

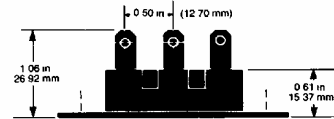
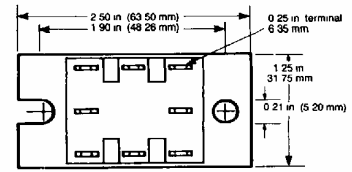
SERIES B-2T

25A-42.5A SCR/DIODE CIRCUITS

Part Number Identification

1st Digit Series Type	2nd Digit Current	3rd Digit Circuit Type	4th Digit AC Line Voltage	Options	Type Of Terminal
B-Casestyle (Ceramic Base)	5-25 amps. 6-42.5 amps.*	1-9 (see schematic diagrams)	1-120 volts 2-240 volts 3-280 volts 4-440 volts	F-Free Wheeling Diode Option S-Suppressor Option E-External Mounting of Suppressor	2T- 250

* 42.5 AMP Rating only available in circuits 1, 2, 3, & 5



Electrical Specifications

		PACKAGE TYPE	
		B5	B6
I_d	maximum dc output current @ 85° C = Tc full bridge (circuits 1-4) (A)	25	42.5
$I_T(RMS)$	maximum output current @ 85°C ceramic plate CKT5(A)	27	46
V_{TM}	maximum peak on-state voltage	1.8V @ 25A	1.6V @ 40A
I_H	maximum holding current	200mA	200mA
T_J	operating junction temperature range	- 25°C to 125°C	
di/dt	critical rate of rise of on-state current @ $T_J = 125°C$ (A/μS)	100	100
dv/dt	① critical rate of rise of off-state voltage @ $T_J = 125°C$ (V/μS)	200	200
V_{RMS}	AC line input voltage (PIV)	--- 120 (400PIV) --- --- 240 (600PIV) --- --- 280 (800PIV) --- --- 440 (1200PIV) ---	
I_{TSM}	maximum non-repetitive surge current (A) 60Hz—125°C 50Hz—25°C	300 325	600 650
I^2t	maximum I^2t for fusing $t = 8.3$ MSEC (A ² sec)	370	1500
I_{GT}	maximum required gate current to trigger, 25°C (mA)	110	150
I_{GT}	typical gate current to trigger	—20mA to 100mA—	
I_{GM}	maximum peak gate current	3.0A	3.0A
V_{GT}	maximum required gate voltage to trigger, 25°C (V)	2.5	3.0
V_{GT}	typical gate voltage to trigger	0.9V	0.9V
V_{GD}	maximum non-triggering gate voltage at $T_J = 125°C$	0.2V	0.2V
P_{GM}	maximum peak gate power, $t_p = 10\mu$ Sec.	5W	5W
$P_G(AV)$	average gate power	0.5W	0.5W
V_{GM}	maximum peak gate voltage (forward)	10V	10V
V_{GM}	maximum peak gate voltage (reverse)	5.0V	5.0V
$R_{\theta cs}$	① maximum thermal resistance case to sink (°C/W)	0.10	0.10
V_{FM}	maximum peak forward voltage	1.65V @ 25A	1.50V @ 40A
$R\theta_{JC}$	typical thermal resistance junction to ceramic base per device	0.6 C/W	0.5°C/W
V_{ISOL}	isolation voltage from terminals to base	—2500 volts _{RMS} min.—	

Circuit Configurations for Series B-2T

