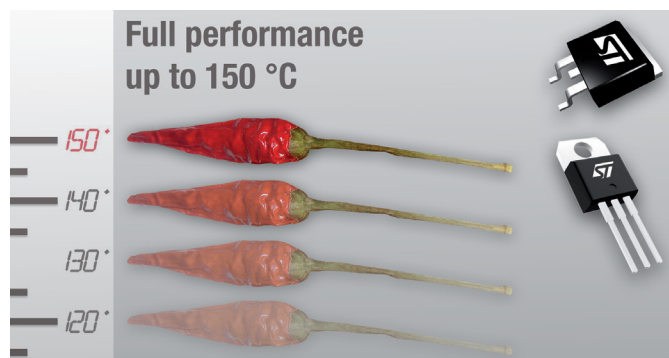


High Temperatures Triacs: The new Leading-Edge Technology of ST

The new High-Temperature Series represents the state-of-the-art of discrete Triacs available today on the market. Thanks to unique process features, the family supports operating junction temperature up to 150°C. The distinctive feature is the enhanced dynamic performances, in particular the maximum turn-off current capability and the noise immunity level, which have been improved along the entire temperature range.

The devices are fully specified up to 150°C, eliminating the risk of decreased performance at high temperatures, e.g. in low air convection environment.



Key Features

- T_j max = 150° C (versus 125°C of standard Triacs)
- Standard gate (35mA, 50mA) and sensitive gate (10mA) versions

Key Benefits

- Perfect choice for low air convection environments
- Allows Heatsink reduction in application
- High Current Density Application
- No need of derating calculations up to 150°C

- Improved turn-off capability
- Enhanced Noise Immunity
- Specified up to 150°C

Key Applications

- Universal motor control (vacuum cleaners, washing machines)
- Hot environment (cookers, ovens, hobs, coffee machines)
- High Power Density on PCB (heater, high power motors)

$I_{T(RMS)}$	V_{RRM}/V_{DRM}	$I_{TSM}^{(2)(3)}$	$I_{GT\ max}^{(2)}$	$(di/dt)c_{min}^{(4)}$	$dV/dt_{min}^{(4)}$	Quadrants	T_j	Packages		
[A]	[V]	[A]	[mA]	[A/ms]	[V/μs]		[°C]	D ² PAK ⁽¹⁾	TO-220AB	TO-220AB Ins.
4	600	40	10	5.7	75	I - II - III	150		T410H-6T	
6	600	60	10	8.7	75	I - II - III	150		T610H-6T	
8	600	80	10	11.4	75	I - II - III	150	T810H-6G	T810H-6T	
8	600	80	35	11.0	1000	I - II - III	150	T835H-6G	T835H-6T	T835H-6I
8	600	80	50	14.0	1500	I - II - III	150	T850H-6G	T850H-6T	T850H-6I
10	600	100	10	14.4	75	I - II - III	150	T1010H-6G	T1010H-6T	
10	600	100	35	13.0	1000	I - II - III	150	T1035H-6G	T1035H-6T	T1035H-6I
10	600	100	50	18.0	1500	I - II - III	150	T1050H-6G	T1050H-6T	T1050H-6I
12	600	120	35	16.0	1000	I - II - III	150	T1235H-6G	T1235H-6T	T1235H-6I
12	600	120	50	21.0	1500	I - II - III	150	T1250H-6G	T1250H-6T	T1250H-6I
16	600	160	35	21.0	1000	I - II - III	150	T1635H-6G	T1635H-6T	T1635H-6I
16	600	160	50	28.0	1500	I - II - III	150	T1650H-6G	T1650H-6T	T1650H-6I
20	600	200	35	27.0	1000	I - II - III	150	T2035H-6G	T2035H-6T	T2035H-6I
20	600	200	50	36.0	1500	I - II - III	150	T2050H-6G	T2050H-6T	T2050H-6I
30	600	270	35	33.0	1000	I - II - III	150		T3035H-6T	T3035H-6I
30	600	270	50	44.0	1500	I - II - III	150		T3050H-6T	T3050H-6I

⁽¹⁾ tape and reel please add suffix -TR ⁽²⁾ I_{TSM} specified at $T_{j\ initial} = 25\ ^\circ\text{C}$, I_{GT} specified at $T_j = 25\ ^\circ\text{C}$ ⁽³⁾ $t_p = 10\ \text{ms}$ ⁽⁴⁾ specified at $T_j = 150\ ^\circ\text{C}$

800V T-Series Triac family

T-Series Triacs offer on the same device
800V capability with 125°C max T_j and
600V capability with 150°C max T_j

With the introduction of the new 800V T-Series family, ST is further strengthening its leadership position in the market of medium-power discrete Triacs. The new family exhibits superior dynamic performances (noise immunity and turn-off capability) and an extended temperature range up to 150°C. Moreover, the off-state voltage capability has been raised up to 800V.

The new 800V T-Series family perfectly meets demanding requirements of today's applications, enabling resizing of the Triac for a given load or higher load rating utilization. The actual portfolio is composed of 16A devices, in three different gate-current capabilities (10, 20 and 35mA), housed in TO-220 insulated. The whole family will be extended during 2012 to different power ranges



Key Features

- 800V, 16A Triacs
- 600V capability with 150°C max T_j
- High static and dynamic commutation
 - 2 times better vs. std. BTA / BTB family
 - 4 times better noise immunity vs. std. BTA/BTB family
- Three quadrants

Key Benefits

- Superior dynamic performance due to ST high temperature process

Key Applications

- 10mA version for resistive loads
 - Water heater
 - Electric heater
 - Coffee machine
- Lighting
- Inrush current limiting circuits
- Overvoltage crowbar protection circuits
- General purpose AC line load switching

- Snubberless device
- Package is RoHS (2002/95EC) compliant
- Tab insulated, voltage = 2500V_{rms}
- Extended temperature range
- Three different I_{GT} : 10, 20, 35mA

- 10mA version can be directly driven by microcontroller

- Home Appliances
 - Fan
 - Pump
 - Solenoid
 - Motor control
 - Washing machine
 - Fridge
 - Blender

Series	BV @ 125°C	BV @ 150°C	$I_{T(RMS)}$	I_{GT}	T_j (operating)	Package
T1610T-8I	800V	600V	16A	10mA	- 40 to +150°C	TO-220 insulated
T1620T-8I	800V	600V	16A	20mA	- 40 to +150°C	TO-220 insulated
T1635T-8I	800V	600V	16A	35mA	- 40 to +150°C	TO-220 insulated