

HIGH PERFORMANCE TRIACS

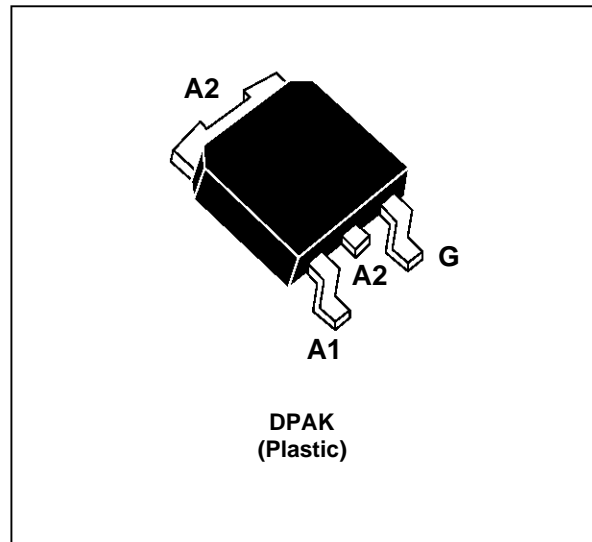
PRELIMINARY DATASHEET

FEATURES

- $I_{TRMS} = 4\text{ A}$
- $V_{DRM} = 400\text{ V to }600\text{ V}$
- SENSITIVE GATE: $I_{GT} \leq 5\text{ mA}$

DESCRIPTION

The T405-B serie of triacs uses a high performance TOPGLASS PNP technology. The parts are intended for general purpose applications using mount technology.


ABSOLUT MAXIMUM RATINGS

Symbol	Parameter		Value	Unit
$I_{T(RMS)}$	RMS on-state current (360° conduction angle)	$T_c = 95\text{ °C}$	4	A
I_{TSM}	Non repetitive surge peak on-state current (T_j initial = 25°C)	$t_p = 8.3\text{ ms}$	35	A
		$t_p = 10\text{ ms}$	30	
I^2t	I^2t value for fusing	$t_p = 10\text{ ms}$	4.5	A ² s
di/dt	Critical rate of rise of on-state current $I_G = 50\text{ mA}$ $di_G/dt = 0.1\text{ A}/\mu\text{s}$	Repetitive $F = 50\text{ Hz}$	10	A/ μs
		Non Repetitive	50	
T_{stg} T_j	Storage temperature range Operating junction temperature range		- 40 to + 150 - 40 to + 110	°C °C
T_l	Maximum lead temperature for soldering during 10 s		260	°C

Symbol	Parameter	T405-		Unit
		400B	600B	
V_{DRM} V_{RRM}	Repetitive peak off-state voltage $T_j = 110\text{ °C}$	400	600	V

T405-B

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
Rth (j-c)	Junction to case for DC	3.5	°C/W
Rth (j-c)	Junction to case for AC 360° conduction angle (F= 50 Hz)	2.6	°C/W

GATE CHARACTERISTICS (maximum values)

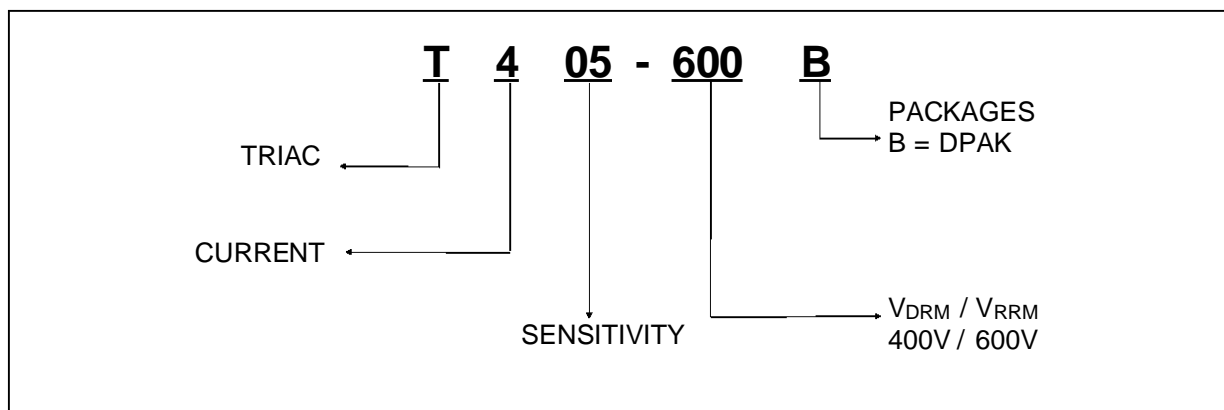
$P_{G(AV)} = 1 \text{ W}$ $P_{GM} = 10 \text{ W}$ (tp = 20 μs) $I_{GM} = 4 \text{ A}$ (tp = 20 μs) $V_{GM} = 16 \text{ V}$ (tp = 20 μs).

ELECTRICAL CHARACTERISTICS

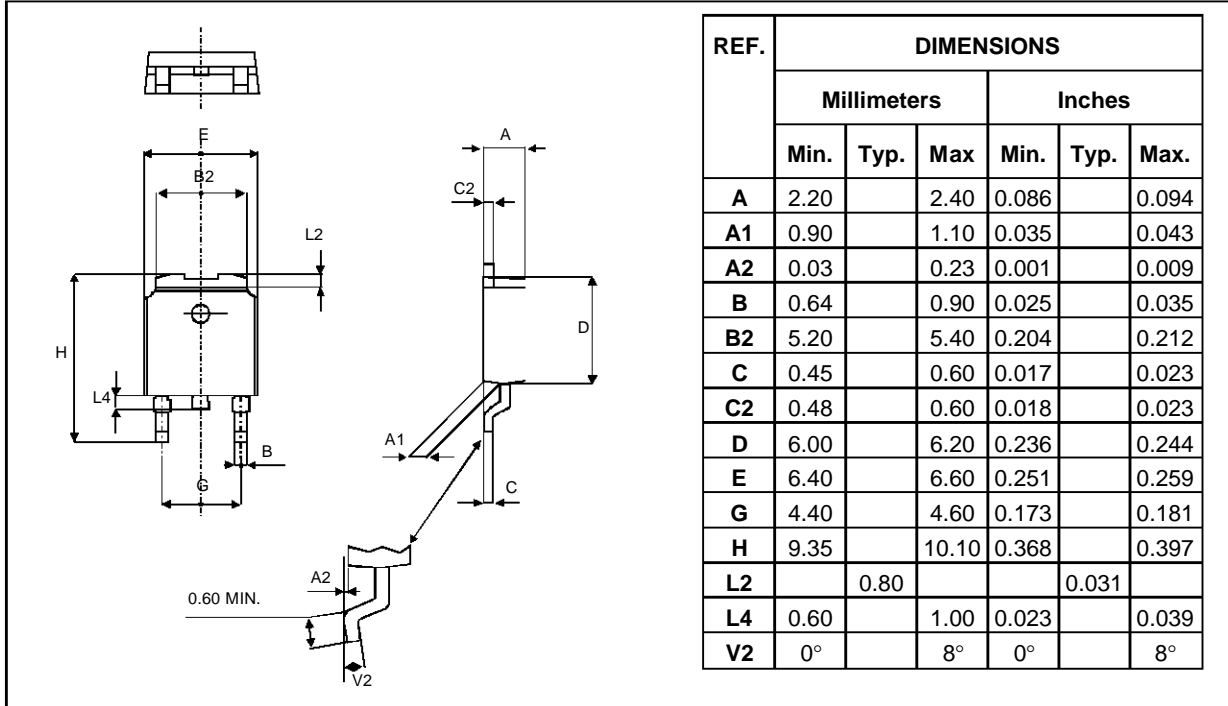
Symbol	Test Conditions		Quadrant		Value	Unit
I_{GT}	$V_D=12\text{V}$ (DC) $R_L=33\Omega$	$T_j=25^\circ\text{C}$	I-II-III	MAX	5	mA
V_{GT}	$V_D=12\text{V}$ (DC) $R_L=33\Omega$	$T_j=25^\circ\text{C}$	I-II-III	MAX	1.5	V
V_{GD}	$V_D=V_{DRM}$ $R_L=3.3\text{k}\Omega$	$T_j=110^\circ\text{C}$	I-II-III	MIN	0.2	V
tgt	$V_D=V_{DRM}$ $I_G = 40\text{mA}$ $di_G/dt = 0.5\text{A}/\mu\text{s}$ $I_{TM} = 5.5\text{A}$	$T_j=25^\circ\text{C}$	I-II-III	TYP	2	μs
I_L	$I_G=1.2 I_{GT}$	$T_j=25^\circ\text{C}$	I-II-III	MAX	15	mA
I_H *	$I_T= 100\text{mA}$ gate open	$T_j=25^\circ\text{C}$		MAX	10	mA
V_{TM} *	$I_{TM}= 5.5\text{A}$ tp= 380 μs	$T_j=25^\circ\text{C}$		MAX	1.75	V
I_{DRM} I_{RRM}	V_{DRM} Rated V_{RRM} Rated	$T_j=25^\circ\text{C}$		MAX	10	μA
		$T_j=110^\circ\text{C}$		MAX	2	mA
dV/dt *	Linear slope up to $V_D=67\%V_{DRM}$ gate open	$T_j=110^\circ\text{C}$		MIN	5	V/ μs
				TYP	20	
(di/dt)c *	(dV/dt)c = 0.1V/ μs	$T_j=110^\circ\text{C}$		MIN	1.8	A/ms

* For either polarity of electrode A₂ voltage with reference enceenceto electrode A₁.

ORDERING INFORMATION



PACKAGE MECHANICAL DATA
DPAK Plastic



MARKING : Type number

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