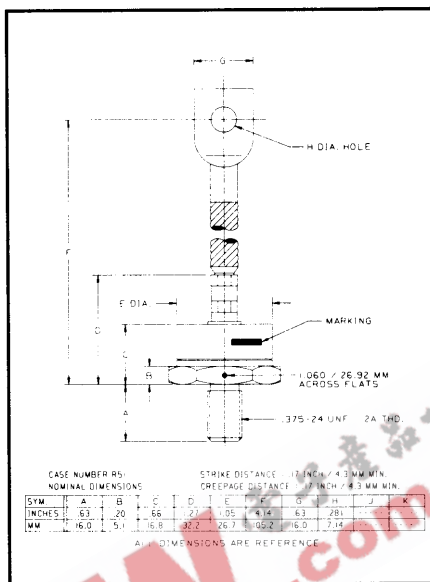
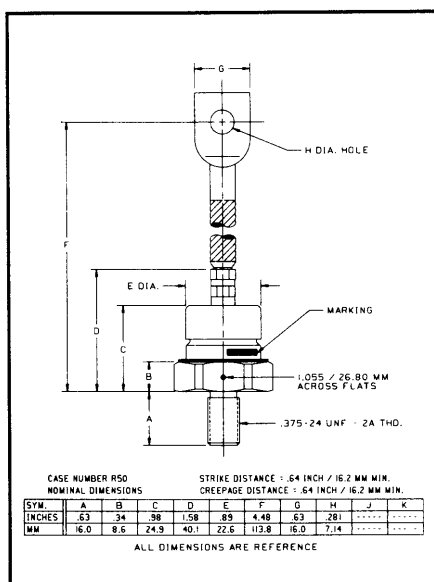


Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272
Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

**General Purpose
Rectifier**
150 Amperes Average
1400 Volts



IN4587, R - IN4596, R (Outline Drawing)

Ordering Information:

Select the complete six digit part number you desire from the table, i.e. IN4596 is a 1400 Volt, 150 Ampere General Purpose Rectifier.

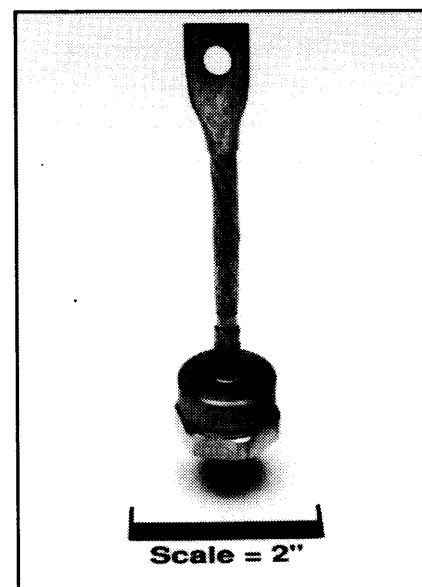
Type	Voltage	Current
	V_{DRM}/V_{RRM} (Volts)	$I_T(av)$ (A)
IN4587	100	150
IN4588	200	
IN4589	300	
IN4590	400	
IN4591	500	
IN4592	600	
IN4593	800	
IN4594	1000	
IN4595	1200	
IN4596	1400	

Features:

- ☐ Standard and Reverse Polarities with Color Coded Seals
- ☐ High Surge Current Ratings
- ☐ Electrical Selection for Parallel and Series Operation
- ☐ Compression Bonded Encapsulation

Applications:

- ☐ Welders
- ☐ Battery Chargers
- ☐ Electromechanical Refining
- ☐ Metal Reduction
- ☐ General Industrial High Current Rectification



IN4587, R - IN4596, R
General Purpose Rectifier
150 Amperes Average,
1400 Volts



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1N4587,R - 1N4596,R
General Purpose Rectifier
150 Ampere Average, 1400 Volts

Absolute Maximum Ratings

Characteristics	Symbol	1N4587,R - 1N4596,R	Units
RMS Forward Current	$I_{F(rms)}$	236	Amperes
Maximum Average Forward Current	$I_{F(av)}$	150	Amperes
One-half Cycle Surge Current (at 60Hz Under Load)	I_{FSM}	3000	Amperes
I^2t (for Fusing), (at 60Hz Half-wave)	I^2t	37200	A ² sec
Storage Temperature	T_{stg}	-60 to +200	°C
Operating Temperature	T_j	-60 to +200	°C
Mounting Torque (Lubricated)		120	in-lb

Electrical and Thermal Characteristics

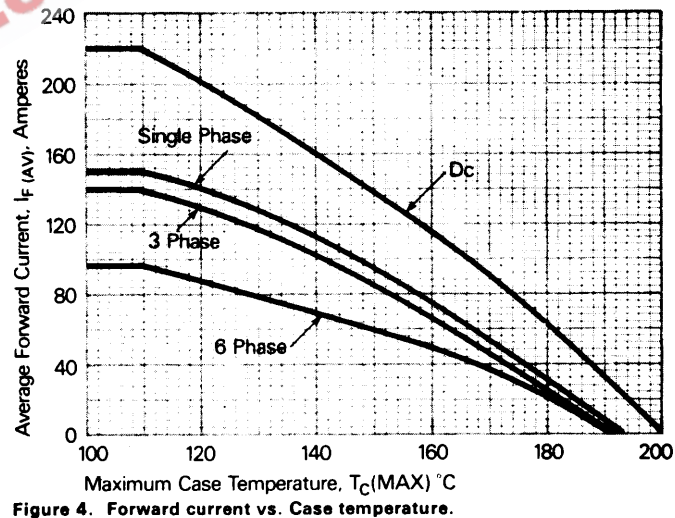
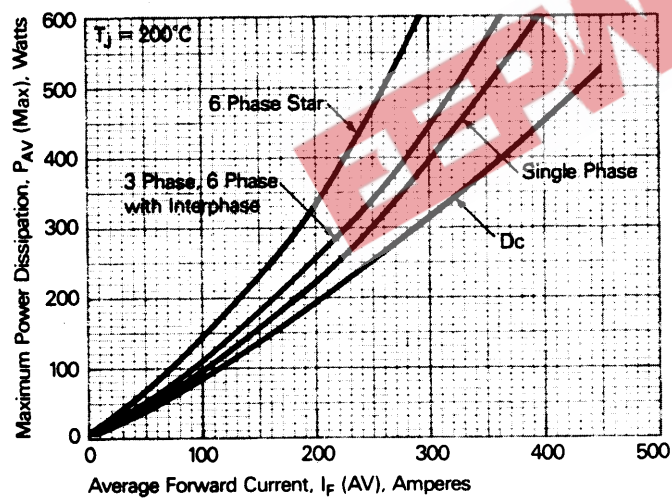
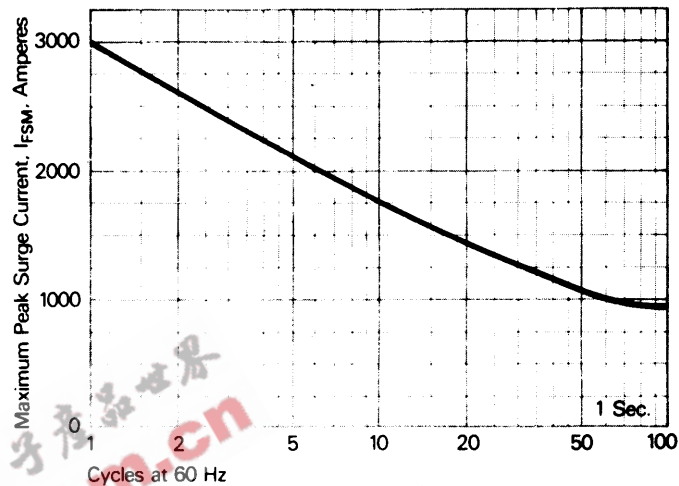
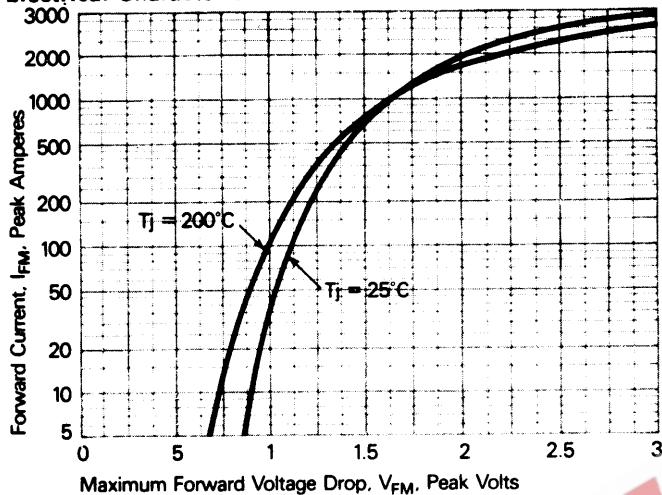
Characteristics	Symbol	1N4587	1N4588	1N4589	1N4590	1N4591	1N4592	1N4593	1N4594	1N4595*	1N4596*	Units
Current - Conducting State Maximums, $T_j = 200^\circ\text{C}$												
Max. Reverse Current at Rated V_{RRM} 150A Avg. Forward Current, $T_j = 110^\circ\text{C}$	$I_{R(av)}$	9.5	9.5	9.0	9.0	8.0	6.5	5.5	4.5	4.0	3.5	mA
Voltage - Blocking State Maximums												
Repetitive Peak Reverse Voltage	V_{RRM}	100	200	300	400	500	600	800	1000	1200	1400	Volts
Non-rep. Trans. Peak Rev. Voltage	V_{RSM}	200	300	400	525	650	800	1050	1300	1600	1800	Volts
Max. Allowable d-c Blocking Voltage	V_R	100	200	300	400	500	600	800	1000	1200	1400	Volts
Thermal												
Maximum Resistance, Junction to Case	$R_{\theta(j-c)}$	0.35 (All Types)										°C/Watt
Maximum Resistance, Case to Sink (Lubricated)	$R_{\theta(c-s)}$	0.15 (All Types)										°C/Watt

*Ceramic Seal Supplied

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150 Ampere Average, 1400 Volts

Electrical Characteristics



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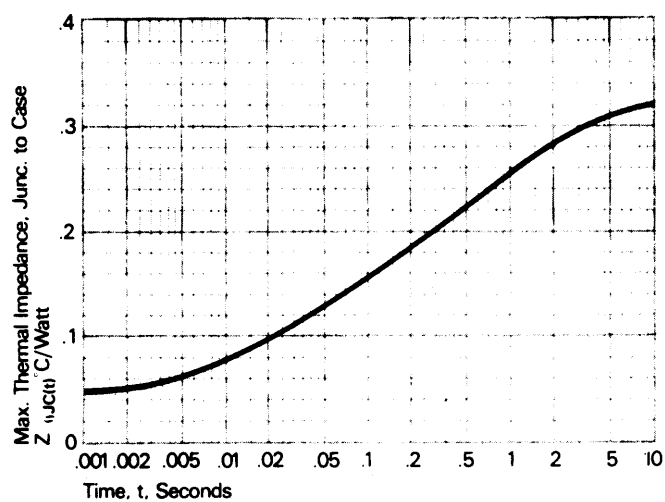


Figure 5. Transient thermal impedance vs. time.

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