal output. Rated at 1300 watts, this converter can deliver up to 107 amps output current and has no minimum load requirement.

It has an input voltage range of 40V to 60V and is primarily designed for use with standard 48V supplies in computing and server applications, as well as regulated 48V supplies in communications equipment.

### Features and benefits

- Delivers up to 1300W
- Ultra-high efficiency above 97%
- Startup pre-bias
- Input range: 40V to 60V
- PMBus™ function (BDQ1300)
- Parallel current sharing (BCQ1300)
- Excellent thermal performance
- No minimum load requirement
- Fixed switching frequency
- Base-plate for contact cooling or heatsink mounting
- ROHS 3.0 (2011/65/EU) compliant
- Input under voltage lockout
- Input over voltage lockout
- Output over current protection
- Output over voltage protection (BDQ1300)
- Over temperature protection
- Pin length option: 4.6mm

## BEL POWER SOLUTIONS – 700INV60-120-240-9G SERIES HIGH EFFICIENCY DC-AC INVERTER



[VIEW PRODUCT DETAILS](#) 

Bel Power Solutions' 700INV60-120-240-9G is a high-efficient DC-AC inverter that converts high-voltage DC power into split phase AC power 120VAC to 240VAC required to drive AC accessory loads directly from the high voltage DC drive or battery bus. The liquid cooled DC-AC inverter operates at input voltages from 400VDC to 850VDC and a power range up to 6,000W. The DC-AC inverter utilises CAN communication to the vehicle controller which allows selection of operational modes and frequency selection. The DC-AC inverter is built in a sealed aluminum enclosure, ready to be mounted to the vehicle chassis and is a commercial-off-the-shelf solution for electric vehicle manufacturers and developers.

### Features and benefits

- 93% typical efficiency
- Input voltage range: 400VDC to 850VDC
- Power rating of 1 module 6kW, possible parallel synchronised
- Operation up to 6 modules with total power up to 32kW or 36kW
- Full galvanic isolation between input and output
- CAN bus serial interface
- Over temperature, output overvoltage and overcurrent protection

### Applications

- Hybrid and electric vehicles

## BEL POWER SOLUTIONS – ABC800 AND MBC800 SERIES 800W AC-DC U-CHANNEL POWER SUPPLIES



[VIEW PRODUCT DETAILS](#) 

Bel Power Solutions ABC800 series and MBC800 series are U-channel power supplies ideal for industrial (ABC series) and medical (MBC series) applications and available in a variety of single output voltages. The MBC800 series is designed and approved to the latest medical standards (EN/IEC 60601-1), providing 2 x MOPP isolation for class I and class II applications. These medical power supplies are ideal for monitoring, imaging, home health care and equipment, as well as surgical and therapy devices, diagnostic, drug pump, dialysis and hospital beds.

### Features and benefits

- ABC800
- 800W standard
- Input voltage range: 85VAC to 264VAC
- Size: 127mm x 216mm x 41mm
- 5V stand by provision
- Convection or forced air cooling
- Universal input
- Current sharing
- Open frame
- Peak power capability MBC800
- 800W standard



## BEL POWER SOLUTIONS – ABE1000 AND MBE1000 SERIES 1000W AC-DC ENCLOSED POWER SUPPLIES



[VIEW PRODUCT DETAILS](#) 

[BUY NOW](#) 

Bel Power Solutions ABE1000 series and MBE1000 series of enclosed power supplies are ideal for industrial (ABE series) and medical (MBE series) applications and available in a variety of single output voltages, are now available. The ABE1000 series features a wide universal AC input range of 85VAC to 264VAC, offering up to 1,000W of output power with an integrated fan, in a compact footprint (127mm x 241.5mm x 41mm) and with a variety of single output voltages. The high efficiency and high-power density of the ABE1000 series ensures minimal power loss in end-use equipment, thereby facilitating higher reliability, easier thermal management and meets regulatory approvals for environmentally-friendly end products.

### Features and benefits

#### ABE1000 Series

- 127mm x 241.5mm x 41mm
- Universal input
- Current sharing option
- Peak power capability
- 5VDC stand by
- 12V fan output

#### MBE1000 Series

- 127mm x 241.5mm x 41mm
- Approved to EN60601
- Dual fusing
- Current sharing option
- Peak power capability
- Standard IEC60601-1-2 : 2014 (4th edition)

#### ABE1000 Series

- Instrumentation
- Lighting
- Industrial applications
- Applied computing
- Renewable energy
- Test and measurement
- Robotics
- Wireless communication

#### MBE1000 Series

- Diagnostic
- Drug pump
- Dialysis
- Hospital beds
- Home health care
- Monitoring
- Imaging
- Therapy devices

## BEL POWER SOLUTIONS – PES2200 SERIES 2200W HIGH DENSITY FRONT-END POWER SUPPLY



[VIEW PRODUCT DETAILS](#) 

The PES2200-12-080xA is a 2200 Watt AC to DC, power factor corrected (PFC) power supply that converts standard AC power into a main output of +12 VDC for powering intermediate bus architectures (IBA) in high performance and reliability servers, routers, and network switches.

The PES2200-12-080xA utilises full digital control architecture for greater efficiency, control, and functionality. This power supply meets international safety standards and displays the CE-Mark for the European Low Voltage Directive (LVD).

### Features and benefits

- PES2200-12-080NA
- High efficiency, meet 80 plus "Platinum" efficiency requirement
- Auto-selected input voltage ranges: 90VAC to 140VAC, 180VAC to 264VAC
- AC input with active power factor correction
- 2200W continuous output power capability PES2200-12-080xD
- Wide input voltage range: -40VDC to -75VDC
- 2,200W continuous output power capability
- Always-on 12VSB/3.5A standby output
- Hot-plug capable

### Applications

- Networking switches
- Servers and routers
- Telecommunications

## BEL POWER SOLUTIONS – TCP4000 SERIES FANLESS 4KW POWER SUPPLY



[VIEW PRODUCT DETAILS](#) 

The Bel Power Solutions TCP4000 series converts worldwide three-phase input voltage (180VAC to 528VAC) to an adjustable low voltage, from 30VDC to 100VDC, optimised at 90V, which is ideal for semiconductor lasers. The TCP4000 also includes filtering and high specification output e-caps with high ripple current rating, high temperature rating and long life, making it ideal for semiconductor cutting, drilling, welding, marking, patterning and other processing techniques using lasers.

### Features and benefits

- World-wide 3-phase input voltage range (nom. 115V to 277V/200V to 480V)
- Power factor >0.94
- High power density 16W/in<sup>3</sup>
- 94% typical efficiency
- Parallel operation up to 16 units (up to 57.6kW)
- Cold-plate cooling system
- 0°C to +50°C of cold-plate surface, 0°C to +70°C of ambient air temperature

- Possibility to install 4 units in 2U 19" rack
- Advanced performance for fast dynamic and pulsed load up to 100kHz (optional)
- RS485 interfaces
- Wide adjustable output voltage range
- Fast output voltage set response (5ms)
- Active current sharing
- SEMI F47 compliant

## BEL POWER SOLUTIONS – TXP4000 SERIES 4000W AC-DC POWER SUPPLY



[VIEW PRODUCT DETAILS](#) 

The Bel Power Solutions TXP4000 series of AC-DC converters employs a PFC front-end stage and an isolated DC-DC stage to convert the 3-phase input voltage to a low DC output voltage in a broad array of industrial applications where high efficiency is a requirement, with emphasis on both reliability and long product life. The TXP4000 series also include DSP technologies which enable monitoring of electrical parameters (including input voltage of all 3-phases) and allow control of the PSU from a system controller. RS485/CAN bus communication is available to command, monitor and provide diagnostic information that can be used to interface with a system controller.

### Features and benefits

- World-wide 3-phase input voltage range (nom. 200Vrms to 480Vrms)
- Power factor >0.94
- High power density 16W/in<sup>3</sup>
- 93% typical efficiency
- Parallel operation of up to 8 units (28kW/32kW)
- Serial operation of up to 4 units
- Internal fan cooling system
- -25°C to +55°C of ambient temperature
- Possibility to install 3 units in 2U 19" rack
- RS485/CAN bus interfaces
- Adjustable output voltage range

- Auxiliary output 12V/0.8A
- Active current sharing

### Applications

- Industrial, process and control, machinery PSU with universal input voltage range (180VAC to 528VAC line to line) and configurable output voltage

## DELTA - MEB-500A24F SERIES 24V 500W POWER SUPPLY



[VIEW PRODUCT DETAILS](#) 

The Delta MED-500A24F is an enclosed medical power supply with built-in fan and active PFC. It operates on universal AC input range from 90VAC to 264VAC and has a wide operating temperature of -20°C to +70°C. Additional features include low leakage current of 0.3mA at single fault condition, type BF patient access leakage currents, and electric shock protection compliance with 2 x MOPP requirements.

### Features and benefits

- Safety approvals to IEC 60601-1 Ed. 2, 3.1 and IEC 60950-1 and IEC 62368-1
- Compliant with IEC 60601-1-2 ed. 4 requirements
- High power density
- Built-in remote ON/OFF
- -5V/1A standby output
- 12V/0.5A fan output for system
- Conformal coating on PCB

## DELTA - MEP-25A15J SERIES MEDICAL AC-DC OPEN FRAME POWER SUPPLY



[VIEW PRODUCT DETAILS](#) 

The Delta MEP-25A15JBNA series provides a 15V output voltage and can operate in temperatures ranging from -10°C to +50°C, with de-rating from +50°C to +70°C. Other features include low touch current and electric shock protection complying with 2 x MOPP. The MEP series is certified according to EMC standards EN 55011 for industrial, medical equipment and EN 55032 for Industrial Technology Equipment (ITE) equipment. It is fully compliant with RoHS directive 2011/65/EU for environmental protection. Risk management report can be provided upon request.

### Features and benefits

- Safety approvals to IEC 60601-1 3.1rd ed. and IEC 60950-1
- Compliant with IEC 60601-1-2 4th ed. requirements
- Low touch current (<70uA normal and 210uA single fault)
- Over-voltage/load/temperature and short circuit protections
- 2 x MOPP (means of patient protection)

## DELTA - PJH SERIES OPEN FRAME POWER SUPPLIES



[VIEW PRODUCT DETAILS](#) 

The Delta PJH series is an open frame power supply with 300W output power. The PJH-24V300WBCA and PJH-36V300WBCA provide up to 240W of convection cooled power without an additional metal plate. With external fan cooling, it can provide 300W output power across a wide operating temperature range from -25°C to +70°C. The design is one of the few to meet both IEC 60335 and IEC 61558 in a compact 240W 76.2mm x 127mm convection cooled design, suitable for limited space in household applications. The PJH series is certified to IEC/EN/UL 62368-1 and complies to OVC III for harsh industrial and farming applications.

### Features and benefits

- IEC 60335-1, pollution degree (PD) 3
- IEC 61558-1 and IEC 61558-2-16
- Earth leakage current <0.75mA
- Glow wire test +550°C, +750°C (te - ti = 2s), +850°C
- Input no load power consumption <0.5W
- 300W fan cool, 240W convection cool
- Built-in active PFC, remote ON/OFF, remote sense, power good signal and 12VSB (6W) or optional 5VSB (6W)
- Class I or class II (double isolation) configuration with universal AC input voltage range

- High efficiency up to 94%
- Extreme low temperature cold start at -40°C
- Approval for pollution degree 3

## FLEX POWER MODULES - BMR4615001/001 SERIES POL REGULATORS



[VIEW PRODUCT DETAILS](#) 

The BMR4615001/001 is a variant of the popular BMR461 series of digital Point-of-Load (PoL) regulators. The module provides up to 15A/50W at an adjustable output voltage of 0.6V to 3.3V, which equates to a 25% higher current and power delivery at 3.3V than the previous 12A maximum for that voltage. The input voltage range of the device is 4.5V to 14V. The higher output is in response to customer demands, offering increased current and power in the compact 12.2mm x 12.2mm x 8mm (0.48 x 0.48 x 0.315in) package of the BMR461 series, and hence saving PCB space due to higher power density.

### Features and benefits

- Small package 12.2mm x 12.2mm x 8mm (0.48 x 0.48 x 0.315 in)
- Architects of modern power™ picoAMP™ compliant
- 0.6V to 5V output voltage range
- High efficiency, typ. 96% at 12Vin, 5Vout and 80% load
- Configuration control and monitoring via PMBus
- Adaptive compensation of PWM control loop and fast loop transient response
- Synchronisation input and phase spreading/interleaving
- Voltage tracking and voltage margining
- MTBF 24Mh

## FLEX POWER MODULES – PKJ7200/7300 SERIES DIRECT CONVERTERS



[VIEW PRODUCT DETAILS](#) 

Flex Power Modules announced the PKJ7200 and PKJ7300 series of power modules for railway rolling stock equipment. The modules are designed for the demands of the EN 50155 standard for railway applications and feature a wide input voltage range, surge protection, power interruption and backup, wide operational temperature range, and resistance to shock and vibration. The modules achieve high efficiency of up to 92% at full load, which reduces power dissipation. They are provided in a compact half-brick package, delivering high power density and thus saving space. To handle the multiple different voltages used on trains, they have a wide input range of 60VDC to 160VDC.

### Features and benefits

- Industry standard case dimensions 61mm x 57.9mm x 12.7mm (2.40\*2.28\*0.5 in)
- High efficiency up to 91%
- 4000VDC input to output isolation
- Meets safety requirements according to IEC/EN/UL 62368-1
- Meet requirements of standard EN50155

## FLEX POWER MODULES – PKM7-W SERIES QUARTER-BRICK DC-DC MODULES



[VIEW PRODUCT DETAILS](#) 

The Flex Power Modules PKM7500W and PKM7100W are quarter-brick modules for powering railway rolling stock equipment. The 50W PKM7500W offers an extremely wide input voltage range of 12V to 160V, while the 100W PKM7100W has an input range of 14V to 160V. This wide input voltage range means that equipment designers can use just one DC-DC converter for products intended for use anywhere in the world, which makes installation, qualification and aftermarket support easier. Equipment for use in railway rolling stock must meet a wide range of standard input voltages, which varies from country to country.

### Features and benefits

- Fully encapsulated designs in most cases
- Ultra-wide 4:1 and 8:1 input ranges
- Meets IEC/EN/UL62368-1 (previously 60950-1)
- Isolation voltages from 1500V to 2250V
- MTBF figures up to 8Mhrs

## FLEX POWER MODULES – PMU8000 SERIES POL REGULATORS



[VIEW PRODUCT DETAILS](#) 

Flex Power Modules PMU8000 series of Point-of-Load (PoL) converters provides an excellent price/performance ratio in a compact, low-profile package. The regulators offer high efficiency of typically 95.3% (at half load) and excellent thermal performance, meaning they can be used in harsh conditions. The ultra-miniature regulators include a loop optimisation feature, which enables design engineers to optimise their load transient response for different capacitive loads, thus increasing flexibility in system design.

### Features and benefits

- Small size 7.5mm x 7.5mm x 5.4mm (0.3 x 0.3 x 0.21 in)
- 0.6V to 5.5V output voltage range
- Maximum output current, 6A
- High efficiency, typ. 95.3% at 12 in, 5.5Vout half load
- Adjustable switching frequency (200kHz to 1.6MHz)
- Control loop with fast load transient response
- Allows synchronisation to an external clock
- Meets safety requirements according to IEC/EN/UL 62368-1
- MTBF TBD Mh

## MEAN WELL – DBUF20/40 SERIES 20A/40A DIN RAIL BUFFER MODULES



[VIEW PRODUCT DETAILS](#) 

The MEAN WELL DBUF40-24 buffer module is a supplementary device for regulated DC 24V power supplies. The buffer module utilises maintenance free electrolytic capacitors to store energy thus eliminates the need for periodic replacement compared to more costly batteries, which also have shorter functional life span. The DBUF40-24 comes with comprehensive protection features like over voltage, over current and short-circuit protections. Buffer modules can be connected in parallel to increase the output ampacity or the hold-up time.

### Features and benefits

- Buffering with electrolytic capacitors instead of lead acid batteries
- Type buffering time of 250ms @ 22VDC/40A
- Buffer mode selectable by switch:
  - > Fixed mode at 22VDC
  - > Dynamic mode for vin-1VDC
- LED indicator for signal status
- Supports parallel connection to extend buffering time
- Cooling by free air convection
- -25°C to +75°C wide operating temperature

### Applications

- Industrial control systems
- Semiconductor fabrication equipment
- Factory automation
- Electro-mechanical apparatus

## MEAN WELL - DDRH-60 SERIES 60W ULTRA WIDE 150~1500VDC INPUT DIN RAIL DC-DC CONVERTER



[VIEW PRODUCT DETAILS](#) 

MEAN WELL released its first ultra-wide range input 60W DIN rail DC-DC converter, the DDRH-60 series. Key features include: 150VDC to 1500VDC ultra-wide input range, 4KVDC input-output isolation, -30°C to +80°C wide temperature range, operating altitude up to 5000m, potted design with improved environment protection, free air convection cooling, doesn't require external components for EMC performance, low ripple and noise, DIN rail mountable design, and complete protection features. The product is suitable for solar and wind powered renewable energy applications, as well as DC power distribution systems that requires voltage conversion from high voltage to low voltage DC.

### Features and benefits

- 150VDC to 1500VDC 10:1 ultra-wide input range
- 57mm slim width, saving DIN rail space
- Potted with silicone gel, provides dust and moisture protection and free air convection cooling capability
- -30°C to +80°C ultra-wide temperature range (>+55°C de-rating)
- Built-in DC OK relay contact
- Operating altitude up to 5000 meters
- Protections: short circuit/overload/over voltage/over temperature/DC input under voltage/DC input reverse polarity
- Adjustable output voltage (100% to 120%)
- Suitable for installation on DIN rail TS-35/7.5 or 15

- Safety approvals: EAC/CE (IEC62109-1, EN55302)
- Dimensions (WxHxD): 57mm x 93.5mm x 105mm

### Applications

- Photovoltaic power generation
- High voltage frequency conversion
- Industrial control system
- Semiconductor fabrication equipment
- Electro-mechanical apparatus
- DC bus centralised application

## MEAN WELL - GEM06I SERIES 6W MEDICAL GRADE AC PLUG-INTERCHANGEABLE ADAPTOR



[VIEW PRODUCT DETAILS](#) 

The MEAN WELL GEM06I is a highly reliable, 6W wall-mounted style single-output green medical adaptor series, which is compact and convenient for carry. This product is equipped with an interchangeable AC plug (4 types, including European type, USA type, U.K. type and Australian type) that makes it very suitable for businessmen to use in the major countries around the globe. GEM06I is a class I power unit (no FG), accepting the input range from 80VAC to 264VAC that it can satisfy the demands for various types of medical electrical devices. The circuitry design meets the international medical standards (2\*MOPP), having an ultra low leakage current (<55µA), fitting the medical devices in direct electrical contact with the patients.

### Features and benefits

- Interchangeable AC plugs (plug kit sold separately)
- Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1/ES60601-1-11, EN60601-1/EN60601-1-11
- Extremely low leakage current
- No load power consumption <0.3W
- Energy efficiency level I
- -20°C to +70°C wide range working temperature
- Class I power (no earth pin)
- Protections: short circuit/overload/over voltage
- Fully enclosed plastic case

### Applications

- Blood glucose meter
- Blood pressure meter
- Nebuliser
- Inhaler
- Portable medical device
- Sleep apnea devices

## MEAN WELL - LCM-25KN SERIES 25W MULTIPLE-STAGE CONSTANT CURRENT MODE LED DRIVER



[VIEW PRODUCT DETAILS](#) 

The MEAN WELL LCM-25KN series is a 25W AC-DC constant current mode output LED driver featuring multiple levels selectable by dip switch and a KNX interface to avoid using the complicated KNX-DALI gateway. The LCM-25KN operates from 180VAC to 277VAC and offers different current levels ranging between 350mA and 1050mA. Thanks to its efficiency up to 85% and the fanless design, the entire series is able to operate in a temperature range of -30°C to +85°C under free air convection. Additionally, the LCM-25KN is equipped with push dimming and synchronisation so as to provide the optimal design flexibility for LED lighting systems.

### Features and benefits

- Constant current mode output with multiple levels selectable by dip switch
- KNX/EIB protocol
- Flicker free design
- Supports Emergency Lighting (EL)
- Integrated constant light output
- Integrated KNX push button interface
- Synchronisation up to 10 units
- Functions: manual dim, operation hours

### Applications

- LED indoor lighting
- LED office lighting
- LED architectural lighting
- LED panel lighting power consumption feedback, log/linear curve selection...etc

## MEAN WELL - LSP-160 SERIES 160W LOW PROFILE NOISE-FREE ENCLOSED POWER SUPPLY



[VIEW PRODUCT DETAILS](#) 

The MEAN WELL LSP series is a miniature enclosure-type power supply, which has been developed to provide equipment with high stability and redundancy functions. The slim width (55mm) and low profile (20mm) case with fanless design is a perfect fit for indoor noise-free equipment or narrow-sized display applications.

### Features and benefits

- Slim width and low profile
- Fanless design for no noise environment
- Protections: short circuit/over voltage/over temperature/over load
- Design with DC OK and redundant function (<5V)
- Semi-potting design for high moisture environment
- LED indicator for power on

### Applications

- Industrial automation machinery
- Industrial control systems
- Mechanical and electrical equipment
- Electronic instruments and apparatus
- Household appliances
- LED display applications



## MEAN WELL - MDS15/20 SERIES MEDICAL GRADE DC-DC CONVERTERS



[VIEW PRODUCT DETAILS](#) 

The MEAN WELL 15W and 20W MDS15 and MDS20 series are the higher power expansion to the previously released MDS01/02 DC-DC converter series. The key features of these two series include: 2"x 1" miniature footprint, -40°C to +90°C ultra-wide operating temperature, <math><5\mu\text{A}</math> low leakage current, and compliance with 2xMOPP/4KVAC isolation. With the certification to the IEC60601-1 medical safety standard, the MDS15 and MDS20 are suitable for enhancing medical system isolation levels and reducing patient contact leakage current for applications such as oxygen monitors, clinical mobile stations, surgical room displays and oral care equipment.

### Features and benefits

- 2"x 1" industry-standard footprint and pin assignment
- 2:1 wide range input
- Approval: IEC60601-1 (2xMOPP)
- Ultra-low patient contact leakage <math><5\mu\text{A}</math>
- 4KVAC I/O isolation
- -40°C to +90°C ultra-wide operating temperature range
- Protections: short circuit/overload/input under voltage

### Applications

- Medical devices
- Medical oxygen monitors
- CT scanning
- Medical carts
- Oral care equipment

## MEAN WELL - PWM-60KN/120KN PWM OUTPUT KNX LED DRIVER



[VIEW PRODUCT DETAILS](#) 

The MEAN WELL PWM-KN series is an AC-DC LED driver featuring a constant voltage mode with PWM style output, which is able to maintain colour temperature and brightness homogeneity when driving all kinds of LED strips. The driver also includes a KNX interface to avoid using the complicated KNX-DALI gateway.

### Features and benefits

- Integrated KNX control protocol
- Single channel and constant voltage PWM style output with user changeable frequency up to 4KHz compliant IEEE 1789-2015 no risk
- Plastic housing with class II design
- Built-in active PFC function
- Standby power consumption <math><0.5\text{W}</math>
- Typical lifetime >50,000 hours

### Applications

- LED strip lighting
- Indoor LED lighting
- LED decorative lighting
- LED architecture lighting

[BUY NOW](#) 

## MEAN WELL - SLD-50 SERIES 50W SLIM AND LINEAR TYPE LED DRIVER



[VIEW PRODUCT DETAILS](#) 

The MEAN WELL ultra-slim SLD-50 series is officially released after the SLD-80 series. With the launch of SLD-50 series, the whole linear type product line is fully completed. The SLD series is especially suitable for decorative lighting/advertising light boxes and linear luminaires.

### Features and benefits

- Wide input range 110VAC to 305VAC
- Slim and linear housing design
- Built-in active PFC function and efficiency up to 90%
- Design with class 2/II and SELV
- Protections: short circuit/over voltage/over temperature

### Applications

- Panel lighting
- Strip lighting
- Decoration lighting
- Troffer lighting
- Signage and displays
- Cove lighting

## MEAN WELL - UHP-2500-36 SERIES 2500W 36V FANLESS CONDUCTION-COOLED POWER SUPPLY



[VIEW PRODUCT DETAILS](#) 

The MEAN WELL UHP-2500 series is a 2500W single-output slim type power supply with a 60mm low profile design. Adopting the full range 90VAC to 264VAC input, the entire series provides an output voltage line of 24V, 36V and 48V. In addition to the high efficiency up to 96%, the whole series operates from -30°C to 70°C under air convection without fan. The UHP-2500 includes complete protection functions and 2G anti-vibration capability, complying with international safety regulations such as TUV EN62368-1, UL62368-1, and EN61558-1 and EN60335-1. The UHP-2500 series serves as a high performance power supply solution for various industrial applications.

### Features and benefits

- Slim and low profile (60mm)
- Fanless and conduction-cooled design
- Built-in active PFC function
- -30 to +70°C working temperature
- Output voltage and constant current level programmable protections: short circuit/overload/over voltage/over temperature
- Built-in remote ON-OFF control
- DC OK active signal
- Operating altitude up to 5,000 metres
- LED indicator for power on

### Applications

- Industrial automation machinery
- Industrial control systems
- Mechanical and electrical equipment
- Test and measurement
- Laser related machines
- Charging related equipment
- Household appliances

## MEAN WELL - XBG-100/240 SERIES LED DRIVER



[VIEW PRODUCT DETAILS](#) 

The MEAN WELL XBG series is an LED driver with a patented circular case mechanism design for bay light and floodlight applications. The main differences compared with the previous HBG series are the circuit design with constant power output and compliance with the latest safety regulations. In addition, the overall design also conforms to the SELV (Safety Extra-Low Voltage) regulation, which can reduce the complexity of the lighting insulation design and guarantee user's safety.

### Features and benefits

- Full power output at 70% to 100% current range operation
- Wide input range 90VAC to 305VAC with active PFC
- Protections: short circuit/over voltage/over temperature
- Metal housing design with IP67
- Multiple dimming functions: 3 in 1/DALI/DALI 2.0/push dim
- Dimming circuit with isolated for latest safety regulation
- Surge protection with 6KV/4KV

### Applications

- LED bay lighting
- LED stage lighting
- LED spot lighting
- Explosion-proof lighting
- Type HL LED driver or class I division 2

[BUY NOW](#) 

## MURATA POWER SOLUTIONS - PQU650 SERIES 650W AC-DC POWER SUPPLIES



[VIEW PRODUCT DETAILS](#) 

The Murata Power Solutions PQU650 is an open-frame 650W-rated AC-DC power supply. The PQU650 series offers the highest power-density on the market, with forced air- and convection-cooled ambient ratings. The power supply offers a multitude of standard features including wide output voltage adjustment range, auxiliary power rails and a high transient capability, at a competitive price.

### Features and benefits

- Compact high-density design and thermal performance operation to:
  - > 450W convection at +50°C; no derating with input line voltage
  - > 650W with forced airflow at +50°C; no derating with input line voltage
  - > 800W 'power boost' for 30 sec. (at output start-up)
- Safety certification applicable to medical/ audio/video/communication and ITE standards
- +5V aux/standby and 12V fan outputs
- 4" x 6" industry standard footprint; "U" channel form factor with industry "standard" mounting footprints
  - > 40mm max. overall "U" channel height
  - > 42.7mm max. overall height with cover
  - > Choice of screwed or pluggable connector variants
- High efficiency of 95% typical at 50% load

- High power density product, allowing for no fan applications up to 70c amb (with derating)
- Extremely compact size makes them ideal for applications with size constraints
- Optional connections for a wide variety of applications
- PSU provides high power for short durations

### Applications

- Industrial applications
- Medical applications
- Communications
- Test equipment
- Visual signage
- Broadcast
- ATE
- Stage lighting
- PoE
- Datacoms

[BUY NOW](#) 

## MOLEX - 213602 SERIES CERAMIC STACKED GPS PATCH ANTENNAS



[VIEW PRODUCT DETAILS](#)

Molex high-accuracy stacked patch GNSS antennas offer superior signal processing and GPS accuracy for high precision tracking applications such as UAVs, drones, and vehicle tracking and Real Time Kinematic (RTK) systems.

### Features and benefits

- Ceramic patch antenna
- Silver pin
- Stacked patch single feed
- High precision tracking
- Low-profile design

### Applications

- Automotive
- Commercial vehicles
- Industrial

[BUY NOW](#)

## MOLEX - 212330 SERIES 2.4GHZ TO 5GHZ MIMO 4X4 FLEXIBLE ANTENNAS



[VIEW PRODUCT DETAILS](#)

The Molex 212330 series is designed for integration into wireless devices at minimal implementation cost. The side and centre-fed cable flexible antenna enables high-performance RF transmission for the most demanding Wi-Fi applications.

### Features and benefits

- Double sided TESA adhesive
- Highly compact, sidefed monopole antenna
- Cable and connector can be customised
- UFL-type connector
- Micro-coaxial cable, 100mm
- Cable and connector can be customised
- UFL-type connector
- Self adhesive mounting on metal and non-metal surface
- Cable and connector can be customised
- Easy peel and stick
- Highly compact
- Micro-coaxial cable (50mm, 100mm, 150mm, 200mm, 250mm and 300mm options)

### Applications

- Consumer
  - > Connected home
  - > Smart home
- Automotive
  - > Connected vehicle: comfort and infotainment
- Industrial
  - > Smart cities

[BUY NOW](#)

## MOLEX - LTE/GPS COMBO FLEXIBLE ANTENNAS



[VIEW PRODUCT DETAILS](#)

Molex combo antennas offer a combination of long-range connectivity, high power efficiency and easy integration advantages for IoT, GPS and M2M applications.

### Features and benefits

- Two holes on the sides of the antenna
- Compact PCB antenna
- Balanced antenna
- 6 micro coaxial cable length (50mm, 100mm, 150mm, 200mm, 250mm and 300mm)
- Tape liner
- Pick-and-place feature
- Feeding pad
- Grounding pad
- Fixing pads
- Ceramic antenna housing
- Antenna radiator
- Provides design flexibility UFL-type connector

### Applications

- Consumer
- Automotive
- Industrial

[BUY NOW](#)

## MOLEX - RECTANGULAR NEAR FIELD COMMUNICATION (NFC) ANTENNAS



[VIEW PRODUCT DETAILS](#)

Molex rectangular NFC antennas maximise effectiveness of quick, two-way read/write operations over a wide range of detection distances from metallic and non-metallic substrate applications.

### Features and benefits

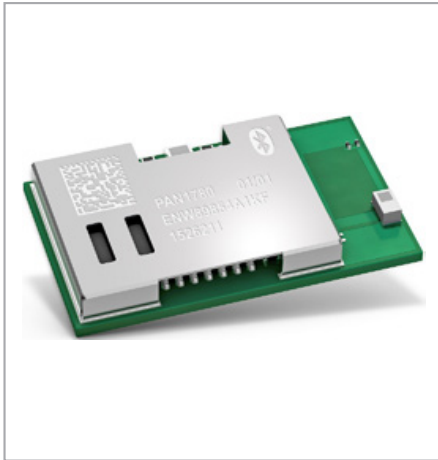
- Flexi material
- Plated pads
- Ferrite layer
- Double-sided adhesive tape with liner (not shown, on underside of antenna)
- Selection of antenna sizes: 15mm x 15mm, 15mm x 25mm, 23mm x 27mm, 34mm x 46mm and 45mm x 55mm

### Applications

- Automotive
- Consumer
- Industrial

[BUY NOW](#)

## PANASONIC INDUSTRY - PAN1780 BLUETOOTH® 5.0 LOW ENERGY WIRELESS MODULE



[VIEW PRODUCT DETAILS](#) 

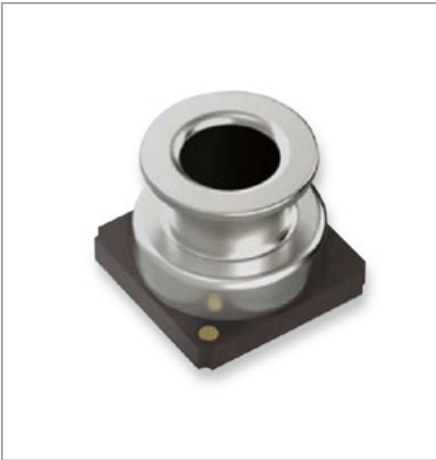
The Panasonic PAN1780, featuring the Nordic nRF52840 single-chip controller. The Bluetooth 5.0 features enable a higher symbol rate of 2Mbps using the high-speed LE 2M PHY or a significantly longer range using the LE coded PHY at 500kb/s or 125kb/s. The channel selection algorithm (CSA#2) improves the performance in high interference environments. Furthermore, the LE advertising extensions allow for much larger amounts of data to be broadcasted in connectionless scenarios. An output power of up to 8dBm and the high sensitivity of the nRF52840 in combination with the LE coded PHY make the module very attractive in applications where a long range is required. In addition the ultra-low current consumption of the PAN1780 makes the module an ideal choice for battery powered devices. With the Cortex® M4F processor, 256kB RAM and the built-in 1MB flash memory the PAN1780 can easily be used in standalone mode, thereby eliminating the need for an external processor, saving complexity, space, and cost. The rich set of security features from the ARM® TrustZone® CryptoCell 310 security subsystem provides the necessary means for secure device operation in the IoT space. The PAN1780 also supports type 2 Near Field Communication (NFC-A) for use in simplified pairing and payment solutions (external antenna required).

### Features and benefits

- Surface mount type dimensions: 15.6mm x 8.7mm x 2mm same
- Form factor as PAN1026A and PAN1762 but smaller pitch same and more pins
- Nordic nRF52840 featuring ARM® Cortex®-M4F With 64MHz
- Bluetooth 5.0 low energy including LE 2M And LE coded PHY
- Embedded 1MB flash memory and 256kB internal RAM includes ARM® TrustZone® CryptoCell® 310 and supports secure boot including Root-of-Trust (RoT)
- Up to 48 general purpose I/Os (GPIO), which are shared by up to 4 SPI, 2 I<sup>2</sup>C, 2 UART, 4 PWM, 8 ADC, 1 NFC-A, 32kHz IN/OUT, nRESET
- USB 2.0 full-speed device interface
- Built-in temperature sensor



## ALPS - HSPPAD143A SERIES WATER PROOF PRESSURE SENSOR



The Alps Alpine HSPPAD143A series single sensor measures air and water pressure and features low current consumption with a dedicated ASIC.

### Features and benefits

- Broad measurement range from 9,000 metres altitude to 10 metres underwater
- 1.8µA low current consumption (in low power mode)
- Use in combination with O-ring provides outstanding water resistance with simple mechanical design
- High sensing resolution with 17-bit digital data output (2Pa/LSB)
- Built-in FIFO memory
- Surface mount type

### Applications

- Wearable devices
- Gas meters

[VIEW PRODUCT DETAILS](#) 

## AMPHENOL ADVANCED SENSORS - FL FLEX SERIES LOW PROFILE NTC TEMPERATURE SENSOR



The Amphenol Advanced Sensors thermometrics type FL low profile NTC temperature sensor consists of an NTC chip thermistor enclosed in a Flat Flexible Circuit (FFC) with a thin-film protective coating. With its low profile (1mm max thickness) and contour-conforming flexibility, this sensor is ideal for tight applications.

### Features and benefits

- Flexible PCB conforms to contours
- Low profile (1mm max. thickness)
- Low mass for fast response
- AEC-Q200 qualified
- RoHS compliant (directive 2002/95/EC)

### Applications

- EV/HEV battery pack temperature sensing

[VIEW PRODUCT DETAILS](#) 

## AMPHENOL ADVANCED SENSORS – JS8746 SERIES HARSH ENVIRONMENT TEMPERATURE SENSOR



[VIEW PRODUCT DETAILS](#) 

The Amphenol Advanced Sensors JS8746 harsh environment temperature sensor has been designed to address all aspects of temperature measurement for HVAC control systems in the container-ship market. Employing materials and build standards that enhance the sensor's ability to withstand water ingress and degradation by the marine environment, the sensor meets statutory requirements for temperature measurement and performance expectations.

### Features and benefits

- HACT exposure: +14 days
- Temperature tolerance rating:  $\pm 0.2^{\circ}\text{C}$  and  $0.15^{\circ}\text{C}$
- Temperature rating:  $-40^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$
- Environmental protection: IP68
- Resistant to salt solutions, Ozone, UV, and a variety of marine environment cleaning detergents
- Inert to trace levels of airborne R134a refrigerant

### Applications

- Industrial process control
- Water management
- HVAC systems
- Refrigeration systems

## AMPHENOL ADVANCED SENSORS – LCIS SERIES MEDIA COMPATIBLE PRESSURE SENSORS



[VIEW PRODUCT DETAILS](#) 

Amphenol Advanced Sensors NovaSensor division LCIS media-compatible pressure sensors feature a high stability SenStable® backside MEMS piezo-resistive chip placed in a board-mountable package. The ceramic button pressure port isolates on-board electronics and allows for operation in hostile environments. These sensors monitor pressure in industrial, medical and transportation applications by producing a voltage output that is linearly proportional to the input pressure.

### Features and benefits

- Pressure ranges: 150psi (1034kPa) and 300psi (2068kPa)
- Integrated EMI noise immunity
- High stability and reliability with silicon MEMS chip
- Absolute and gauge variants
- Ceramic button pressure port
- Miniature size
- Operating temperature:  $-40^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Custom transfer functions available

### Applications

- Industrial process control
- Water management
- HVAC systems
- Refrigeration systems



## BOURNS - BPS125 SERIES ULTRA-LOW PRESSURE DIGITAL PRESSURE SENSOR



[VIEW PRODUCT DETAILS](#) 

Bourns' BPS125 series pressure sensor is based on Microelectromechanical Systems (MEMS) technology. The BPS125 is 3.3V capable and is calibrated for pressure ranges from 250Pa to 1PSI. Designed for advanced sensor needs in industrial automation, energy, building and home control, medical (low/medium risk) and military applications, the BPS125 has been designed to provide high sensitivity/accuracy, long-term reliability and ultra-low pressure sensing with a digital output (I2C). The BPS125 pressure sensor delivers extremely accurate ultra-low pressure sensing capabilities for sensitive applications. This sensor family offers fully calibrated and compensated output for more efficient processes, as well as long-term stability for reliable repeatability.

### Features and benefits

- 3.3V supply
- Ultra-low pressure sensing (250Pa)
- Gauge and differential types
- For use in clean, dry air and non-corrosive gas environments
- Digital I2C output
- RoHS compliant

### Applications

- Industrial
- HVAC systems
- Process monitoring
- Packaging automation
- Medical devices (low/medium risk)
- Diagnostic equipment

[BUY NOW](#) 

## BOURNS - BPS310, BPS320, BPS330 & BPS340 SERIES ENVIRONMENTAL MEMS PRESSURE SENSORS



[VIEW PRODUCT DETAILS](#) 

Bourns' BPS310, BPS320, BPS330 and BPS340 series of environmental sensors are based on Microelectromechanical Systems (MEMS) technology. These four series are designed for customers that require ultra-fast response time, long-term stability and have the ability to do self-calibration. The four series cover a vast array of applications and packaging requirements. The BPS310 has been designed to provide high sensitivity/accuracy for ultra-low pressures. The BPS320 has a robust configuration in a surface mount package for gauge and absolute pressure measurements up to 500PSI. The BPS330 is a through-hole pressure sensor with an aluminum port for low pressure applications that have an operating temperature range up to +125°C. The BPS340 is a surface mount device with pressure ranges of up to 500PSI, and the ability handle certain harsh medias. These models in the Bourns® pressure sensor family are designed for stable performance over the product's lifespan, and the ability to work with a wide range of pressures. Bourns also offers port configuration and calibration customisation for all BPS pressure models.

### Features and benefits

- Uncompensated output
- Absolute, gauge and differential types
- For use in clean, dry air and non-corrosive gas environments
- RoHS compliant

### Applications

- Industrial
- Medical devices (low/medium risk)

[BUY NOW](#) 

## KEMET - C/CT SERIES CLAMP-ON CURRENT SENSORS



[VIEW PRODUCT DETAILS](#) 

KEMET's C/CT series clamp-on current sensors are designed to measure currents in live wires.

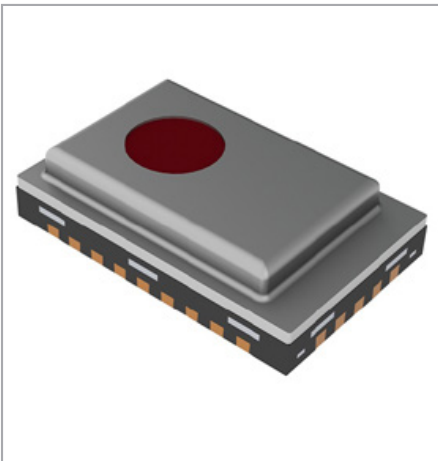
### Features and benefits

- Compact and slim design
- Flat temperature characteristics
- UL 94 V-0 flame retardant rated case
- RoHS compliant

### Applications

- EMS current measurement
- High performance distribution boards
- Power conditioners
- Power monitoring systems
- Inverters and industrial machinery

## KEMET - QFS SERIES I2C-SMD PYROELECTRIC INFRARED FLAME SENSORS



[VIEW PRODUCT DETAILS](#) 

KEMET's QFS pyroelectric flame sensors combine high sensitivity with fast response times and high dynamic range to ensure rapid and accurate detection of small and large flames, nearby or over larger distances. These high quality sensors, in their small SMD package, integrate a digital, current mode read-out offering high responsivity over the full frequency range of flame flicker from 3Hz to 30Hz. Industry standard I2C communication enables plug-and-play connectivity to microcontrollers and allows easy tuning and calibration. Programmable gain and filtering offer maximum flexibility in system design, and various optical filter options are also available. These sensors can be connected together in linear series to allow synchronised sampling across devices. Their long and maintenance-free operational lifetime and various low power modes makes them ideal for any smart or IoT type of applications.

### Features and benefits

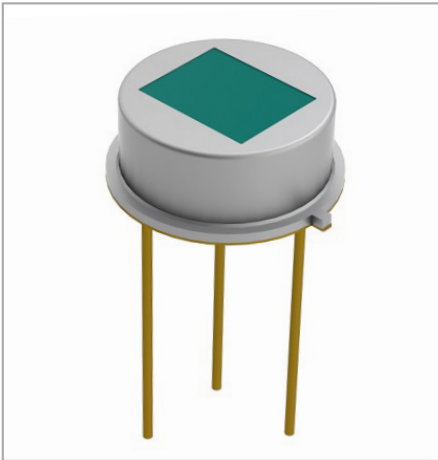
- High sensitivity with fast response time
- High dynamic range
- Small SMD package
- I2C communication compatible
- Digital and analog output
- Programmable gain and filtering
- Various optical filter options
- Integrated configurable amplifier, filter, and ADC
- Low power consumption

### Applications

- Smart home
- Smart building
- Industrial IoT
- Transportation

[BUY NOW](#) 

## KEMET - QFC SERIES ANALOG PYROELECTRIC INFRARED FLAME SENSORS



[VIEW PRODUCT DETAILS](#) 

KEMET's QFC pyroelectric flame sensors provide accurate discrimination of flame sources in triple IR flame detection systems, through their excellent signal to noise characteristic at the signature 8Hz to 10Hz flicker range of a flame. The sensor element is built into a low noise circuit that has an internal CMOS op amp with a 10GO feedback resistor outputting a voltage signal centred around half the supply rail. Exceptional high responsivity, a wide field of view and rapid recovery from thermal and electrical shocks makes it the ideal solution for demanding flame detecting applications.

### Features and benefits

- Exceptionally high responsivity
- Wide field of view, typically +100°C (subject to filter band pass specification)
- Rapid recovery from thermal and electrical shock (<1 second downtime)
- TO39 package
- Analog output
- Integrated op amp

### Applications

- Industrial
- Oil and gas
- Infrastructure protection
- Forest protection

[BUY NOW](#) 

## TDK - EPCOS B59050Z0206A030/B59070Z0285D12X SERIES ULTRASONIC SENSOR DISKS



[VIEW PRODUCT DETAILS](#) 

The new series of ceramic-based EPCOS ultrasonic sensor disks comprises two standard types. The B59050Z0206A030 sensor disk has a diameter of 5.0mm and thickness of 1.02mm. With a serial resonance frequency of 2000 kHz it features thickness oscillation mode (axial), making it suitable for use in liquid media. The B59070Z0285D12\* has a diameter of 7.0mm and a thickness of 0.195 mm. It offers a radial mode of oscillation at 285 kHz, and is suitable for operation in air. The RoHS-compatible sensor disks are suitable for a variety of applications. In automotive electronics, for example, they can be used in park assist or blind spot monitoring systems, level sensing for fuel or SCR tanks, as well as interior monitoring for anti-theft systems. In industrial electronics applications the sensor disks permit the flow metering of fluids or gases, and the level sensing of fluids or bulk materials. The sensor disks are also suitable for collision avoidance systems in automated guided vehicles. Apart from the standard types, application specific versions can also be manufactured.

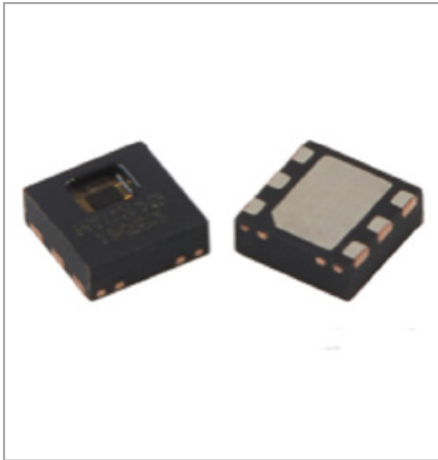
### Features and benefits

- Silver metallisation
- Temperature range: -40°C up to +160°C
- RoHS-compatible

### Applications

- Automotive:
  - > Level sensing for fuel or Selective Catalytic Reduction (SCR) tanks
- Industrial applications:
  - > Flow meters for fluids
  - > Level sensing for fluids

## TE CONNECTIVITY - HTU31 HUMIDITY AND TEMPERATURE COMBINATION SENSOR



[VIEW PRODUCT DETAILS](#) 

The HTU31 is one of the smallest and most accurate humidity sensors on the market. TE Connectivity's precision engineering and 20+ years of experience in humidity and temperature combination sensors, enables us to provide fast response time, precision measurement, low hysteresis and sustained performance even when exposed to extreme temperature (-40°C to 125°C) and humidity environments (0% to 100%).

### Features and benefits

- High reliability and environmental robustness
- Full interchangeability with no calibration required in standard conditions
- Quick recovery after long periods in saturation phase
- Compatible with automatic assembly processes
- Reflow solderable
- Individual marking for compliance to stringent traceability requirements
- Lead free sensor
- Low power consumption

### Applications

- Home appliance
- Medical
- Printers
- Humidifiers
- Automotive
- Meteorology
- Environmental monitoring

## VISHAY - RAMK060 SERIES ROTATIONAL POSITION SENSOR



[VIEW PRODUCT DETAILS](#) 

Vishay's RAMK060 series is a high precision position sensor that offers more robust performance than existing absolute encoders and better resolution and accuracy than traditional hall effect sensors for industrial robotics and other demanding applications. The patented design is particularly suited for applications calling for precise and repetitive motion.

### Features and benefits

- Advanced contactless technology achieves:
  - > 13-bit accuracy, 19-bit resolution, and
  - > 16-bit repeatability
- Maintains robustness against external magnetic fields, moisture, airborne pollution, vibration, mechanical shock, and changes in temperature
- Features a rotor + stator kit design
- OFF-axis design allows for hollow shaft mounting
- Slim ~6.5mm profile
- Light weight of <55g
- Outside diameter of 60mm and inner diameter of 25mm

### Applications

- Arm joints for industrial robots and collaborative robots
- Steering wheels for automated guided vehicles
- Machine tools used in printing, textile manufacturing and milling







# Wireless Wireless charging

	RFID	NFC	ANT	Bluetooth	Zigbee	Thread	Wi-Fi	LoRa	SigFox	LTE Cat M1	NB-IoT	Optical wireless comms	Tx coil	Rx coil	Tx module	Rx module
	Wireless												Wireless charging			
Abracon													•	•		
Alps Alpine				•												
Amphenol													•	•		
AVX (Ethertronics)								•								
Fujitsu				•												
Molex													•	•		
Murata	•	•		•			•	•	•	•	•					
Panasonic Industry		•		•	•	•	•									
Pulse													•	•		
Taiyo Yuden		•	•	•	•	•	•					•				
TDK													•	•	•	•
Vishay													•	•		

# Antennas

	NFC	ISM, Zigbee and Bluetooth	WLAN and Wi-Fi	NB-IoT, Cat-M1	GSM and LTE	GNSS (GPS, Glonass, BeiDou, Galileo)	DAS
	Antenna						
Abracon	•	•	•	•	•	•	
Amphenol	•	•	•	•	•	•	•
AVX (Ethertronics)	•	•	•	•	•	•	
Molex	•	•	•	•	•	•	
Murata	•						
Pulse	•	•	•	•	•	•	•
Taiyo Yuden		•	•			•	
TDK	•	•					
TE Connectivity	•	•	•	•	•	•	
Vishay		•	•			•	
Yageo	•	•	•		•	•	



# Batteries

	Zinc carbon	Alkaline manganese	Silver oxide	Zinc air	Lithium manganese dioxide	Lithium iron disulfide	Lithium thionyl chloride	Lithium poly-carbon monofluoride	Sealed lead acid	Nickel metal hydride	Lithium ion	Lithium polymer	Lithium vanadium pentoxide	All-ceramic multilayer	Chargers and power adapters	
	Primary								Rechargeable							
Artesyn																.
Dubilier					.	.	.			.	.	.				
Energys								.								
GP Batteries	.	.	.	.	.	.				.	.					
MEAN WELL																.
Molex	.															
Murata		.	.		.						.					
Nichicon											.					
Panasonic Industry	.	.		.	.			.	.	.	.		.			
Procell (Duracell)		.			.						.					
RRC											.	.				.
Tadiran							.				.					
TDK														.		
Varta		.	.	.	.	.				.	.	.				
Wamtechnik										.	.					

# Power

	Enclosed and open frame	Board or chassis mounted	Conduction cooled and fanless	DIN rail	LED drivers and system accessories	Modular	Railway and rugged	Adaptors and chargers	Front end and high power	Miniature, industrial and bricks	Digital brick and PoL	PoL, PIM and power block	Switching regulators	Transportation and railway	DIN rail and chassis mount	LED	Medical	High voltage input	Filter boards	IGBT and MOSFET driver	
	AC-DC										DC-DC										
ABB	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Aimtec	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Artesyn	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Bel Power/Melcher	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cyntec												.									
Datel										.		.	.	.				.			
Delta	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Excelsys	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Flex Power										.	.	.		.							
Fulham				.	.												.				
MEAN WELL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Murata Power Solutions	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
TDK											.	.									

# Sensors

	NTC	PTC	RTD	Digital IC	Thermal read switch	IR thermopile	Thermocouple	Pressure	Force, load, torque and tension	Humidity	VOC and CO <sub>2</sub>	Dust	Flow	Water level	
	Temperature							Pressure		Gas and liquid					
Abrakon	.														
Alps Alpine								.	.	.					
Amphenol Advanced Sensors	.	.				.		.		.	.	.			
AVX (Ethertronics)	.		.					.							
Bourns								.		.					
Bulgin															
C&K Components															
CTS															
Grayhill															
Harvatek															
Innovative Sensor Technology			.	.						.			.		
KEMET					.										
Kingstate															
Molex (Contrinex)															
Murata	.	.						.		.					
Nidec Copal								.							
Omron						.		.		.	.	.	.		
Panasonic Electric Works															
Panasonic Industry	.					.		.							
Piher															
PUI Audio															
Pulse															
Qinlon															
SMI (TE Connectivity)								.							
TDK	.	.						.		.					
TE Connectivity	.		.	.		.	.	.	.	.	.		.	.	
Vishay	.	.	.												

Sensors continue...

# Sensors

	Accelerometer, vibration and shock	Inclinometer and gyro	Geomagnetic	GMR, AMR and TMR	Inductive and hall transducer	Capacitive touch	Resistive potentiometers	Optical encoder	Magnetic encoder/potentiometer	Photo interruptor	Photoelectric	Ultrasonic	Passive infrared (PIR)	Light convergent reflective	Magnetic proximity (reed and hall)	Current	Sunlight, ambient light	Pulse oximetry (SpO <sub>2</sub> )	Microphone	Human vision
	Motion															Current	Optical	Sound	Sound	Image
Abracon																				
Alps Alpine			•	•			•		•								•			
Amphenol Advanced Sensors																	•			
AVX (Ethertronics)					•		•													
Bourns							•	•	•											
Bulgin											•									
C&K Components								•							•					
CTS					•		•	•												
Grayhill								•	•											
Harvatek										•								•		
Innovative Sensor Technology																				
KEMET															•		•			
Kingstate																			•	
Molex (Contrinex)					•						•									
Murata	•	•		•			•				•	•								
Nidec Copal							•	•	•								•			
Omron	•				•					•				•						•
Panasonic Electric Works														•						
Panasonic Industry	•			•			•													
Piher							•		•											
PUI Audio												•							•	
Pulse																	•			
Qinlon												•								
SMI (TE Connectivity)																				
TDK	•	•	•	•													•			•
TE Connectivity	•	•		•	•		•		•			•			•			•		
Vishay							•		•											

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