T405-B

HIGH PERFORMANCE TRIACS

FEATURES

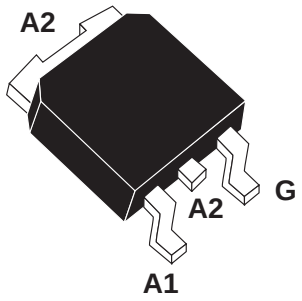
I_{TRMS} = 4 A

V_{DRM} = 400 V to 600 V

SENSITIVE GATE : $I_{GT} \leq$ 5 mA

LOGIC LEVEL

HIGH NOISE IMMUNITY



DPAK
(Plastic)

DESCRIPTION

The T405-B triac is using a high performance TOP-GLASS PNPN technology.This device is intended for AC control applications using surface mount technology. The high communation performances combined with high sensitivity make this triac perfect for direct drive from microprocessors in all applications like appliances, power tools, small motor drives etc...

ABSOLUT MAXIMUM RATINGS

Symbol	Parameter		Value	Unit
$I_{T(RMS)}$	RMS on-state current (360° conduction angle)	Tc = 95 °C	4	A
I_{TSM}	Non repetitive surge peak on-state current (Tj initial = 25°C)	tp = 8.3 ms	35	A
		tp = 10 ms	30	
I^2t	I^2t value for fusing	tp = 10 ms	4.5	A^2s
dI/dt	Critical rate of rise of on-state current I_G = 50mA di_G/dt = 0.1A/µs	Repetitive F = 50 Hz	10	A/µs
		Non Repetitive	50	
Tstg Tj	Storage temperature range Operating junction temperature range		- 40 to + 150 - 40 to + 110	°C °C
Tl	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 Tj = 110 °C	400	600	V

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)

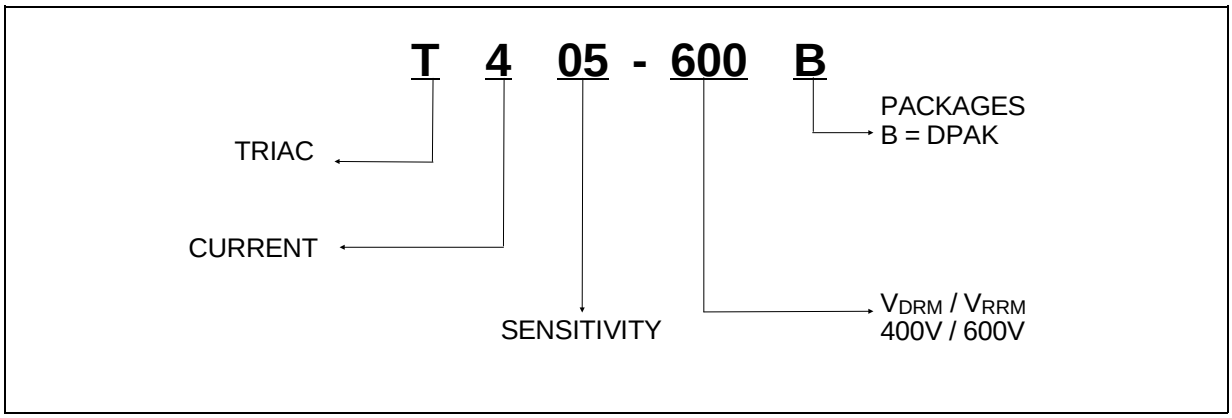
$P_{G(AV)}$ = 1 W P_{GM}= 10 W (tp = 20 µs) I_{GM} = 4 A (tp = 20 µs) V_{GM} = 16 V (tp = 20 µs).

ELECTRICAL CHARACTERISTICS

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

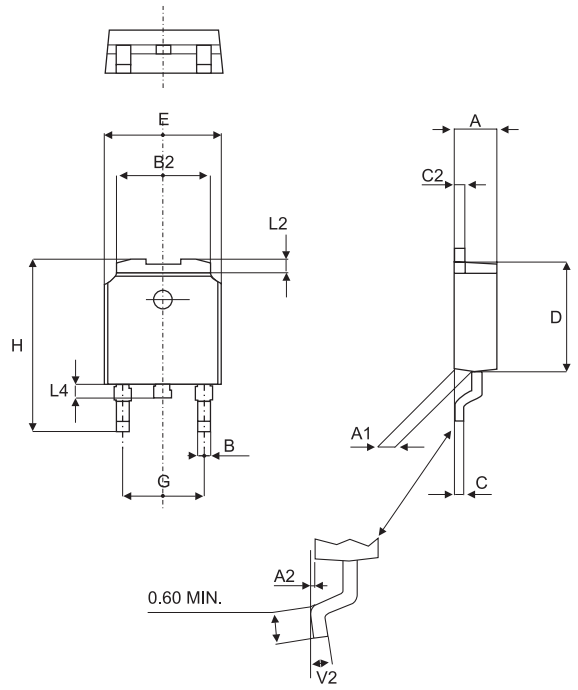
* For either polarity of electrode A_2 voltage with reference enceenceto electrode A_1.

ORDERING INFORMATION



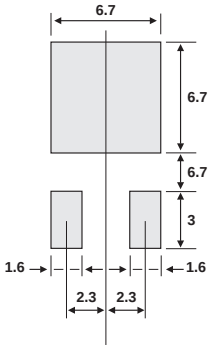
PACKAGE MECHANICAL DATA

DPAK Plastic



REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.094
A1	0.90		1.10	0.035		0.043
A2	0.03		0.23	0.001		0.009
B	0.64		0.90	0.025		0.035
B2	5.20		5.40	0.204		0.212
C	0.45		0.60	0.017		0.023
C2	0.48		0.60	0.018		0.023
D	6.00		6.20	0.236		0.244
E	6.40		6.60	0.251		0.259
G	4.40		4.60	0.173		0.181
H	9.35		10.10	0.368		0.397
L2		0.80			0.031	
L4	0.60		1.00	0.023		0.039
V2	0°		8°	0°		8°

FOOT PRINT DIMENSIONS (in millimeters)



MARKING

TYPE	MARKING
T405-400B	T4 0540
T405-600B	T4 0560

WEIGHT : 0.30g