



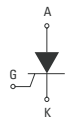
Applications

- Motor Control
- Overvoltage Crowbar Protection
- Capacitive Discharge Ignition
- Voltage Regulation
- Welding Equipment
- Capacitive Filter Soft Start (Inrush Current Control)

- > Suitable for General Purpose AC Switching
- > IGT 60mA Max.
- > VDRM/VRMM 800, 1000, 1200, 1400, 1600V

Absolute Maximum Ratings

	CONDITIONS	SYMBOL	RATING
RMS On-State Current (full sine wave) ^{NOTE 1}	T _c = 80°C	I _{T(RMS)}	50A
Average On-State Current	T _c = 80°C	I _{T(AV)}	32A
Non Repetitive Surge Peak On-State Current (Full Cycle, T _j Initial = 25°C)	F = 50 Hz F = 60 Hz	I _{TSM}	500A 525A
I ² t Value for fusing	t _p = 10 ms	I ² t	1250A ² s
Critical rate of rise of on-state current I _G =2 x I _{GT} , tr<100 ns, T _j = 125°C		di/dt	100A/μs
Peak Gate Current @ T _j = 125°C	t _p = 20 μs	I _{GM}	4A
Average Gate Power Dissipation @ T _j = 125°C		PG(AV)	1W
Storage Temperature Range		T _{stg}	-40 to +150°C
Operating Junction Temperature Range		T _j	-40 to +125°C
Maximum Peak Reverse Gate Voltage		V _{RGM}	5V



Electrical Characteristics ^{NOTE 2}

I _{GT} MAX @ V _D = 12 V, R _L = 30Ω		60mA
V _{GT} MAX @ V _D = 12 V, R _L = 30Ω		1.3V
V _{GD} MIN @ V _D = V _{DRM} , R _L = 3.3kΩ	T _j = 125°C	0.2V
I _H MAX @ I _T = 500 mA (gate open)		180mA
I _L MAX @ I _G = 1.2 I _{GT}		90mA
dv/dt MIN @ V _D = 67%V _{DRM} (gate open)	T _j = 125°C	1000V/μs
V _{TM} MAX @ I _{TM} = 150 A, t _p = 380μs	T _j = 25°C	1.6V
I _{DRM} MAX @ V _{DRM} = V _{RDM}	T _j = 25°C	5μA
I _{RDM} MAX @ V _{DRM} = V _{RDM}	T _j = 125°C	4mA

GENERAL NOTES

1. All parameters at 25 degrees C unless otherwise specified.

ISO9001 Certified



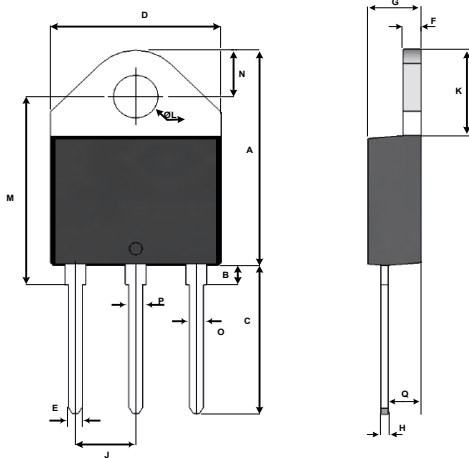
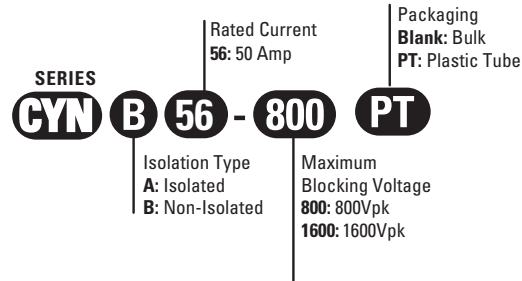
Thermal Resistances

		SYMBOL	RATING
Junction to Case (AC)	T0-218	Rth(j-c)	0.8°C/W
Junction to Case (AC)	T0-218 Isolated	Rth(j-c)	1.1°C/W
Junction to Ambient	T0-218	Rth(j-a)	50°C/W
Junction to Ambient	T0-218 Isolated	Rth(j-a)	50°C/W

Part Number Selection

Part Number	Voltage [Vpk]	I _{GT} [mA]	Package
CYNA/CYNB-xxx	800/1000/1200/1400/1600	60	T0-218

Part Number Designation



Dimensions

REF.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	20.4		21.1	0.8		0.831
B		3.23			0.127	
C	14.35		15.60	0.565		0.614
D	15.1		15.5	0.594		0.610
E	1.20		1.40	0.047		0.055
F	1.45		1.55	0.057		0.061
G	4.4		4.6	0.173		0.181
H	0.5		0.7	0.020		0.028
J	5.4		5.65	0.213		0.222
K	8.0		8.25	0.315		0.325
L	4.08		4.17	0.161		0.164
M	15.8		16.5	0.622		0.650
N	4.6		4.8	0.181		0.189
O	1.20		1.40	0.047		0.055
P	1.20		1.40	0.047		0.055
Q	2.7		2.9	0.106		0.114

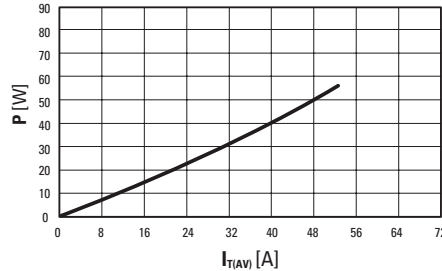


Fig. 1: Power dissipation versus average on-state current.

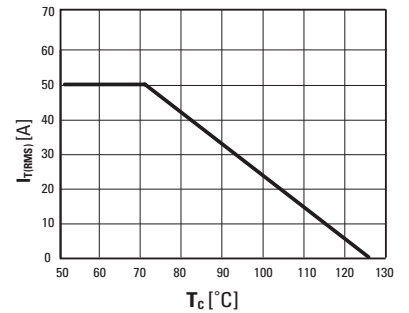


Fig. 2: RMS on-state current versus case temperature (full cycle)

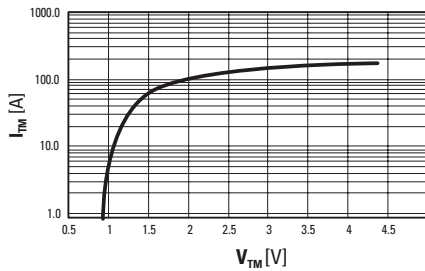


Fig. 3: On-state current versus on-state voltage (instantaneous values)

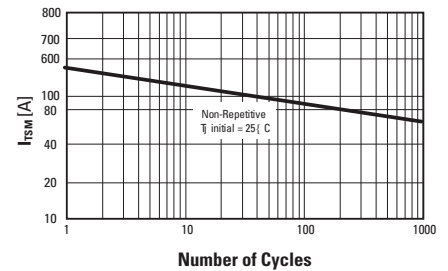


Fig. 4: Non-repetitive surge peak on-state current versus number of cycles.