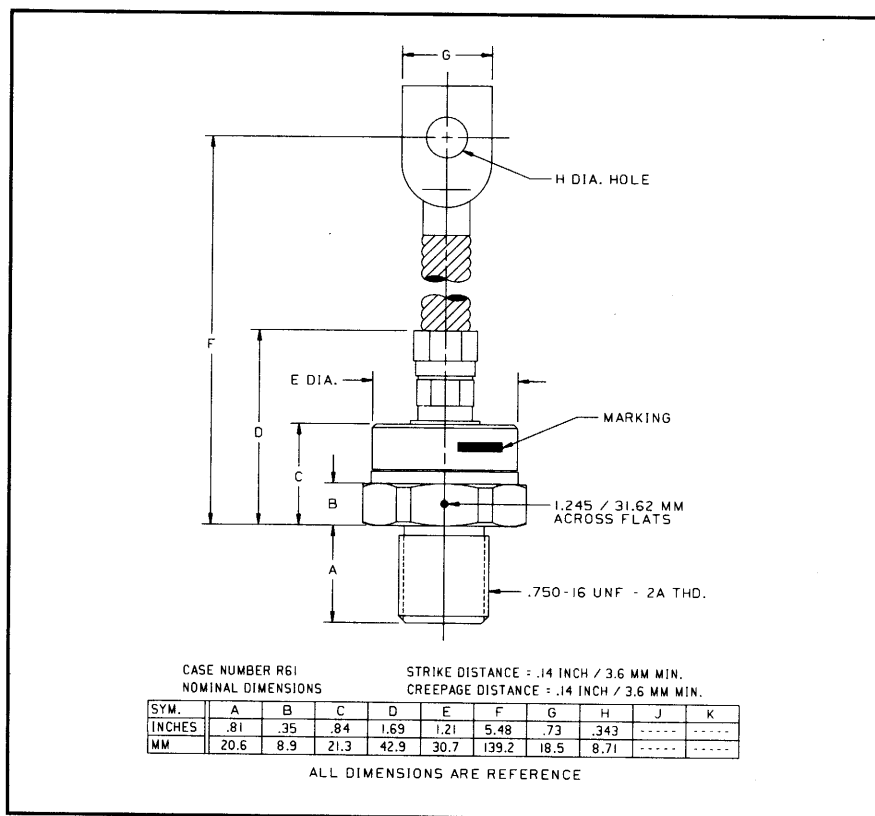
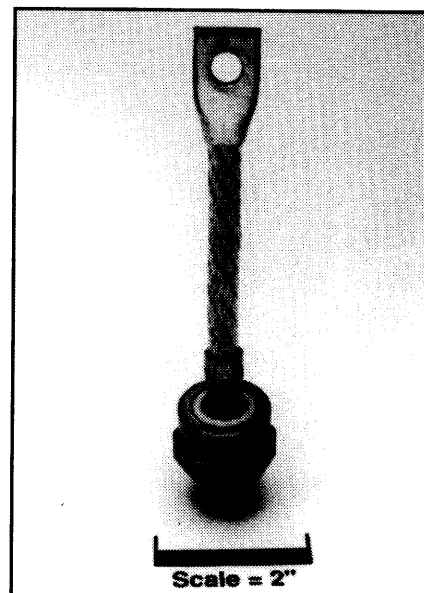


Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272
Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

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} (μsec)	Code	Circuit	Code	Case	Code
R610 (Std. Polarity)	100	01	200	20	13	X	JEDEC	X	DO-9	YZ
	200	02								
	400	04	250	25	11	X				
R611 (Rev. Polarity)	600	06								
	800	08	300	30	9	X				
	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°C, I _{FM} = 800A	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 ≤ 5.0msec	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} = 785A, t _p = 100μsec, di _F /dt = 25A/msec, T _C = 25°C	9	11	13	μsec
Thermal						
Maximum Resistance, Case to Sink (Lubricated)	R _{θ(c-s)}		0.10	0.10	0.10	°C/Watt

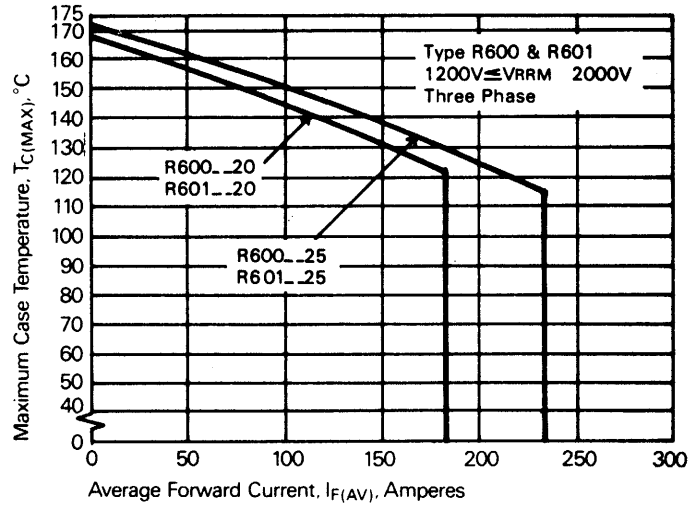
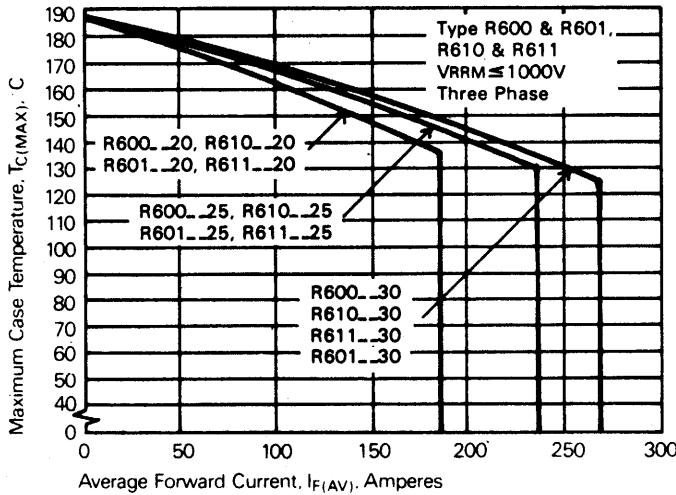
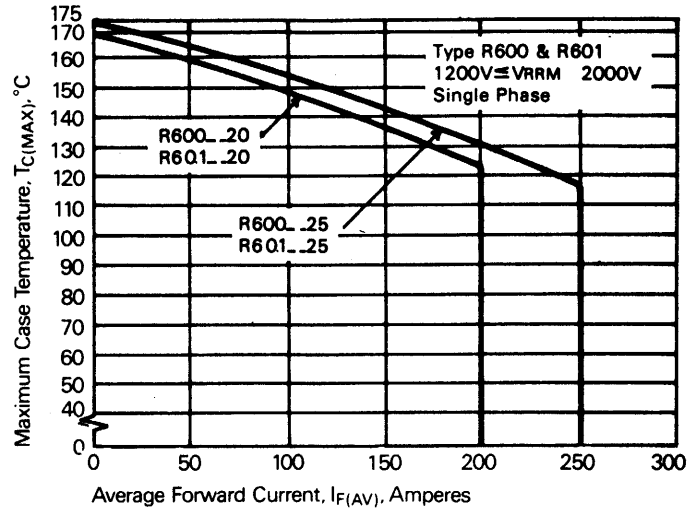
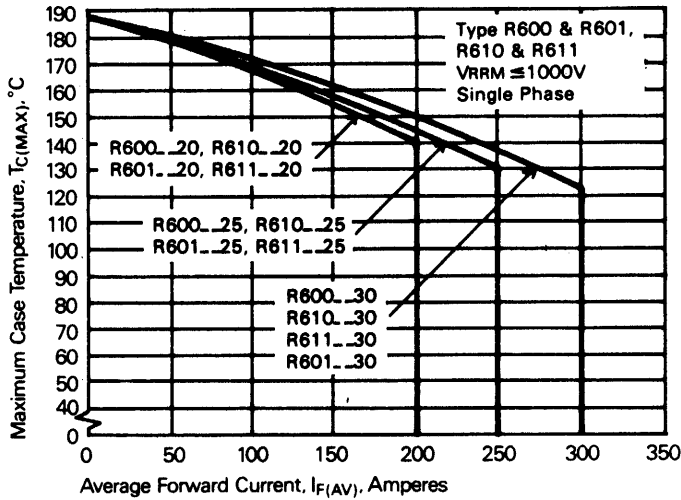


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R610/R611

General Purpose Rectifier

200-300 Amperes Average, 1200 Volts



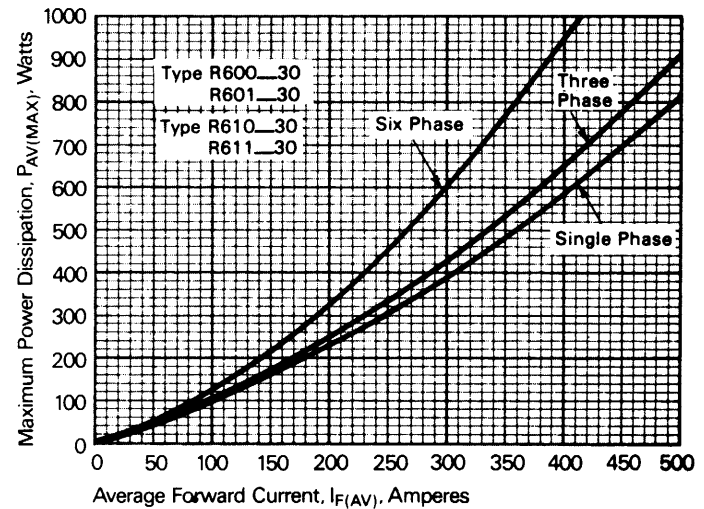
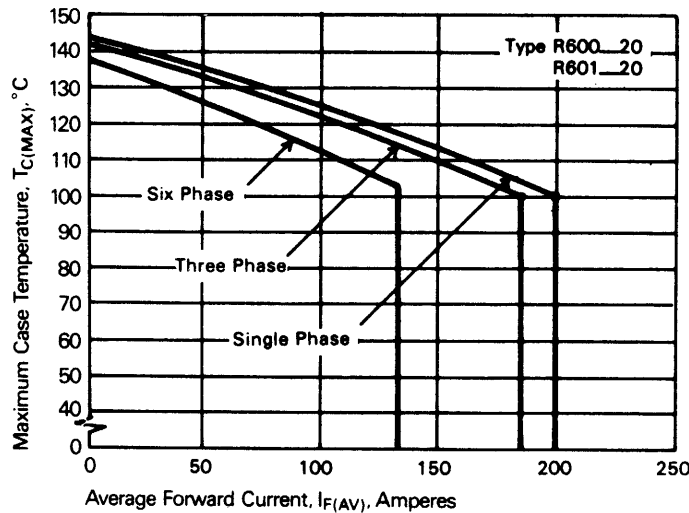
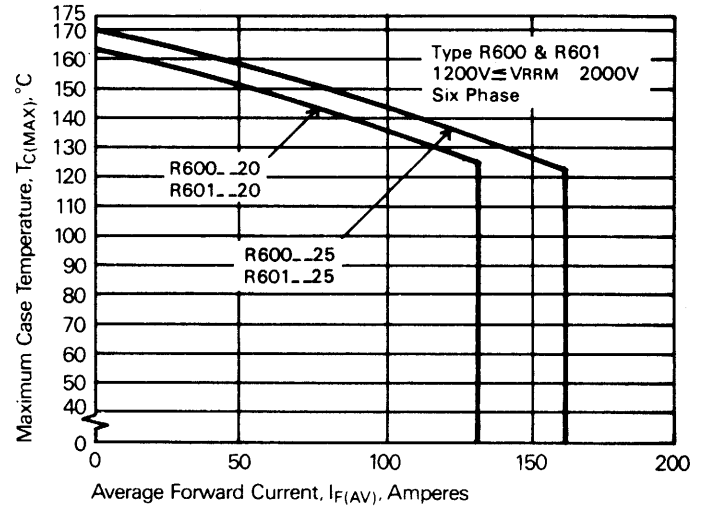
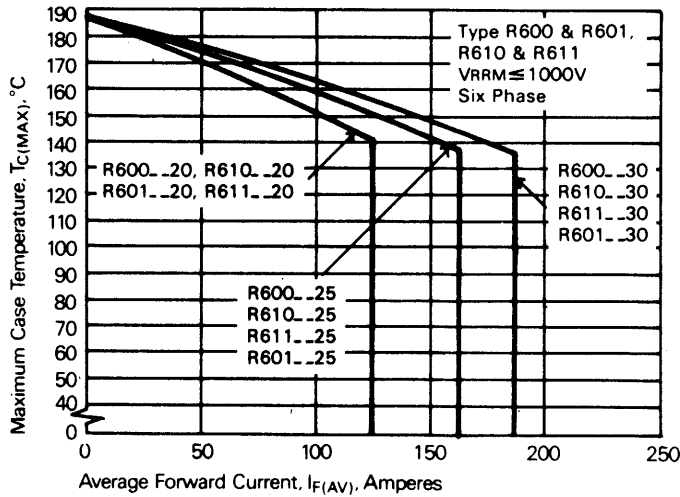
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