



# POWER OVER ETHERNET TRANSFORMERS

## PoE

**RoHS**

- \* Power from 3 Watts to 40 Watts.
- \* 1500Vrms Minimum Isolation Voltage.

- \* High Frequency.
- \* High Operating Temperature Range.

**ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -40°C TO +125°C**

PART NUMBER	Application		Turn Ratio (±3%)			Primary Ind μH (±10%)	Leakage Ind μH (Max.)	DCR (mΩ Max)			Hi-Pot	Schematics / Package
	Input	Output	Pri	Sec	Aux			Pri	Aux	Sec		
PM-POE001	V=33-57v, F=200Khz	V=3.3v/3W, 8v/20mA	1	.083	.208	500	7.5	1750	215	15	1500	A / 1
PM-POE002	V=33-57v, F=200Khz	V=3.3v/3W, 12v/20mA	1	.182	.682	310	5.0	1600	2600	45	1500	A / 1
PM-POE003	V=33-57v, F=200Khz	V=5.0v/3W, 8v/20mA	1	.125	.208	500	7.5	1750	215	35	1500	A / 1
PM-POE004	V=33-57v, F=200Khz	V=5.0v/3W, 12v/20mA	1	.273	.682	310	5.0	1600	2650	87	1500	A / 1
PM-POE005	V=33-57v, F=200Khz	V=12v/3W, 8v/20mA	1	.286	.204	520	7.5	1750	220	100	1500	A / 1
PM-POE006	V=33-57v, F=200Khz	V=12v/3W, 12v/20mA	1	.682	.682	310	5.0	1600	2600	550	1500	A / 1
PM-POE030	V=36-72v, F=300Khz	V=3.3v/10W, 5v/100mA	1	.100	.150	25.2	2	250	20	3.5	1500	A / 2
PM-POE031	V=33-57v, F=200Khz	V=3.3v/7W, 8v/20mA	1	.083	.208	253	7.5	420	115	7.5	1500	A / 2
PM-POE033	V=33-57v, F=200Khz	V=3.3v/7W, 12v/20mA	1	.182	.682	155	5	530	900	31	1500	A / 2
PM-POE034	V=9-50v, F=200Khz	V=3.3v/10W, 8v/20mA	1	.222	.555	20.4	1.5	80	150	7.5	1500	A / 2
PM-POE035	V=9-50v, F=200Khz	V=3.3v/10W, 5v/20mA	1	.444	.388	20.4	1.5	80	105	30	1500	A / 2
PM-POE036	V=33-57v, F=200Khz	V=5v/7W, 8v/20mA	1	.125	.208	253	7.5	420	115	16	1500	A / 2
PM-POE037	V=33-57v, F=200Khz	V=5v/7W, 12v/20mA	1	.273	.682	155	5	570	1000	40	1500	A / 2
PM-POE038	V=33-57v, F=200Khz	V=12v/7W, 8v/20mA	1	.286	.204	264	7.5	800	115	45	1500	A / 2
PM-POE039	V=33-57v, F=200Khz	V=12v/7W, 12v/20mA	1	.682	.682	155	5	540	920	370	1500	A / 2
PM-POE070	V=33-57v, F=200Khz	V=3.3v/13.5W, 8v/20mA	1	.083	.208	127	7.5	440	88	6	1500	B / 3
PM-POE071	V=33-57v, F=200Khz	V=3.3v/11W, 12v/20mA	1	.167	.639	155.5	5	330	650	11	1500	C / 3
PM-POE072	V=33-57v, F=200Khz	V=3.3v/13.5W, 12v/20mA	1	.182	.682	77.4	5	100	270	8.5	1500	B / 3
PM-POE073	V=33-57v, F=200Khz	V=5v/13.5W, 8v/20mA	1	.125	.208	127	7.5	460	94	12	1500	B / 3
PM-POE074	V=33-57v, F=200Khz	V=5v/13.5W, 12v/20mA	1	.273	.682	77.4	.8	220	250	18	1500	B / 3
PM-POE075	V=33-57v, F=200Khz	V=12v/13.5W, 8v/20mA	1	.292	.208	127	7.5	460	94	55	1500	B / 3
PM-POE076	V=33-57v, F=200Khz	V=12v/13.5W, 12v/20mA	1	.682	.682	77.4	5	100	270	75	1500	B / 3
PM-POE077	V=33-57v, F=200Khz	V=15v/27W, 12v/20mA	1	.470	.294	28.9	1	58	55	27	1500	B / 3
PM-POE080	V=33-57v, F=400Khz	V=10v/40W, 12v/60mA	1	.417	.583	15	2	75	50	50	1500	E / 4
PM-POE081	V=33-57v, F=200Khz	V=3.3v/30W, 12v/60mA	1	.09	.33	42	3	70	5	220	1500	F / 4
PM-POE082	V=33-57v, F=200Khz	V=5v/30W, 12v/60mA	1	.14	.33	42	1.6	70	5	225	1500	F / 4
PM-POE083	V=33-57v, F=200Khz	V=12v/30W, 12v/60mA	1	.33	.33	42	.6	65	18	200	1500	F / 4
PM-POE084	V=33-57v, F=200Khz	V=19.5v/30W, 12v/60mA	1	.56	.33	42	.45	62	40	200	1500	F / 4
PM-POE085	V=33-57v, F=200Khz	V=24v/30W, 12v/60mA	1	.67	.33	42	.32	62	55	200	1500	F / 4
PM-POE086	V=33-57v, F=200Khz	V=20.5v/30W, 12v/60mA	1	.811	.33	32.7	.50	62	50	200	1500	F / 4
PM-POE087	V=36-57v, F=200Khz	V=20.5v/31W, 2x12v/30mA	1	.714	.429	36	3	115	1150	400	1500	K / 4
PM-POE088*	V=36-57v, F=200Khz	V=5/10W&15V@22.5W	1	.17/1.5	.29	50	3	100	30/50	60	1500	H / 4
PM-POE089*	V=36-57v, F=200Khz	V=5/10W&15V@22.5W	1	.17/1.5	.28	50	3	100	30/50	60	1500	H / 6
PM-POE090	V=18-57v	V=3.3v/25W, 11v/20mA	1	.12	.41	50	2.2	26	320	4	1500	F / 5
PM-POE091	V=18-57v	V=5v/25W, 11v/20mA	1	.18	.41	50	1.1	26	320	8	1500	F / 5
PM-POE092	V=18-57v	V=9v/25W, 11v/20mA	1	.35	.41	50	.47	26	320	14	1500	F / 5
PM-POE093	V=18-57v	V=12v/25W, 11v/20mA	1	.47	.41	50	.41	26	320	20	1500	F / 5
PM-POE094	V=18-57v	V=15v/25W, 11v/20mA	1	.59	.41	50	.38	26	320	37	1500	F / 5
PM-POE101*	Vin=36-72v	V=12v/60W, 12v/20mA	1	.40	.40	30	1.0	55	200	15	1500	G / 7
PM-POE102	Vin=36-72v	V=18v/60W, 12v/20mA	1	.60	.40	30	1.0	55	200	25	1500	G / 7
PM-POE103*	Vin=36-72v	V=24v/60W, 12v/20mA	1	.80	.40	30	1.0	55	200	40	1500	G / 7
PM-POE104*	Vin=36-72v	V=36v/60W, 12v/20mA	1	1.20	.40	30	1.0	55	200	85	1500	G / 7
PM-POE105	Vin=36-72v	V=48v/60W, 12v/20mA	1	1.60	.40	30	1.0	55	200	85	1500	G / 7

For AKROS chip set # AS1844, AS1854, AS1860

Specifications subject to change without notice.

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# POWER OVER ETHERNET TRANSFORMERS

## PoE

RoHS

- \* Flyback PoE for 6W and 13 W
- \* 1500 Vrms Minimum Isolation Voltage.

- \* High Frequency 250kHz .
- \* High Operating Temperature Range.

**ELECTRICAL SPECIFICATIONS AT 25°C - OPERATING TEMPERATURE RANGE -40°C TO +125°C**

PART NUMBER	Application		Turn Ratio (±3%)			Primary Ind μH ±10%	Leakage Ind μH (Max.)	DCR (mΩ Max)			Hi-Pot (Vdc)	Schematics / Package
	Input	Output	Pri	Sec	Aux			Pri	Aux	Sec		
PM-POE175	V=36-57 V, F=250 kHz	V=1.8V/3.3A 6W	1	0.07	0.36	75	8.0	195	195	5	1500	J / 8
PM-POE176	V=36-57 V, F=250 kHz	V=2.5V/2.4A 6W	1	0.08	0.33	55	4.6	95	150	5	1500	J / 8
PM-POE177	V=36-57 V, F=250 kHz	V=3.3V/1.8A 6W	1	0.11	0.36	65	4.0	140	180	7	1500	J / 8
PM-POE178	V=36-57 V, F=250 kHz	V=5.0V/1.2A 6W	1	0.15	0.35	60	2.5	130	165	9	1500	J / 8
PM-POE179	V=36-57 V, F=250 kHz	V=12V/0.5A 6W	1	0.35	0.35	55	0.7	95	150	17	1500	J / 8
PM-POE185	V=36-57 V, F=250 kHz	V=1.8V/7.2A 13W	1	0.07	0.36	45	7.9	195	195	5	1500	J / 8
PM-POE186	V=36-57 V, F=250 kHz	V=2.5V/5.2A 13W	1	0.08	0.33	35	4.2	95	150	5	1500	J / 8
PM-POE187	V=36-57 V, F=250 kHz	V=3.35V/3.9 13W	1	0.11	0.36	40	3.5	140	180	7	1500	J / 8
PM-POE188	V=36-57 V, F=250 kHz	V=5.0V/2.6A 13W	1	0.15	0.35	40	2.0	130	165	9	1500	J / 8
PM-POE189	V=36-57 V, F=250 kHz	V=12V/1.1A 13W	1	0.35	0.35	35	0.6	95	150	17	1500	J / 8
PM-POE190	V=36-57 V, F=250 kHz	V=19.5V/0.67A 13W	1	0.57	0.35	37	0.4	86	390	25	1500	J / 8
PM-POE191	V=36-57 V, F=250 kHz	V=24V/0.54A 13W	1	0.67	0.33	37	0.4	86	390	50	1500	J / 8

Specifications subject to change without notice.

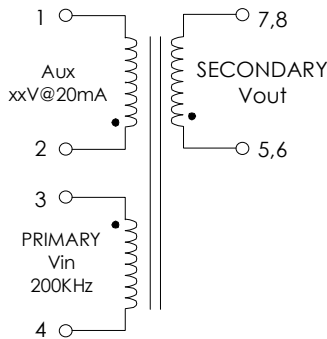
02/16

# POWER OVER ETHERNET TRANSFORMERS

## PoE

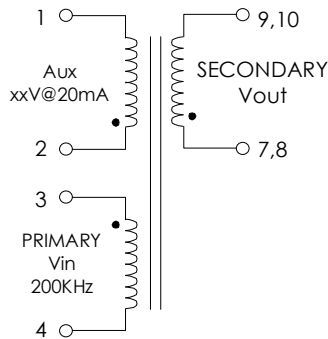
**RoHS**

### SCHEMATICS A



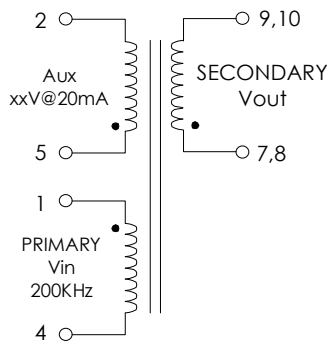
**PM-POE001,002,003,004,005,006  
031,033,034,035,036,037,038,039**

### SCHEMATICS B



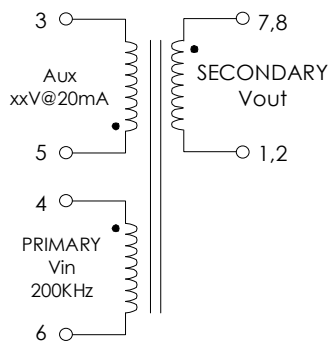
**PM-POE070,072,073,074,075,076,077**

### SCHEMATICS C



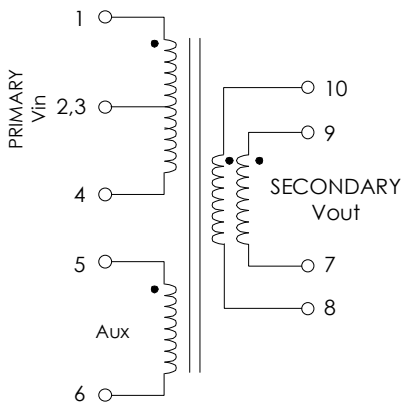
**PM-POE071**

### SCHEMATICS D



**PM-POE030**

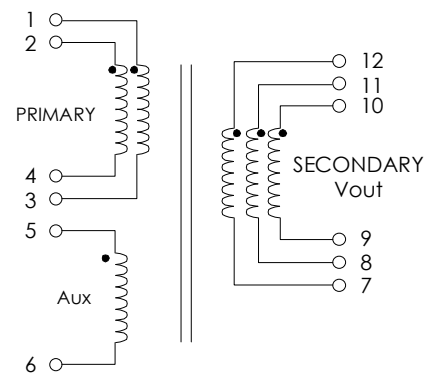
### SCHEMATICS E



Connect 2&3 for Pri, 9 & 10, 7 & 8 for Sec on PCB

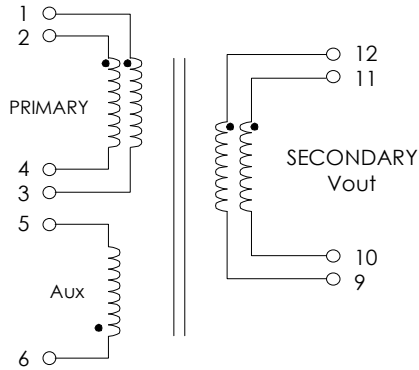
**PM-POE080**

### SCHEMATICS F

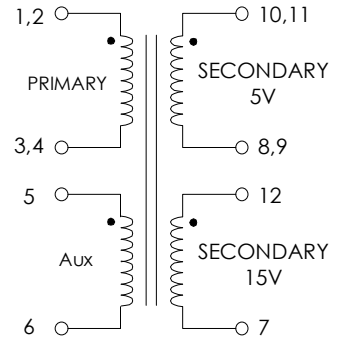


**PM-POE081-86  
PM-POE090-094**

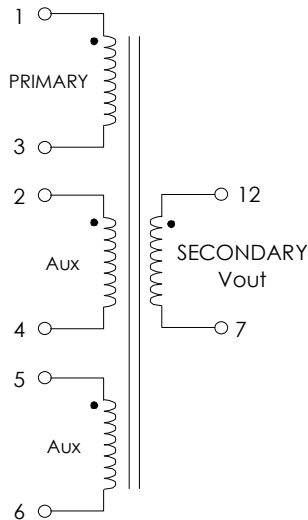
**SCHEMATICS G**



**SCHEMATICS H**

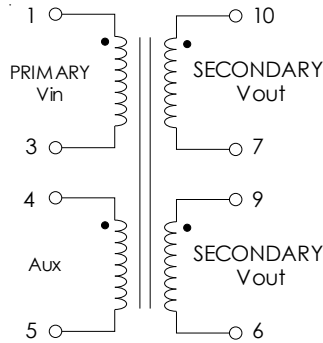


**SCHEMATICS K**

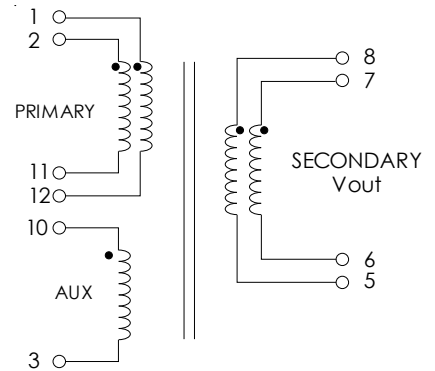


**PM-POE087**

**SCHEMATICS I**



**SCHEMATICS J**

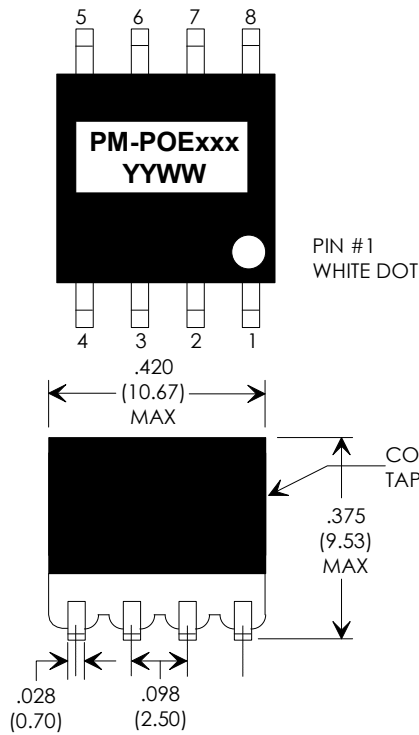


# POWER OVER ETHERNET TRANSFORMERS

## PoE

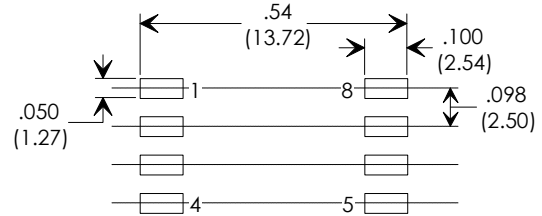
**RoHS**

### Package #1



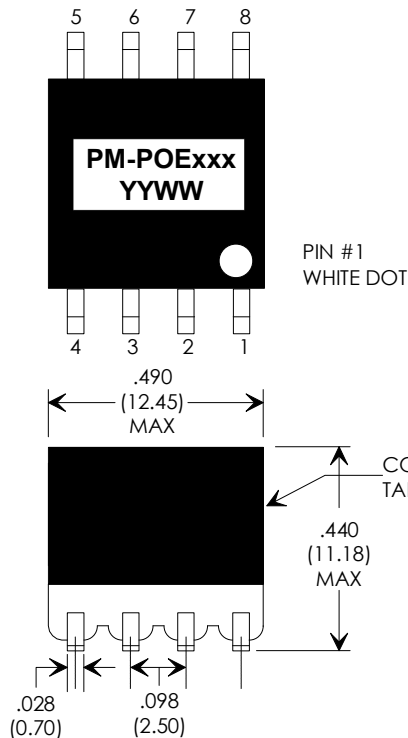
### RECOMMENDED P.C.B. LAYOUT

Dimensions in inches (mm)



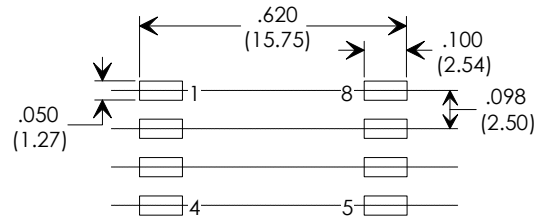
PM-POExxx  
YYWW

### Package #2



### RECOMMENDED P.C.B. LAYOUT

Dimensions in inches (mm)



Specifications subject to change without notice.

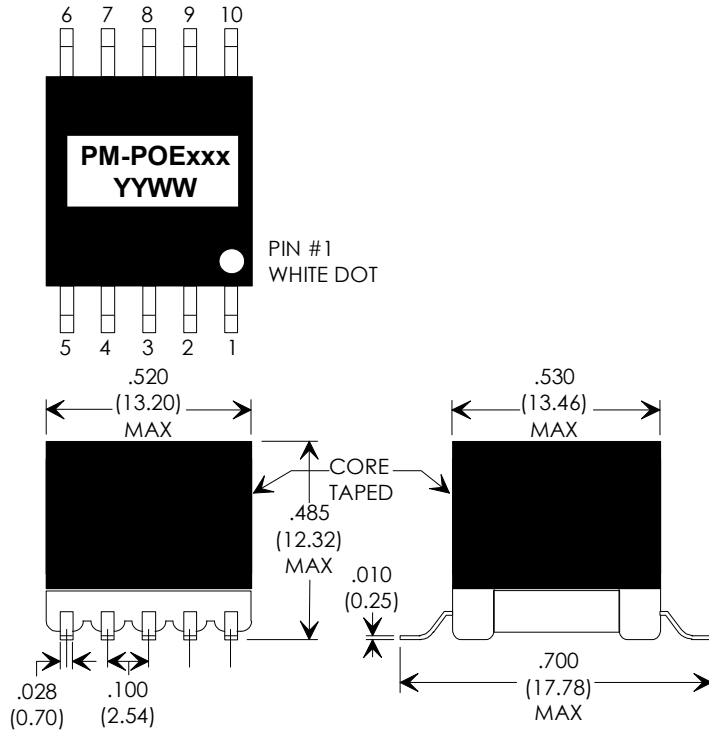
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# POWER OVER ETHERNET TRANSFORMERS

## PoE

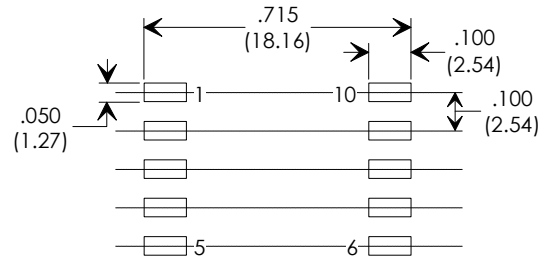
**RoHS**

### Package #3

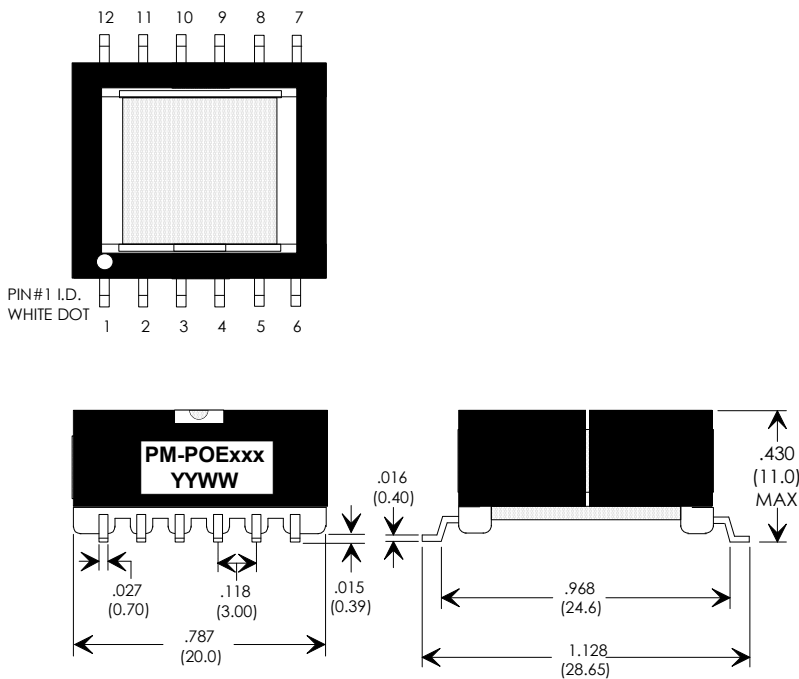


### RECOMMENDED P.C.B. LAYOUT

Dimensions in inches (mm)

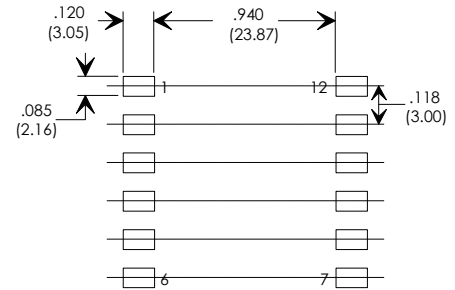


### Package #4



### RECOMMENDED P.C.B. LAYOUT

Dimensions in inches (mm)

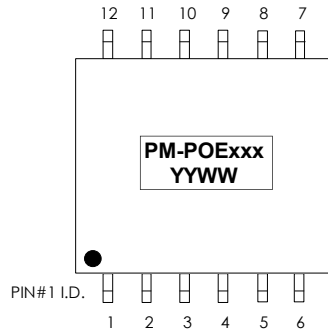


Specifications subject to change without notice.

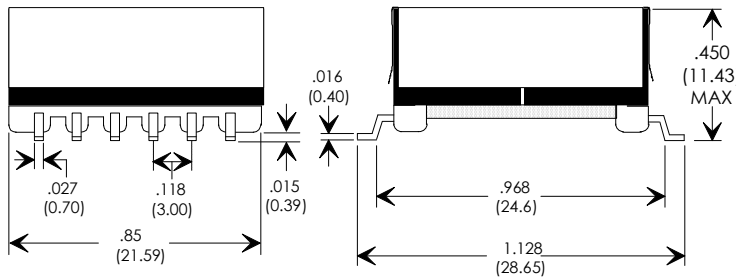
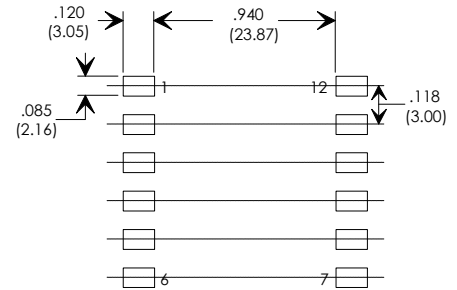
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**RoHS**

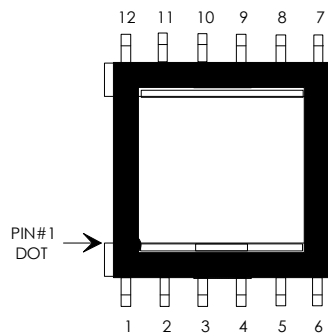
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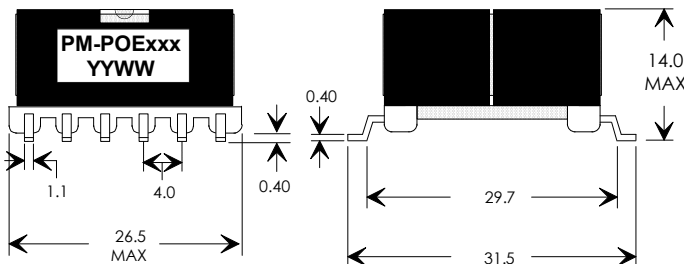
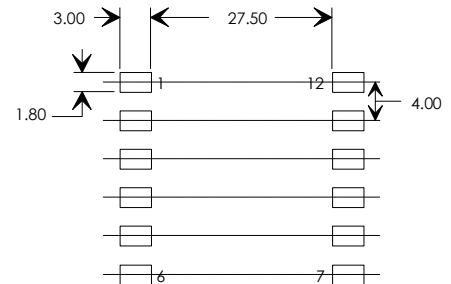
**RECOMMENDED P.C.B. LAYOUT**  
Dimensions in inches (mm)



**Package #6**



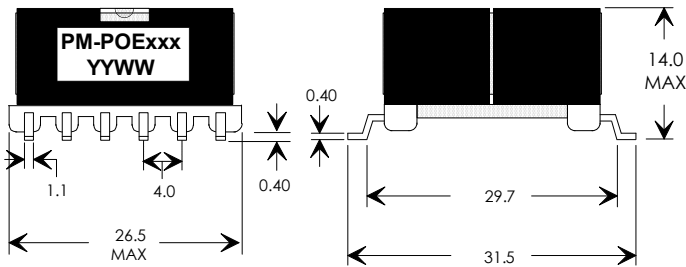
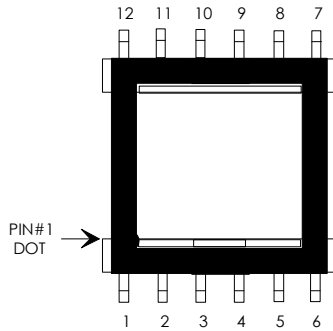
**RECOMMENDED P.C.B. LAYOUT**  
Dimensions in mm



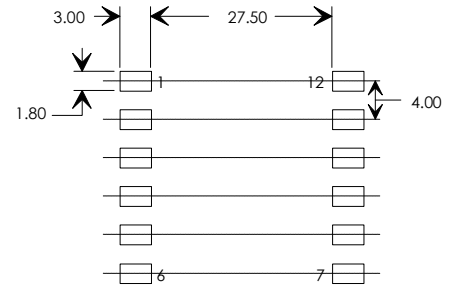
Specifications subject to change without notice.

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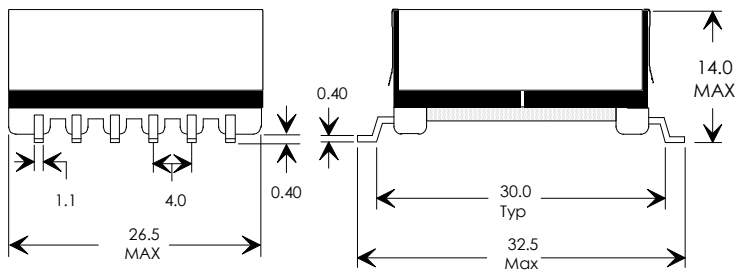
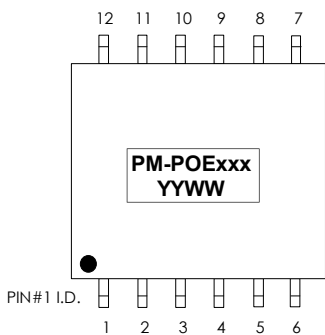
**Package #6**



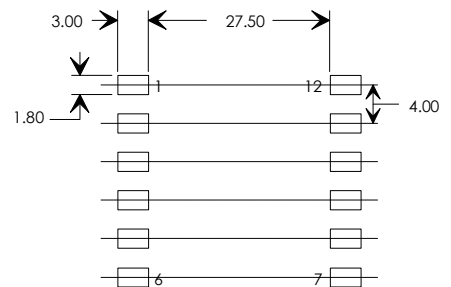
**RECOMMENDED P.C.B. LAYOUT**  
Dimensions in mm



**Package #7**

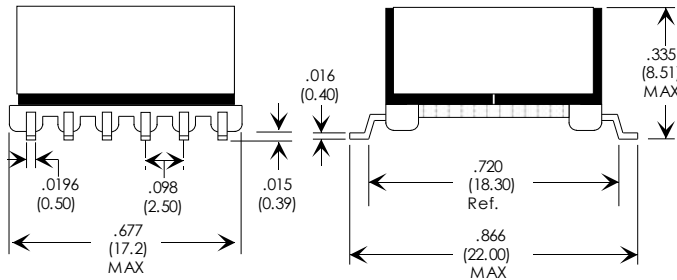
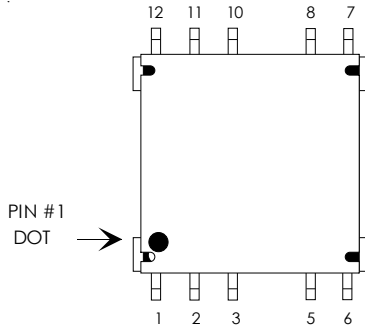


**RECOMMENDED P.C.B. LAYOUT**  
Dimensions in mm

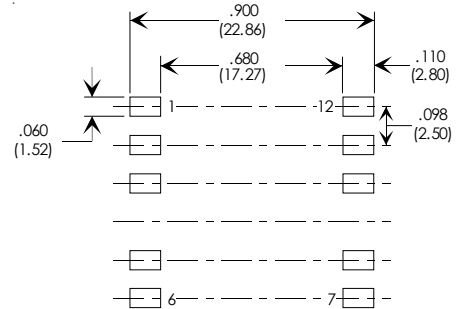




**Package #8**



**RECOMMENDED P.C.B. LAYOUT**  
Dimensions in mm



### CROSS REFERENCE LISTING

Premier P/N	Pulse P/N	CoilCraft	Premier P/N	Pulse P/N	CoilCraft
PM-POE001 PM-POE002 PM-POE003 PM-POE004 PM-POE005 PM-POE006	PA1130NL PA1279NL PA1131NL PA1280NL PA1132NL PA1281NL		PM-POE175 PM-POE176 PM-POE177 PM-POE178 PM-POE179		POE60F-18L POE60F-25L POE60F-33L POE60F-50L POE60F-12L
PM-POE030 PM-POE031 PM-POE032 PM-POE033 PM-POE034 PM-POE035 PM-POE036 PM-POE037 PM-POE038 PM-POE039	PA2115NL PA1133NL PA1253NL PA1282NL PA1277NL PA1370NL PA1134NL PA1283NL PA1135NL PA1284NL		PM-POE185 PM-POE186 PM-POE187 PM-POE188 PM-POE189 PM-POE190 PM-POE191		POE13F-18L POE13F-25L POE13F-33L POE13F-50L POE13F-12L POE13F-19L POE13F-24L
PM-POE070 PM-POE071 PM-POE072 PM-POE073 PM-POE074 PM-POE075 PM-POE076 PM-POE077	PA1136NL PA1267NL PA1269NL PA1137NL PA1260NL PA1138NL PA1276NL PA1528NL				
PM-POE090 PM-POE091 PM-POE092 PM-POE093 PM-POE094		FA2677-AL FA2898-AL FA2899-AL FA2900-AL FA2901-AL			