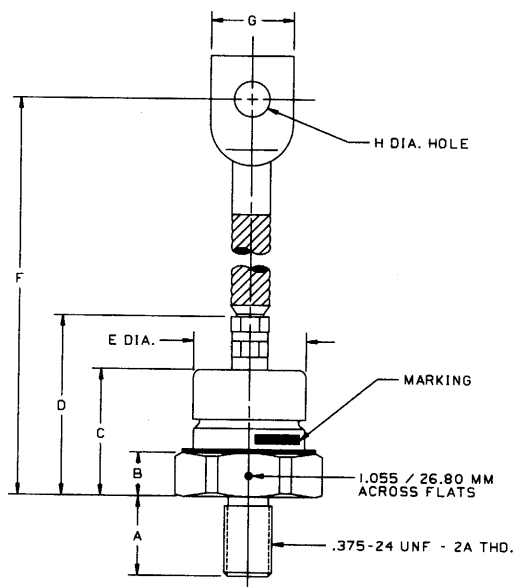


Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272
Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

Silicon Rectifier
150 Amperes Average
1600 Volts

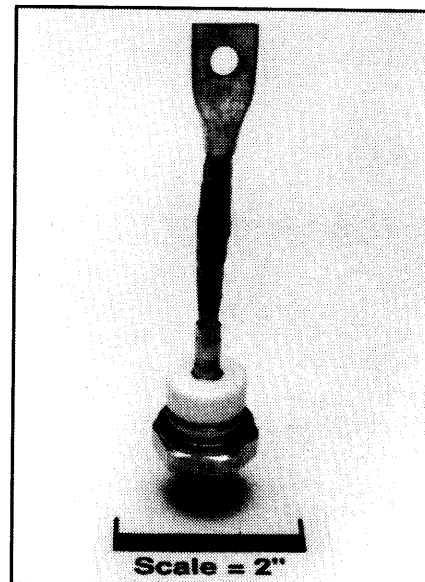


CASE NUMBER R50
NOMINAL DIMENSIONS

STRIKE DISTANCE = .64 INCH / 16.2 MM MIN.
CREEPAGE DISTANCE = .64 INCH / 16.2 MM MIN.

SYM.	A	B	C	D	E	F	G	H	J	K
INCHES	.63	.34	.98	1.58	.89	4.48	.63	.281	----	----
MM	16.0	8.6	24.9	40.1	22.6	113.8	16.0	7.14	----	----

ALL DIMENSIONS ARE REFERENCE



A180 (R)
Silicon Rectifier
150 Amperes Average, 1600 Volts

A180 (R) (Outline Drawing)

Ordering Information:

Select the complete five or six digit part number you desire from the table, i.e. A180PM is a 1600 Volt, 150 Ampere Silicon Rectifier.

Type	Voltage		Current $I_{T(av)}$
	V_{RRM}	Code	
A180	200	B	150
	400	D	
	600	M	
	800	N	
	1000	P	
	1200	PB	
	1400	PD	
	1600	PM	

Features:

- ☐ Hermetic Seal

Applications:

- ☐ Transportation Equipment
- ☐ DC Motor Control
- ☐ DC Power Supplies
- ☐ Battery Vehicles



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A180 (R)

Silicon Rectifier

150 Amperes Average, 1600 Volts

Absolute Maximum Ratings

Characteristics	Symbol	A180 (R)	Units
RMS Forward Current	$I_{F(rms)}$	236	Amperes
Average Forward Current	$I_{F(av)}$	150	Amperes
One Cycle Surge Current	I_{FSM}	3400	Amperes
I^2t (for Fusing), Times ≥ 1.0 milliseconds	I^2t	22000	A^2sec
Storage Temperature	T_{stg}	-40 to +200	$^{\circ}C$
Operating Temperature	T_j	-40 to +200	$^{\circ}C$
Mounting Torque (Lubricated)		90 to 100 10.2 to 11.3	in-lb N-m

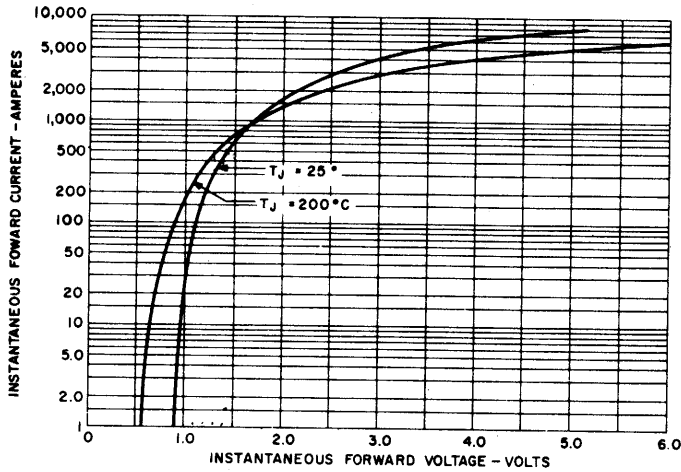
Electrical and Thermal Characteristics

Characteristics	Symbol	Test Conditions	A180 (R)	Units
Current - Conducting State Maximums				
Forward Voltage Drop	V_{FM}	$T_C = 143^{\circ}C$, $I_{F(av)} = 150A$, 471A Peak	1.3	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., $V_{RRM} = \text{Rated}$	20	mA
Thermal				
Maximum Resistance, Junction to Case	$R_{\theta(j-c)}$		0.3	$^{\circ}C/Watt$

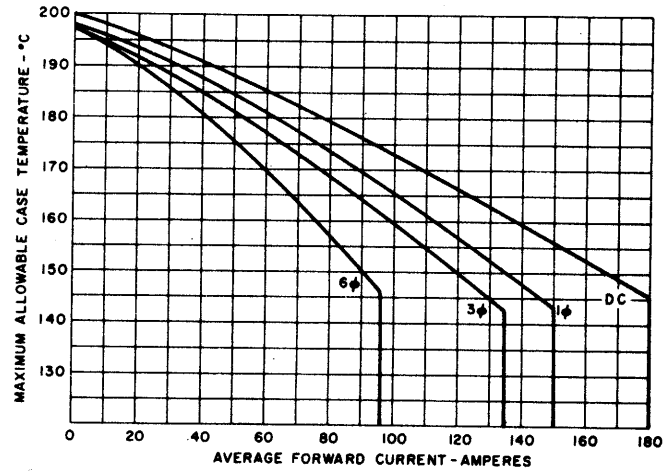


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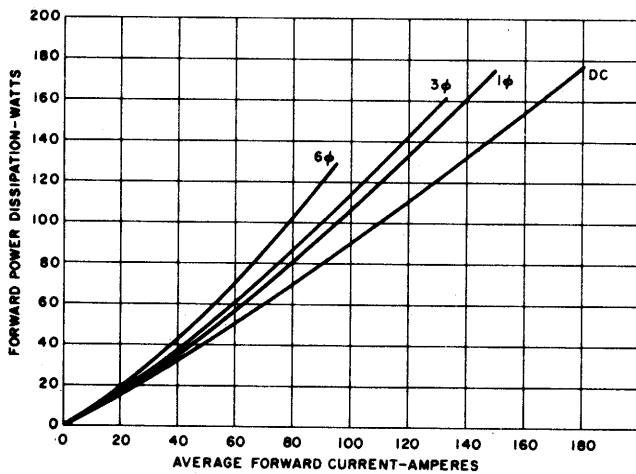
A180 (R)
Silicon Rectifier
 150 Amperes Average, 1600 Volts



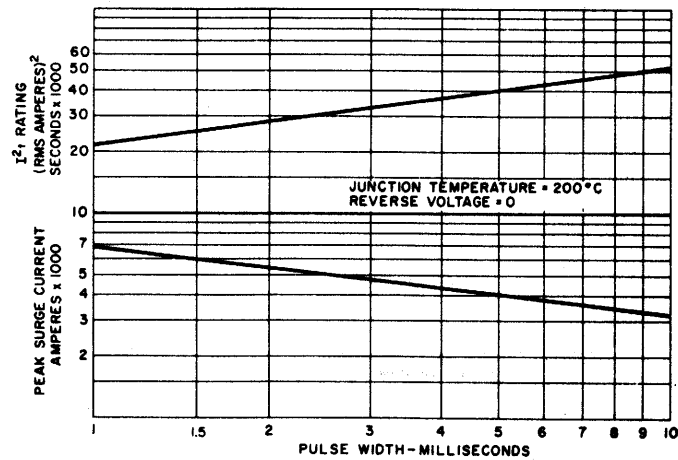
MAXIMUM FORWARD CHARACTERISTICS



MAXIMUM CASE TEMPERATURE VS. AVERAGE FORWARD CURRENT



AVERAGE FORWARD POWER DISSIPATION VS. AVERAGE FORWARD CURRENT

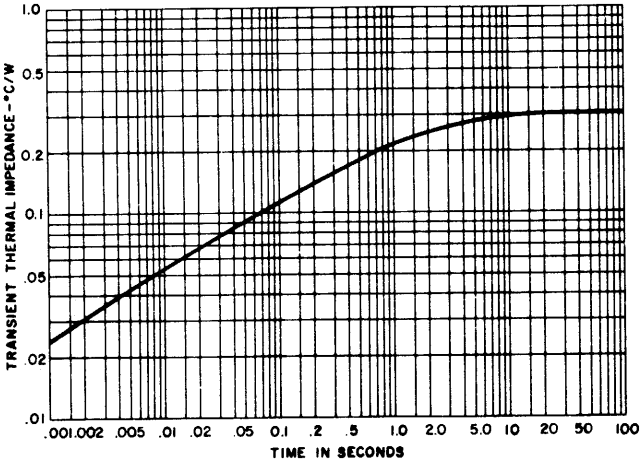


SUB-CYCLE SURGE FORWARD CURRENT AND I^2t RATING VS. PULSE TIME FOLLOWING RATED LOAD CONDITIONS



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A180 (R)
Silicon Rectifier
150 Amperes Average, 1600 Volts



TRANSIENT THERMAL IMPEDANCE —
JUNCTION-TO-CASE