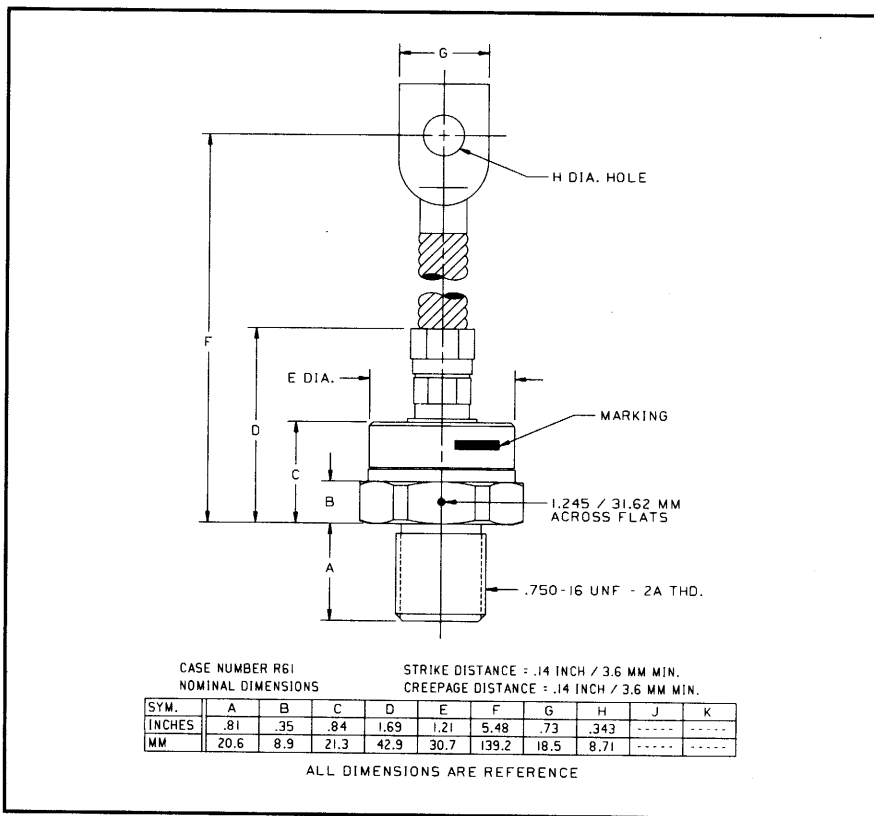
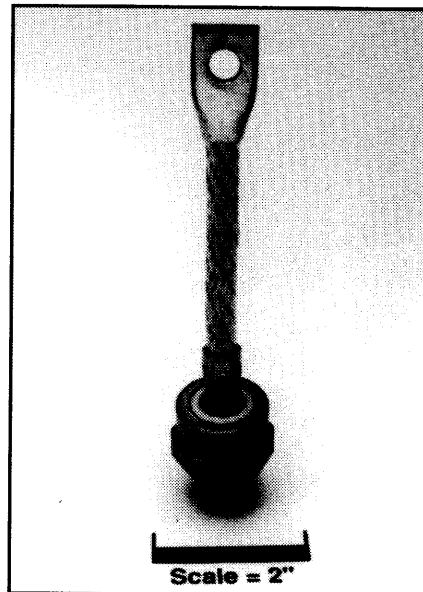


Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272
 Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

General Purpose Rectifier
 200-300 Amperes Average
 1200 Volts



R610/R611 (Outline Drawing)



R610/R611
 General Purpose Rectifier
 200-300 Amperes Average, 1200 Volts

Ordering Information:

Select the complete part number you desire from the following table:

Type	Voltage		Current		Recovery Time		Recovery Time Circuit		Leads	
	V_{RRM} (Volts)	Code	$I_{F(av)}$ (A)	Code	t_{rr} (μ sec)	Code	Circuit	Code	Case	Code
R610 (Std. Polarity)	100	01	200	20	13	X	JEDEC	X	DO-9	YZ
	200	02	250	25	11	X				
	400	04								
R611 (Rev. Polarity)	600	06	300	30	9	X	(Typical)			
	800	08								
	1000	10								
	1200	12								

Example: Type R610 rated at 250A average with $V_{RRM} = 800V$, and standard flexible lead, order as:

Type	Voltage	Current	Time	Circuit	Leads
R 6 1 0	0 8	2 5	X	X	Y Z

Features:

- Standard and Reverse Polarities
- Flag Lead and Stud Top Terminals Available
- High Surge Current Ratings
- High Rated Blocking Voltages
- Special Electrical Selection for Parallel and Series Operation
- Compression Bonded Encapsulation
- JAN Types Available

Applications:

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



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R610/R611
General Purpose Rectifier
200-300 Amperes Average, 12600 Volts

Absolute Maximum Ratings

Characteristics	Symbol	R610_20,	R610_25,	R610_30,	Units
		R611_20	R611_25	R611_30	
RMS Forward Current	$I_{F(rms)}$	315	400	470	Amperes
Average Forward Current	$I_{F(av)}$	200	250	300	Amperes
One-half Cycle Surge Current	I_{FSM}	5500	6000	6500	Amperes
3 Cycle Surge Current	I_{FSM}	4300	4700	5050	Amperes
10 Cycle Surge Current	I_{FSM}	3300	3600	3900	Amperes
i^2t (for Fusing), Times = 8.3 milliseconds	i^2t	125000	150000	175000	A^2sec
Storage Temperature	T_{stg}	-65 to +190	-65 to +190	-65 to +190	$^{\circ}C$
Operating Temperature	T_j	-65 to +190	-65 to +190	-65 to +190	$^{\circ}C$
Mounting Torque (Lubricated)		360	360	360	in-lb



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R610/R611
 General Purpose Rectifier
 200-300 Amperes Average, 1200 Volts

Electrical and Thermal Characteristics

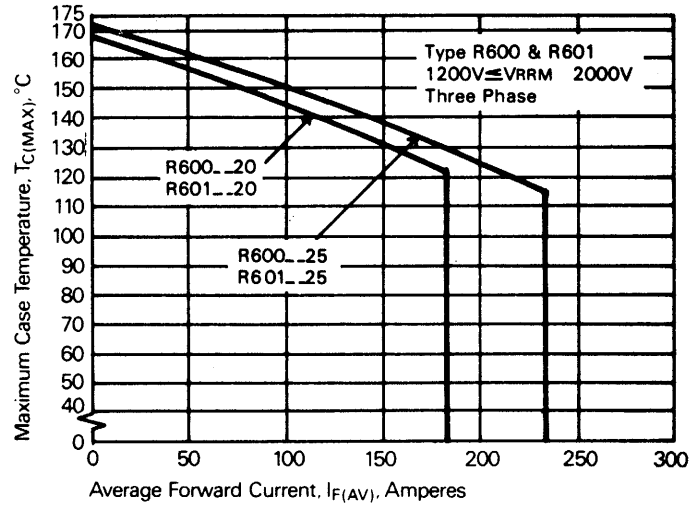
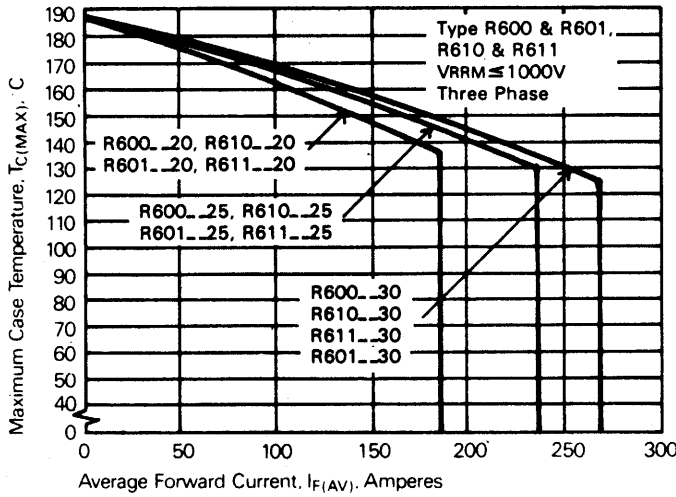
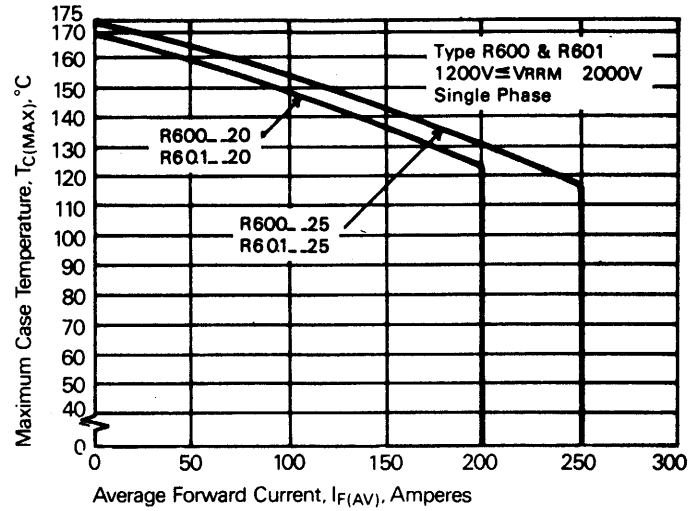
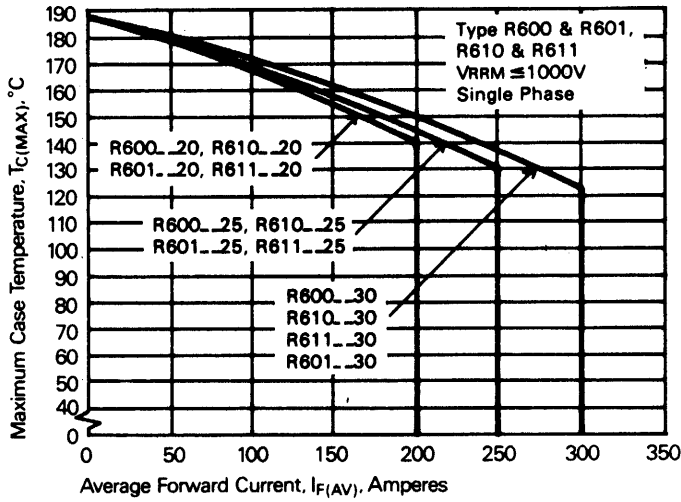
Characteristics	Symbol	Test Conditions	R610_20,	R610_25,	R610_30,	Units
			R611_20	R611_25	R611_30	
Current - Conducting State Maximums						
Forward Voltage Drop	V_{FM}	$T_j = 25^\circ\text{C}, I_{FM} = 800\text{A}$	1.70	1.50	1.40	Volts
Voltage - Blocking State Maximums						
Repetitive Peak Reverse Voltage (Rated Limit)	V_{RRM}		1200	1200	1200	Volts
Non-rep. Trans. Peak Rev. Voltage (Rated Limit)	V_{RSM}	$V \leq 5.0\text{msec}$	1300	1300	1300	Volts
Reverse Leakage Current	I_{RRM}	T_j at max., V_{RRM} Rated	50	50	50	mA
Switching						
Typical Reverse Recovery Time	t_{rr}	$I_{FM} = 785\text{A}, t_p = 100\mu\text{sec},$ $di_F/dt = 25\text{A/msec}, T_C = 25^\circ\text{C}$	9	11	13	μsec
Thermal						
Maximum Resistance, Case to Sink (Lubricated)	$R_{\theta(c-s)}$		0.10	0.10	0.10	$^\circ\text{C/Watt}$

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R610/R611

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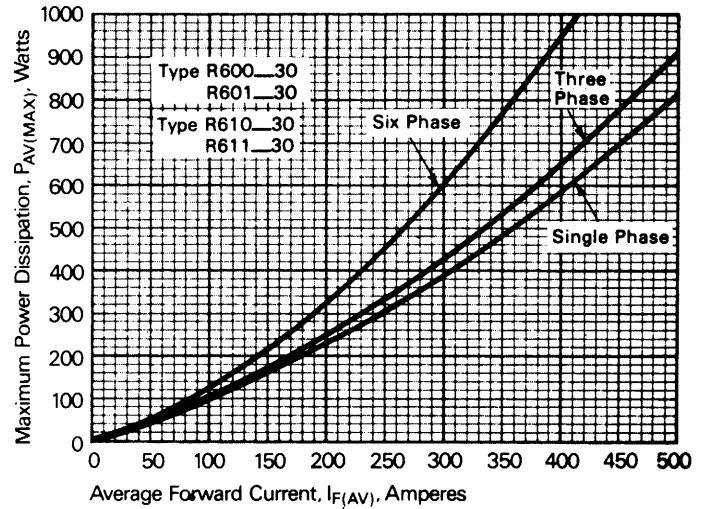
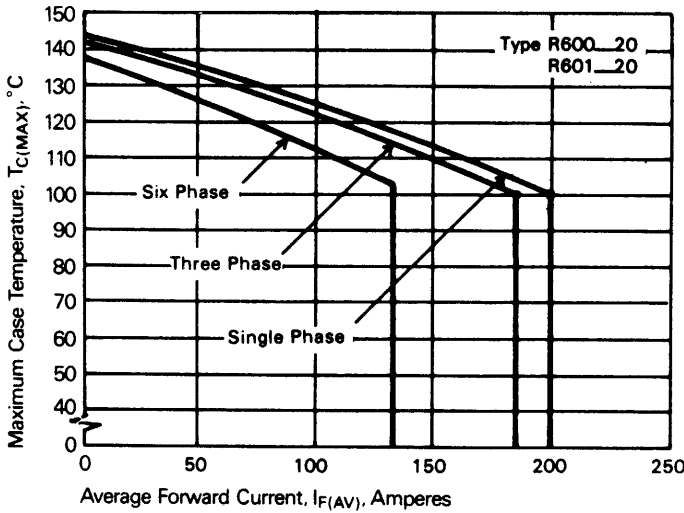
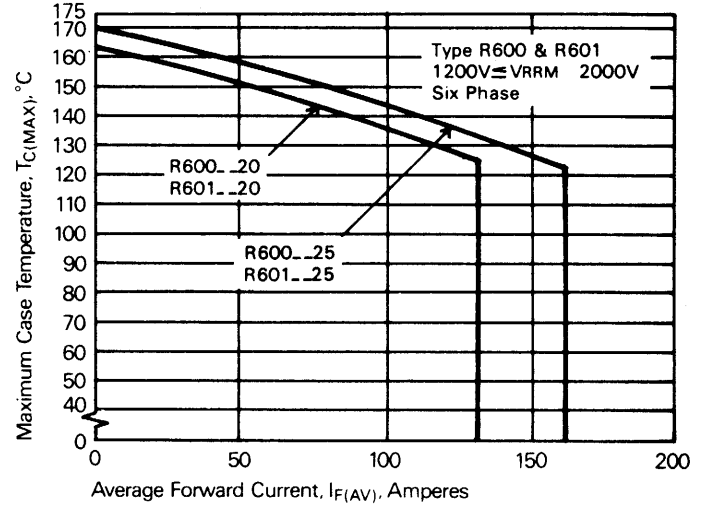
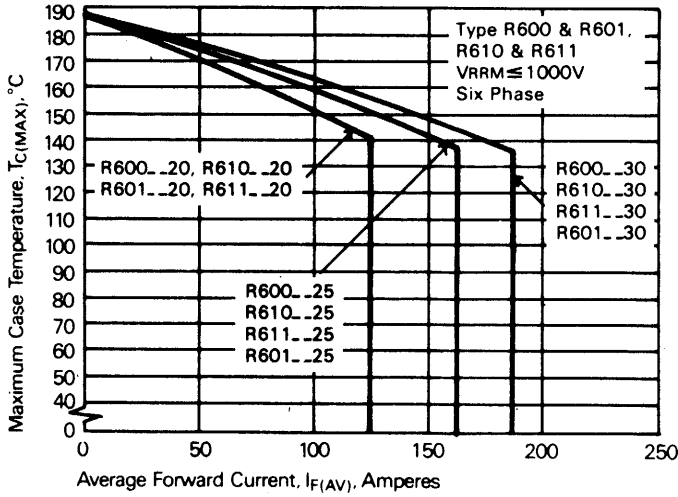


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