SGS-THOMSON MICROELECTRONICS

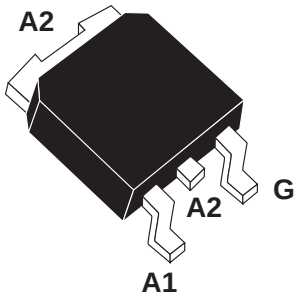
T410/T435-B

HIGH PERFORMANCE TRIACS

PRELIMINARY DATASHEET

FEATURES

- I_{TRMS} = 4 A
- V_{DRM} = 400 V to 800 V
- $I_{GT} \leq$ 10mA and 35mA



DPAK
(Plastic)

DESCRIPTION

The T410/T435-B serie of triacs uses a high performance TOPGLASS PNPN 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)	Tc = 110 °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 = 500mA di_G/dt = 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 + 125	°C °C
Tl	Maximum lead temperature for soldering during 10 s		260	°C

Symbol	Parameter	T410 or T435-				Unit
		400B	600B	700B	800B	
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Tj = 125 °C	400	600	700	800	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)

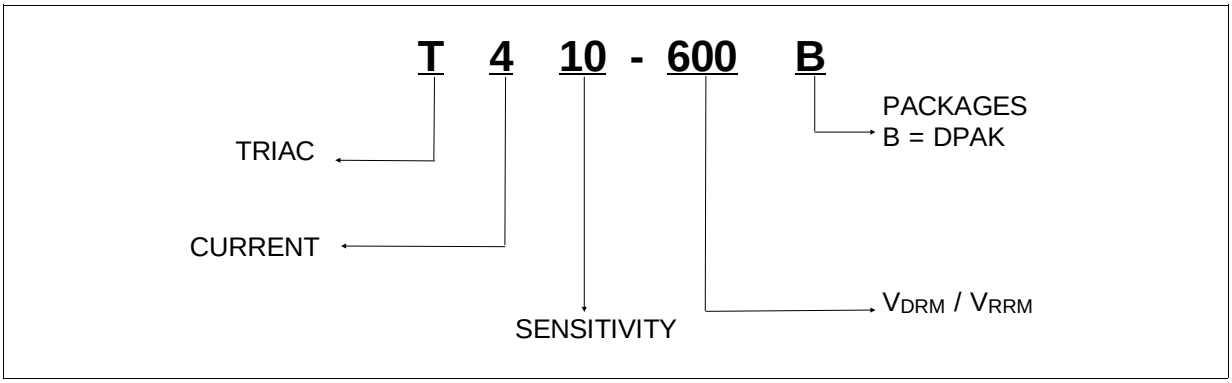
$P_{G(AV)}$ = 1 W P_{GM}= 10 W (tp = 20 µs) I_{GM} = 4 A (tp = 20 µs) V_{GM} = 16 V (tp = 20 µs).

ELECTRICAL CHARACTERISTICS

Symbol	Test Conditions		Quadrant		Value		Unit
					T410	T435	
I_{GT}	V_D=12V (DC) R_L=33Ω	Tj=25°C	I-II-III	MAX	10	35	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=125°C	I-II-III	MIN	0.2		V
tgt	V_D=V_{DRM} I_G = 500mA dI_G/dt = 3A/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	30	60	mA
I_H *	I_T= 100mA gate open	Tj=25°C		MAX	15	35	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=125°C		MAX	2		mA
dV/dt *	Linear slope up to V_D=67%V_{DRM} gate open	Tj=125°C		MIN	30	250	V/µs
(dI/dt)c *	(dV/dt)c = 0.1V/µs	Tj=125°C		MIN	2.7	4.4	A/ms
	(dV/dt)c = 20V/µs				1.8	2.7	

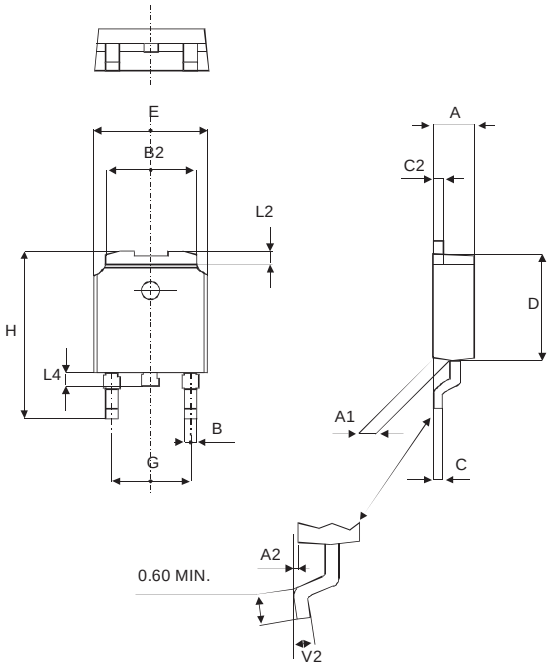
* For either polarity of electrode A_2 voltage with reference enceenceto electrode A_1.

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°

MARKING : Type number

Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsability for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied.
SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

© 1996 SGS-THOMSON Microelectronics - Printed in Italy - All rights reserved.

SGS-THOMSON Microelectronics GROUP OF COMPANIES
Australia - Brazil - Canada - China - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands - Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A.