



T-series Triacs for Home appliances

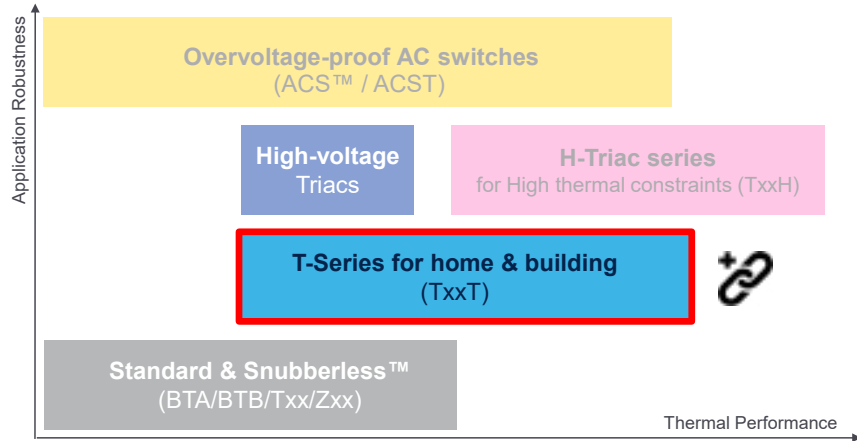
Discrete and Filter Division
Automotive and Discrete Group



T-series Triacs

T-Series Triacs improves system's EMI immunity

**Bidirectional
Conducting**





T-series Triacs for Home & Building automation



STMicroelectronics, Thyristors and AC Switches

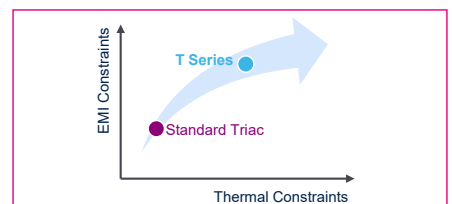
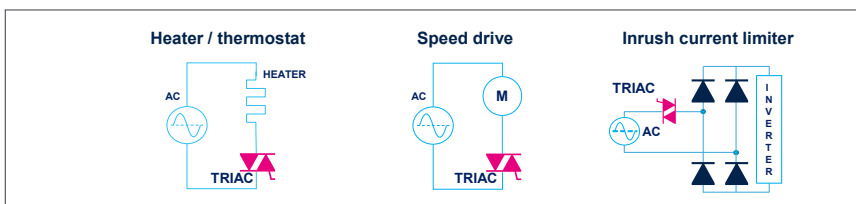


T-series features & benefits

- 150°C Junction Operation
- High Turn-off and Noise Immunity
- Up to 800 V Blocking Voltage
- Wide package selection



- Improved Thermal Performance
- Application Robustness against EMI
- Functional Reliability
- Compact / Innovative Designs



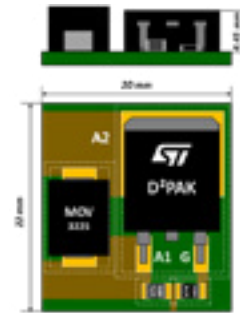
STMicroelectronics, Thyristors and AC Switches



150°C T-series Triac portfolio at a glance

A full D²PAK range for compact solutions and automatic board assembly

Package (suffix)						RMS on-state current
Generic Part Number	TO-220AB	TO-220AB 1ns 2.5kV isolation	TO-220FPAB 2kV isolation	FPAB	D ² PAK	max. (A)
Logic Level (direct drive by MCU) = Max. Triggering gate current (I_{GT}) of 10 mA						
T610T-8	I		FP			6
T810T-8	I		FP		G	8
T1210T-8	I		FP		G	12
T1610T-8	I	I	FP		G	16
Snubberless™ = Max. Triggering gate current (I_{GT}) of 35 mA						
T635T-8	I		FP			6
T835T-8	I	I	FP		G	8
T1235T-8	I	I	FP	R	G	12
T1635T-8	I	I	FP		G	16
T2035T-8					G	20
T2535T-8	I	I			G	25
Max. Repetitive peak off-state voltage (V_{DRM} , V_{RRM}) = 800 V						



NEW

STMicroelectronics, Thyristors and AC Switches

T-series Triacs challenges and solutions

CHALLENGE

SOLUTION

BENEFIT

Drive high current inductive loads

Twice better turn-off commutation

No RC network required

Higher voltage robustness

$V_{DRM/RRM} = 800V$, $V_{DSM/RSM} = 900V$

Easier Triac selection
Smaller MOV protection

Improve EMI Immunity

$dV/dt = \text{Up to } 1kV/\mu s @ 150^\circ C$

Eases EMI std compliance
IEC61000-4-4, IEC61000-4-5



STMicroelectronics, Thyristors and AC Switches



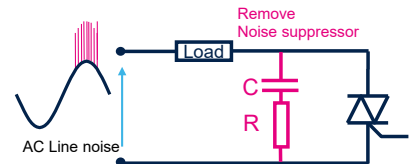
Application Robustness Parameters

Noise Immunity dV/dt , Turn-Off Commutation $(di/dt)_c$

T-series Triacs offer high immunity and commutation
 → Remove snubber for difficult loads

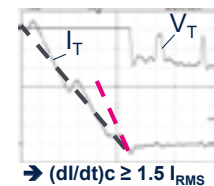
dV/dt

Voltage spikes lead to false turn-on
 High dV/dt immunity protects against false triggering



$(di/dt)_c$

Motor brush transient current impairs turn-off
 High $(di/dt)_c$ capability commutation



STMicroelectronics, Thyristors and AC Switches



Your Design support & Tools

Datasheets	<u>Phone App</u>	T-series Triacs	<u>E-Design suite</u>	Intelligent design tools
Portfolio	<u>Selector Guide</u>		<u>Online Support</u>	Find answers
Reference design	<u>Evaluation boards</u>		<u>Application Notes</u>	Product know-how & design tips



STMicroelectronics, Thyristors and AC Switches

CONTACT

EBV Elektronik GmbH & Co. KG
 D-85586 Poing
 Im Technologiepark 2-8
 Phone: +49 (0)8121 774-0
 Fax: +49 (0)8121 774-422