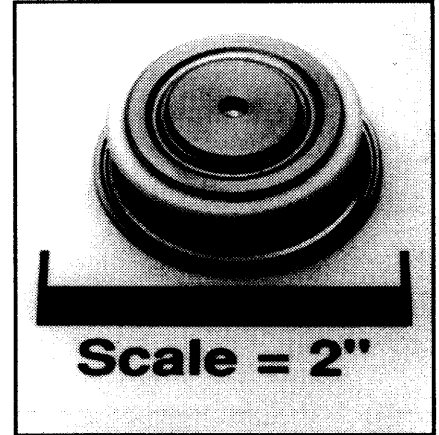
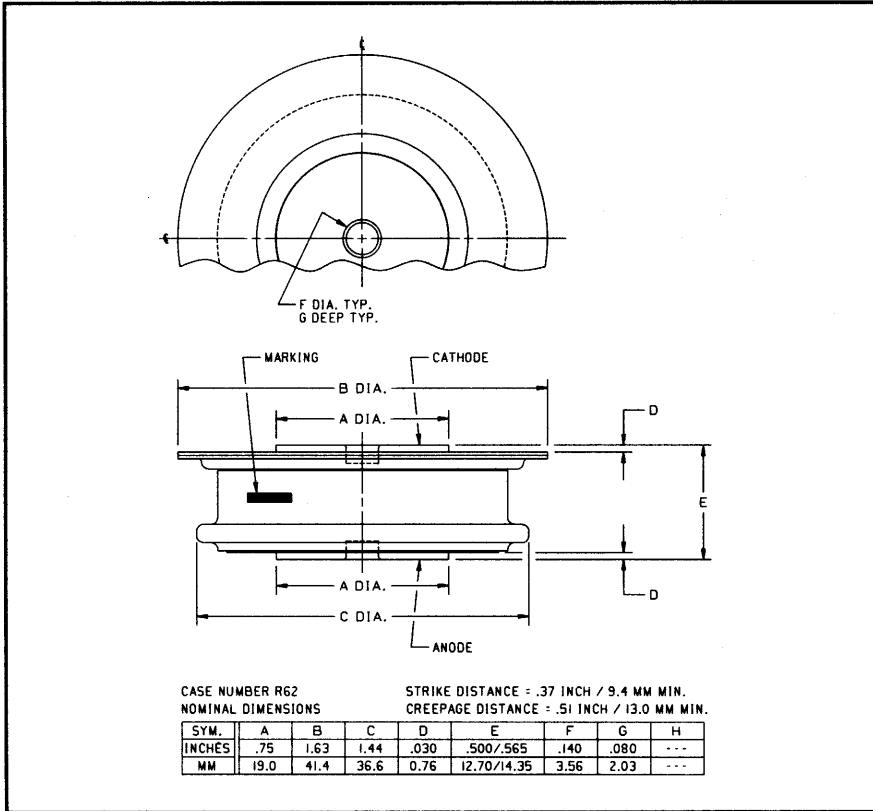


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 Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

Silicon Rectifier
 400 Amperes Average
 1600 Volts



A390
Silicon Rectifier
 400 Amperes Average, 1600 Volts

A390 (Outline Drawing)

Features:

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

Applications:

- Auction Diode
- DC Power Supplies

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
	V _{RRM}	Code	I _{T(av)}
A390	200	B	400
	400	D	
	600	M	
	800	N	
	1000	P	
	1200	PB	
	1400	PD	
1600	PM		



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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

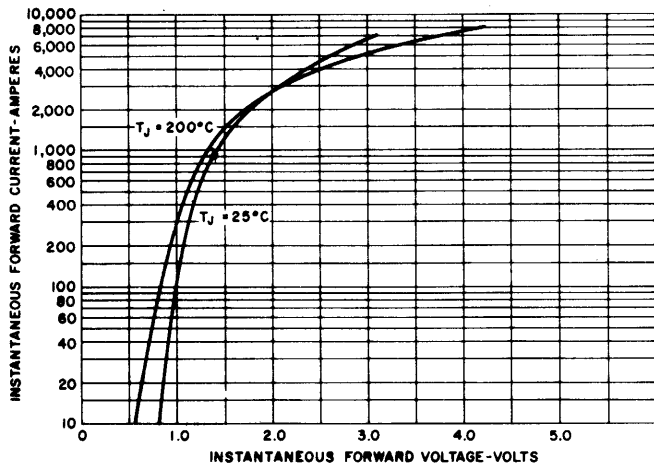
Electrical and Thermal Characteristics

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., $V_{RRM} =$ Rated	25	mA
Thermal				
Maximum Resistance, Junction to Case	$R_{\theta(j-c)}$		0.095	$^{\circ}C/Watt$

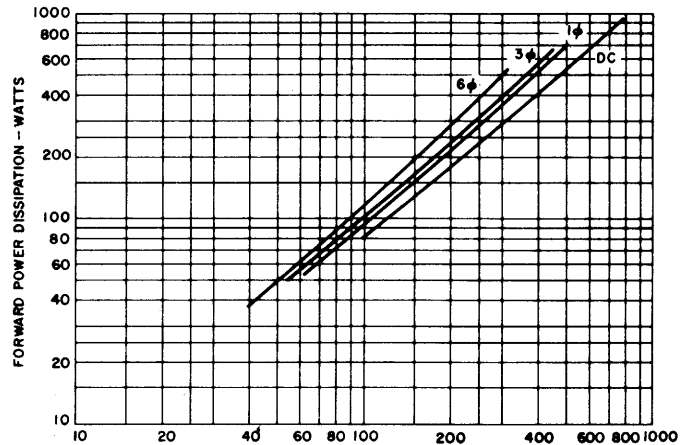


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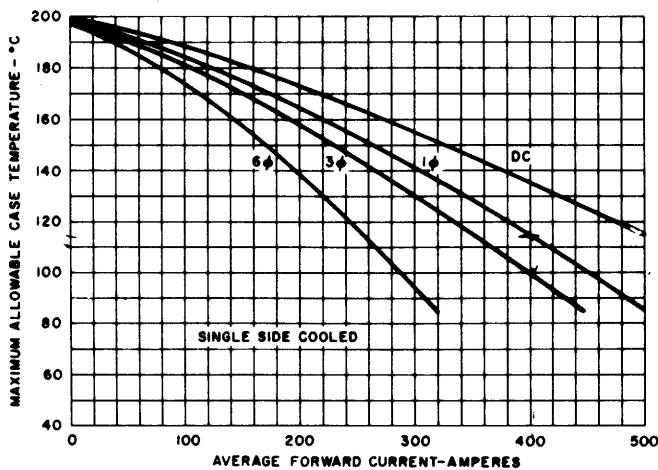
A390
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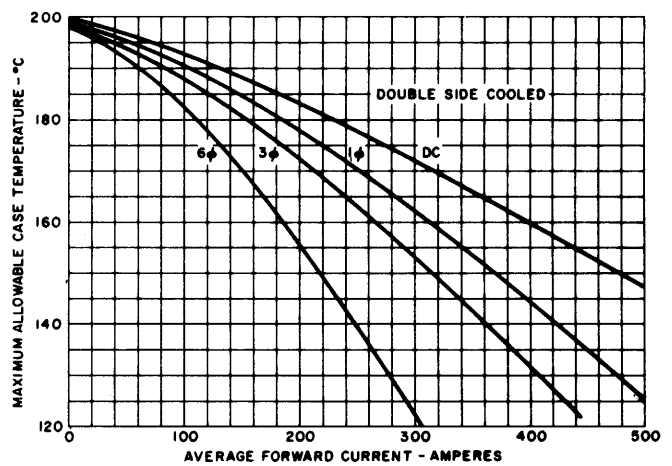
MAXIMUM FORWARD CHARACTERISTICS



AVERAGE FORWARD POWER DISSIPATION VS. AVERAGE FORWARD CURRENT



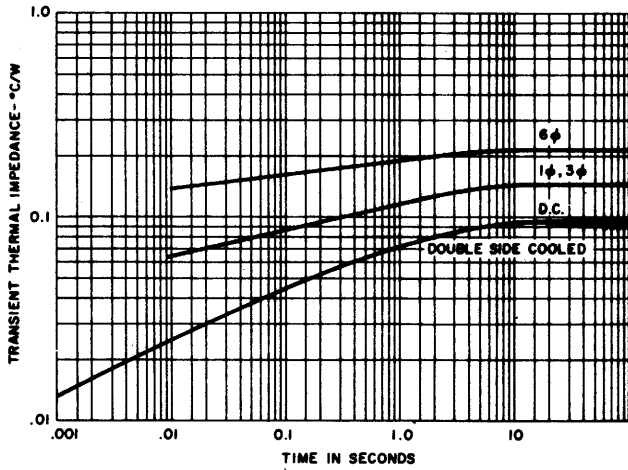
MAXIMUM CASE TEMPERATURE VS. AVERAGE FORWARD CURRENT FOR SINGLE-SIDE COOLING



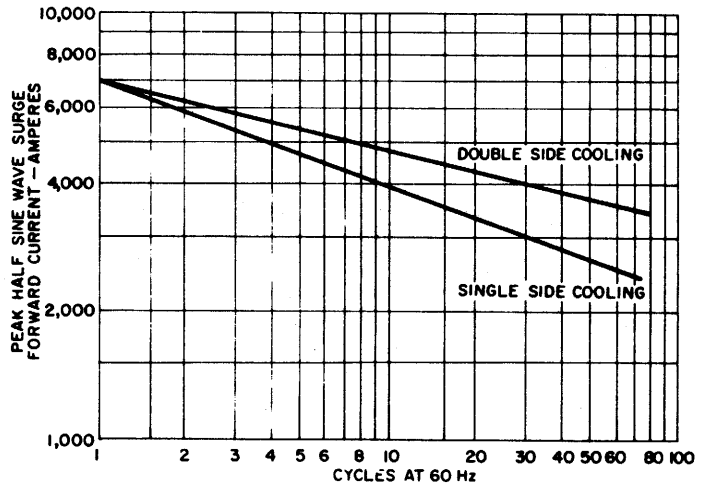
MAXIMUM CASE TEMPERATURE VS. AVERAGE FORWARD CURRENT FOR DOUBLE-SIDE COOLING

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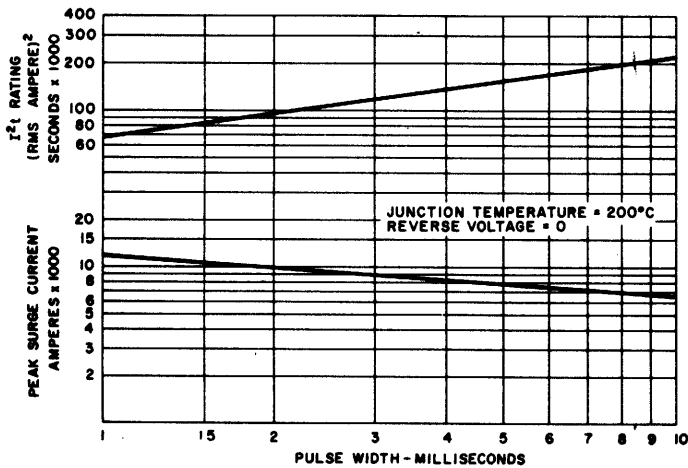
A390
Silicon Rectifier
 400 Amperes Average, 1600 Volts



**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**