CRYDOM COMPANY

POWER MODULES

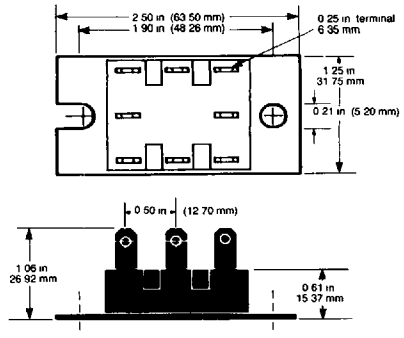
SERIES B-2T

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	①critical 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, tp = 10µSec.	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
$R_{\theta cs}$	①maximum 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