



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

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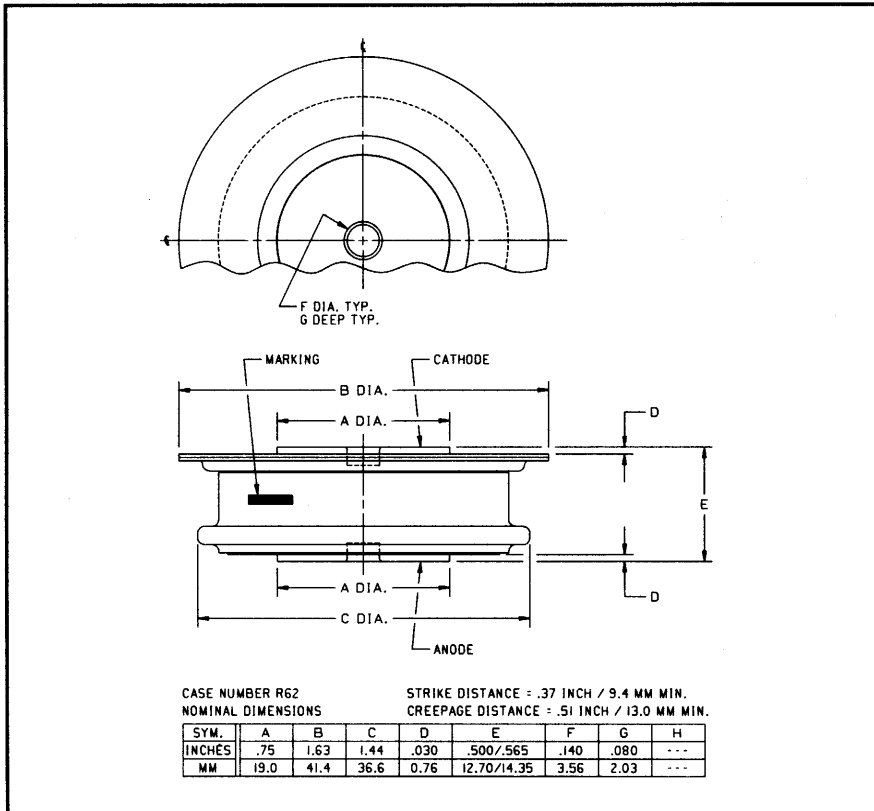
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



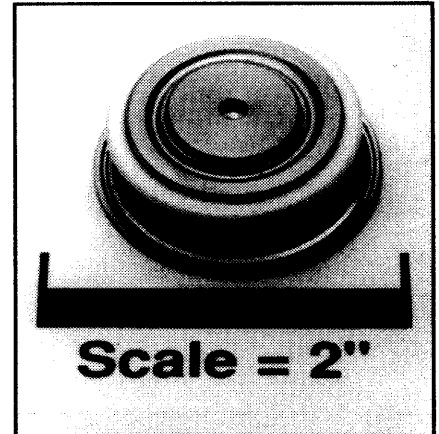
Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272
Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

Silicon Rectifier

400 Amperes Average
1600 Volts



A390 (Outline Drawing)



A390
Silicon Rectifier
400 Amperes Average, 1600 Volts

Ordering Information:

Select the complete five or six digit part number you desire from the table, i.e. A390PM is a 1600 Volt, 400 Ampere Silicon Rectifier.

Type	Voltage		Current $I_T(av)$
	V_{RRM}	Code	
A390	200	B	400
	400	D	
	600	M	
	800	N	
	1000	P	
	1200	PB	
	1400	PD	
	1600	PM	

Features:

- ☐ Soft Reverse Recovery
- ☐ High Reverse Blocking Voltage Capability
- ☐ Pressure Contacts
- ☐ Package Reversibility
- ☐ Rugged Glazed Ceramic Hermetic Package

Applications:

- ☐ Auction Diode
- ☐ DC Power Supplies



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A390
Silicon Rectifier
400 Amperes Average, 1600 Volts

Absolute Maximum Ratings

Characteristics	Symbol	A390	Units
RMS Forward Current	$I_{F(rms)}$	628	Amperes
Average Forward Current	$I_{F(av)}$	400	Amperes
One Cycle Surge Current	I_{FSM}	7000	Amperes
i^2t (for Fusing), Times ≥ 1.0 milliseconds	i^2t	80000	A^2sec
Storage Temperature	T_{stg}	-40 to +200	$^{\circ}C$
Operating Temperature	T_j	-40 to +200	$^{\circ}C$
Mounting Force		800 $\pm$ 10%	lbs
		3.56 $\pm$ 10%	KN

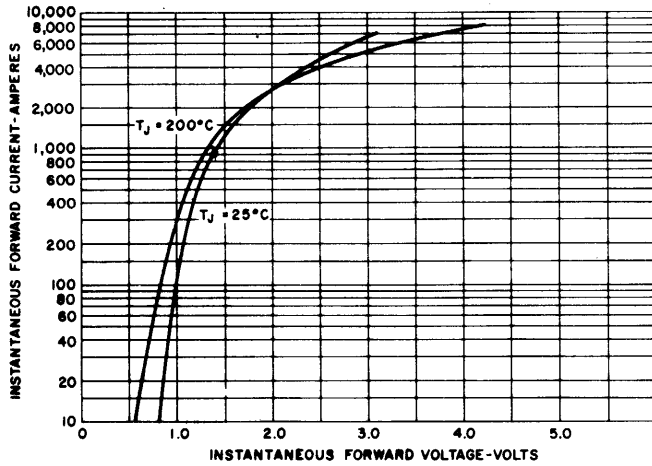
Electrical and Thermal Characteristics

Characteristics	Symbol	Test Conditions	A390	Units
Current - Conducting State Maximums				
Forward Voltage Drop	V_{FM}	$T_C = 144^{\circ}C$, $I_{F(av)} = 400A, 1260A$ Peak	1.4	Volts
Voltage - Blocking State Maximums				
Repetitive Peak Reverse Voltage (Rated Limit)	V_{RRM}		1600	Volts
Non-rep. Trans. Peak Rev. Voltage (Rated Limit)	V_{RSM}	$V \leq 5.0msec$	1800	Volts
Reverse Leakage Current, mA peak	I_{RRM}	T_j at max., $V_{RRM} = \text{Rated}$	25	mA
Thermal				
Maximum Resistance, Junction to Case	$R_{\theta(j-c)}$		0.095	$^{\circ}C/Watt$

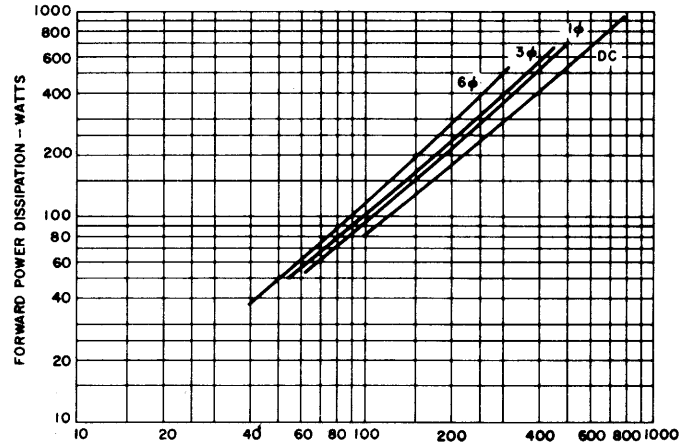


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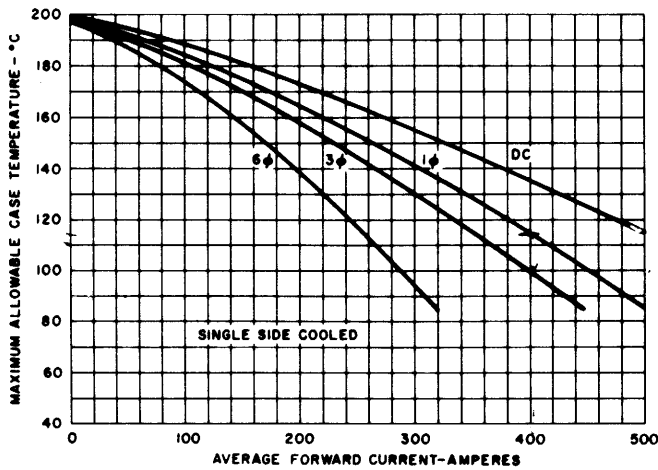
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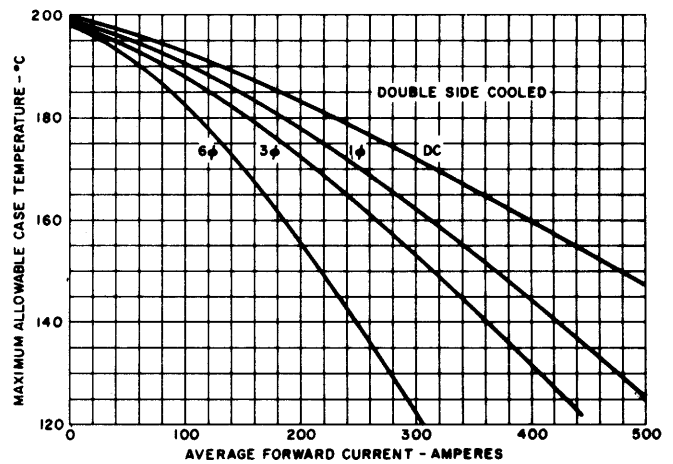
MAXIMUM FORWARD CHARACTERISTICS



**AVERAGE FORWARD POWER DISSIPATION
VS. AVERAGE FORWARD CURRENT**



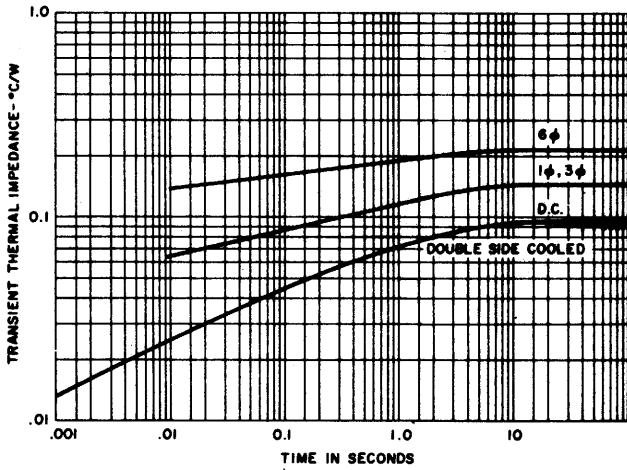
**MAXIMUM CASE TEMPERATURE VS.
AVERAGE FORWARD CURRENT FOR
SINGLE-SIDE COOLING**



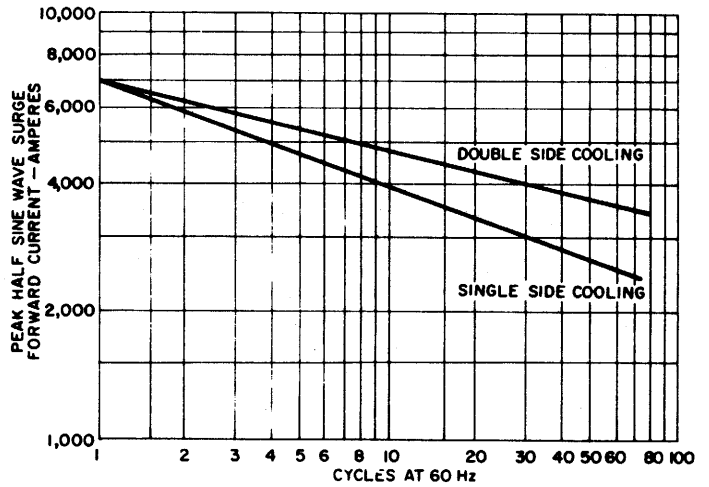
**MAXIMUM CASE TEMPERATURE VS.
AVERAGE FORWARD CURRENT FOR
DOUBLE-SIDE COOLING**

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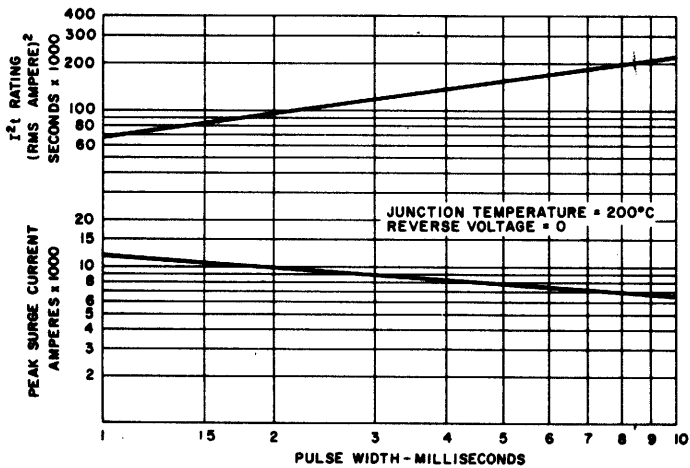
A390
Silicon Rectifier
 400 Amperes Average, 1600 Volts



**TRANSIENT THERMAL IMPEDANCE —
 JUNCTION-TO-CASE**



**MAXIMUM SURGE CURRENT FOLLOWING
 RATED LOAD CONDITIONS**



**SUB-CYCLE SURGE FORWARD CURRENT
 AND I^2t RATING VS. PULSE TIME
 FOLLOWING RATED LOAD CONDITIONS**