CRYDOM
C O M P A N Y

SERIES L

13A-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
L-Casestyle (Ceramic Base)	3-13 Amp 4-20 Amp. 5-25 Amp 6-42 5 Amp*	1-9 (see schematic diagrams)	1-120 volts 2-240 volts 3-280 volts	F-Free Wheeling Diode Option C-Gate to cathode capacitor option. Consult factory.

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

Each part number consists of 4 to 7 digits. Use the table to determine the part that fits your needs.

Electrical Specifications

		SERIES			
		L3	L4	L5	L6*
I_d	maximum dc output current @ 85°C = Tc ceramic full bridge (A)	13.0	20	25	42.5
I_T^{RMS}	maximum output current @ 85°C = Tc CKT 5 (A)	15.0	22	27	46
V_{TM}	maximum SCR voltage (V) @ amperes peak	1.8V @13A	2.2V @20A	2.2V @25A	2.2V @40A
I_H	maximum holding current (mA)	100	100	100	200
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	100	100
dv/dt	critical rate of rise of off-state current @ T_J = 125°C (A/μS)	200	200	200	200
V_{RMS}	AC line input voltage	——120 (400PIV)—— ——240 (600PIV)—— ——280 (800PIV)—— ——400 (1200PIV)——			
I_{TSM}	maximum non-repetitive surge current (A)	150	250	300	600
I^2t	maximum I^2t for fusing t = 8.3 (A² sec)	94	260	375	1500
I_{GT}	maximum required gate current to trigger, 25°C (mA)	100	100	100	100
I_{GM}	maximum peak gate current (A)	1.5	3.0	3.0	3.0
V_{GT}	maximum required gate voltage to trigger, 25°C (V)	2.5	2.5	2.5	3.0
V_{GD}	maximum non-triggering gate voltage at Tj = 125°C (V)	0.2	0.2	0.2	0.2
P_{GM}	maximum peak gate power, tp = 10μSec. (W)	5.0	5.0	5.0	5.0
$P_G(AV)$	average gate power (W)	0.5	0.5	0.5	0.5
V_{GM}	maximum peak gate voltage (reverse) (V)	5.0	5.0	5.0	5.0
R_{OCS}	maximum thermal resistance to sink (°C/W)	0.1	0.1	0.1	0.1
RθJC	typical thermal resistance junction to ceramic base per device (°C/W)	0.6	0.5	0.5	0.5

Circuit Configurations for Series L