



life.augmented

T-series Triacs for Home appliances

Discrete and Filter Division

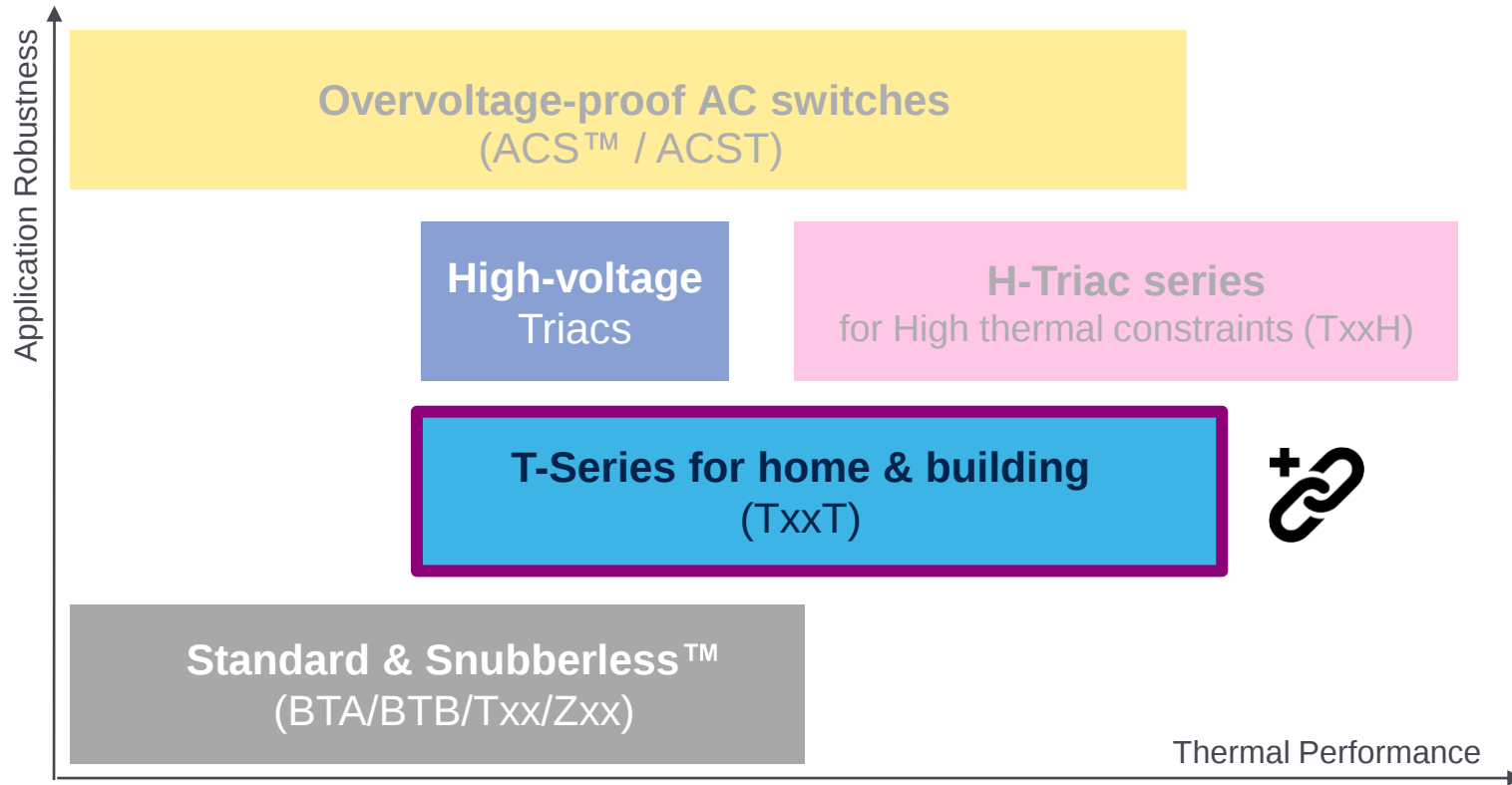
Analog, Power & Discrete, MEMS et Sensors



T-series Triacs family overview

T-Series Triacs improves system's EMI immunity

**Bidirectional
Conducting**





T-series Triacs for Home & Building automation



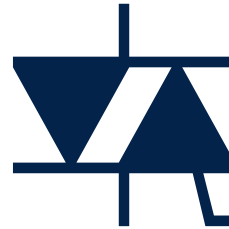
T-series Triacs features & benefits

150°C Junction Operation

High Turn-off and Noise Immunity

Up to 800 V Blocking Voltage

Wide package selection



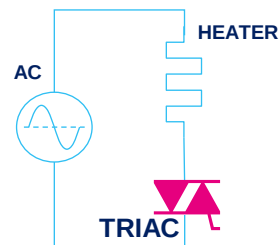
Improved Thermal Performance

Application Robustness against EMI

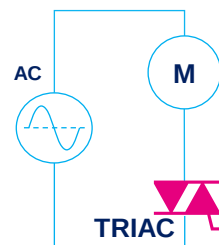
Functional Reliability

Compact / Innovative Designs

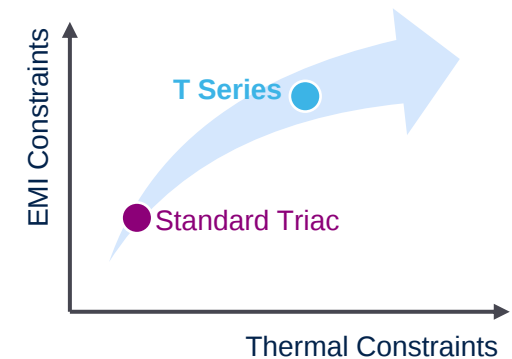
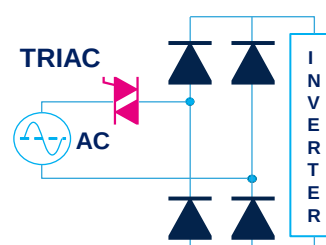
Heater / thermostat

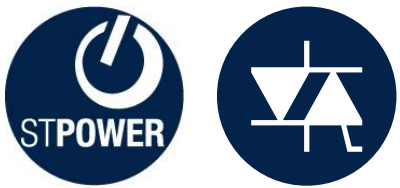


Speed drive



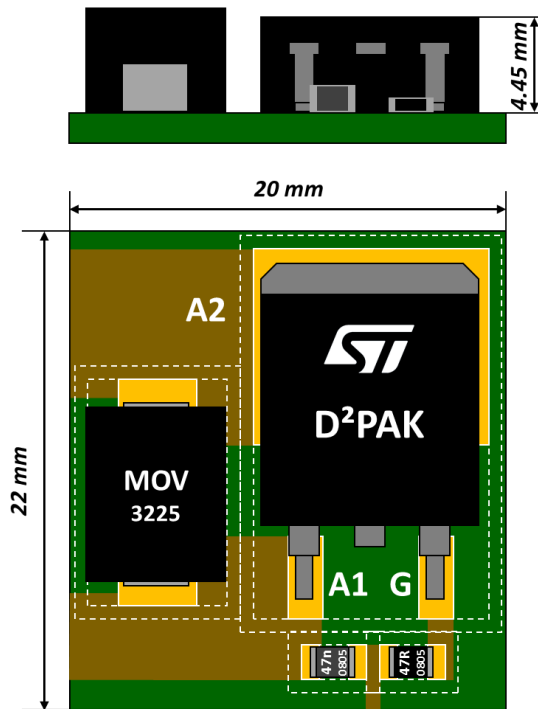
Inrush current limiter

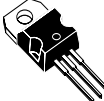
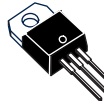
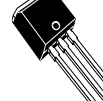
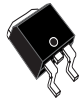




150°C T-series Triac portfolio at a glance

A full D²PAK range for compact solutions and automatic board assembly



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

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

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

Easier Triac selection
Smaller MOV protection

Improve EMI Immunity

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

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

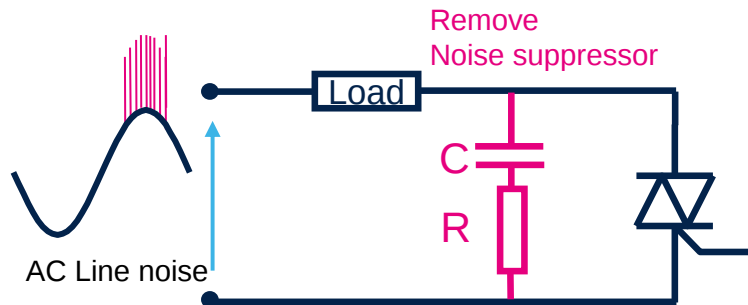


Application Robustness Parameters

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

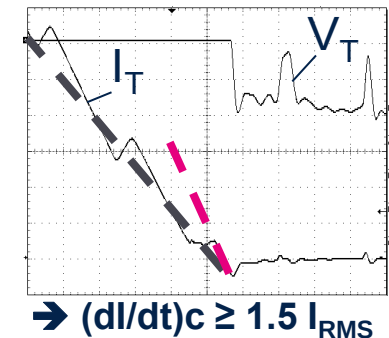
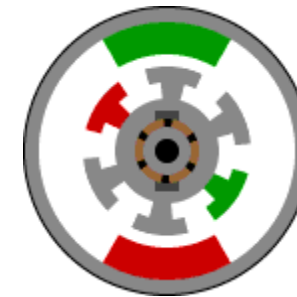
dV/dt

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



$(dI/dt)_c$

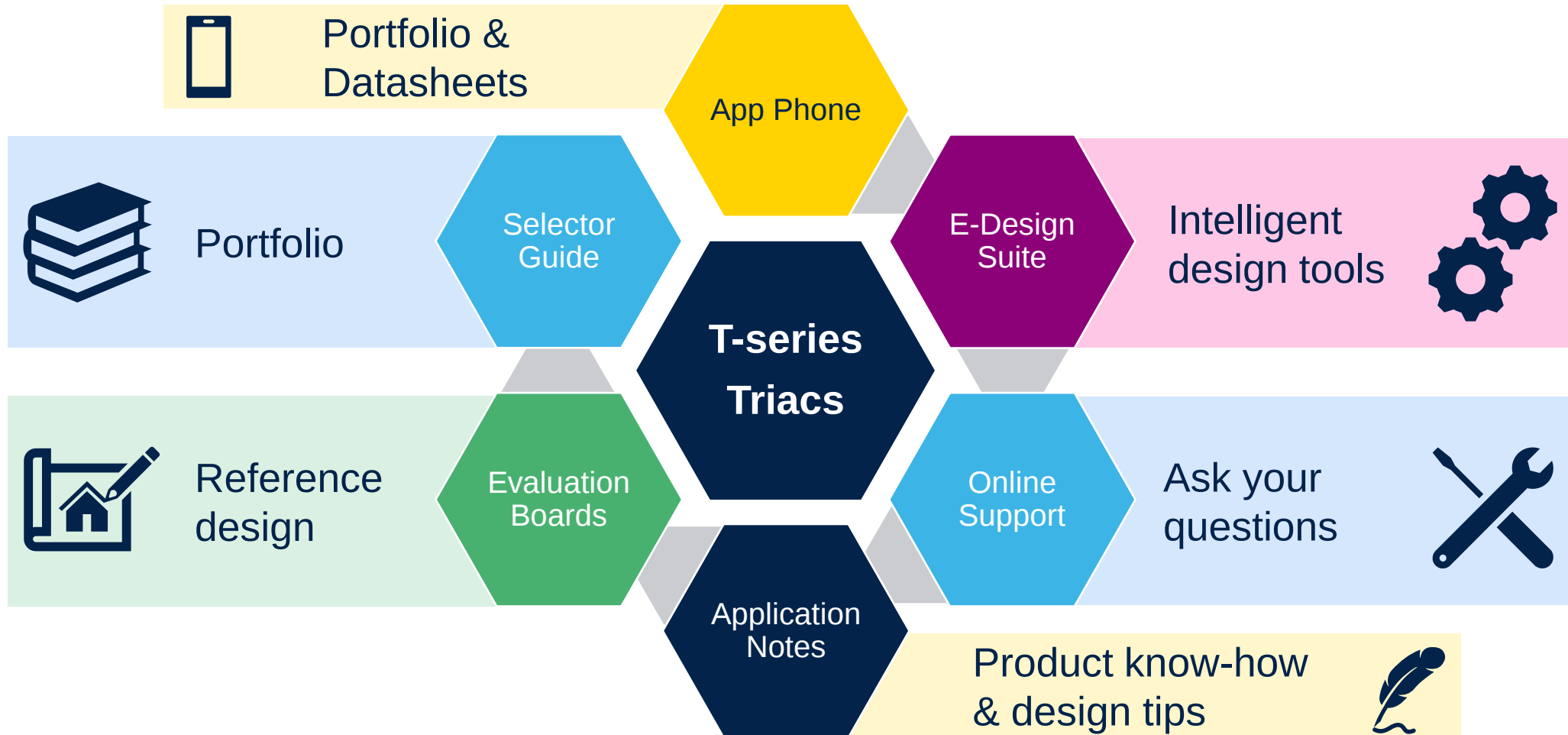
Motor brushes transient current impairs
turn-off High $(dI/dt)_c$ capability
commutation



Snubberless option for difficult loads against transient voltage thanks to T-series Triacs
robust commutation performance and voltage spike immunity



Want to know more ?



Our technology starts with You



Find out more at www.st.com/en/thyristor-scr-ac-switches.html