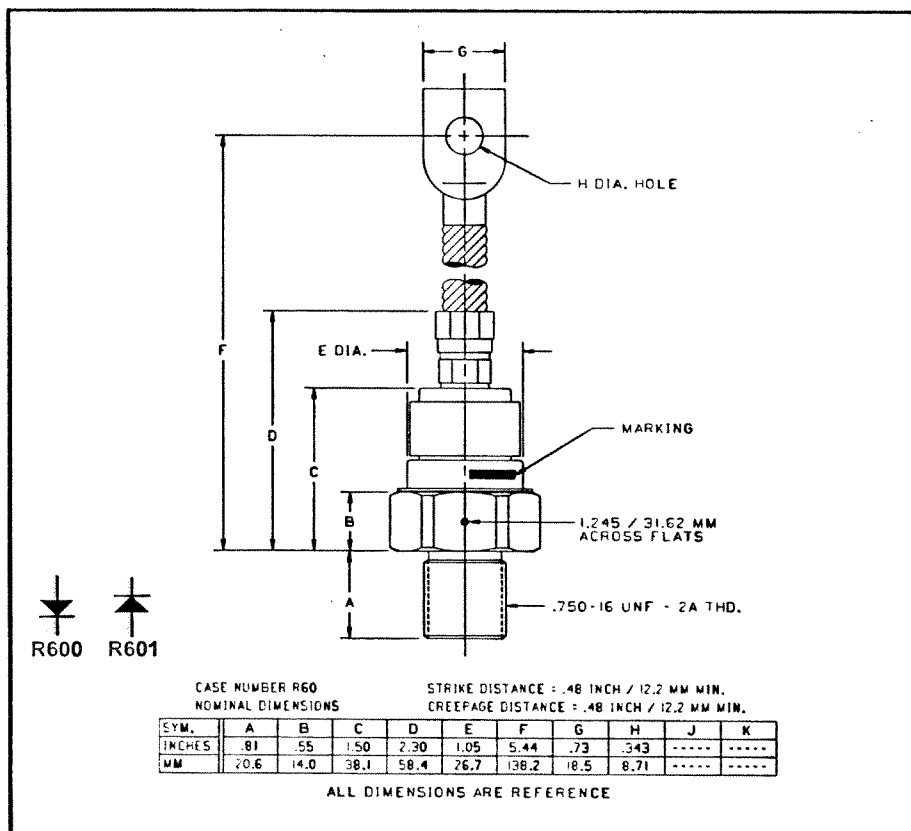


Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272
Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

General Purpose Rectifier
200-300 Amperes Average
1400-2600 Volts



R600/R601 (Outline Drawing)



R600/R601
General Purpose Rectifier
200-300 Amperes Average,
1400-2600 Volts

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
- ☐ Glazed Ceramic Seal Gives High Voltage Creepage and Strike Paths
- ☐ Compression Bonded Encapsulation
- ☐ JAN Types Available

Applications:

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

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
R600 (Std. Polarity)	1400	14	200	20	13	X	JEDEC	X	DO-9	YA
	1600	16								
	1800	18	250	25	11	X				
	2000	20								
R601 (Rev. Polarity)	2200	22	300	30	9	X				
	2400	24								
	2600	26								

Example: Type R600 Rated at 300A average with VRRM = 2600V and standard flexible lead, order as:

Type	Voltage	Current	Time	Circuit	Leads
R 6 0 0	2 6	3 0	X	X	Y A

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R600/R601

General Purpose Rectifier

200-300 Amperes Average, 1400-2600 Volts

Absolute Maximum Ratings

Characteristics	Symbol	R600_20, R601_20	R600_25, R601_25	R600_30, R601_30	Units
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 ² sec
Storage Temperature	T_{stg}	-65 to +190	-65 to +190	-65 to +190	°C
Operating Temperature	T_j	Up to 1200V -65 to +190	1200V to 2200V -65 to +175	2200V to 2800V -65 to +150	°C
Mounting Torque		360	360	360	in-lb

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R600/R601

General Purpose Rectifier

200-300 Amperes Average, 1400-2600 Volts

Electrical and Thermal Characteristics

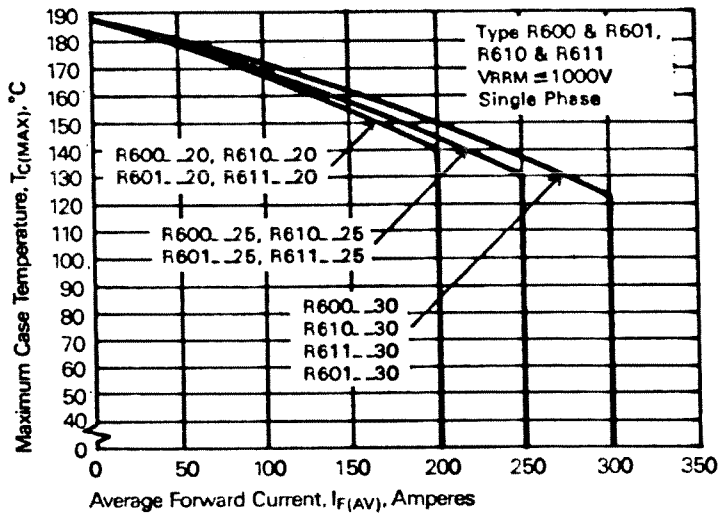
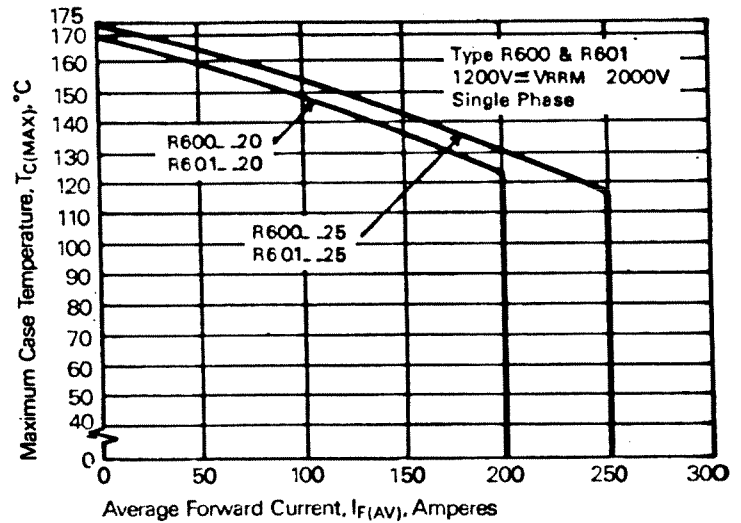
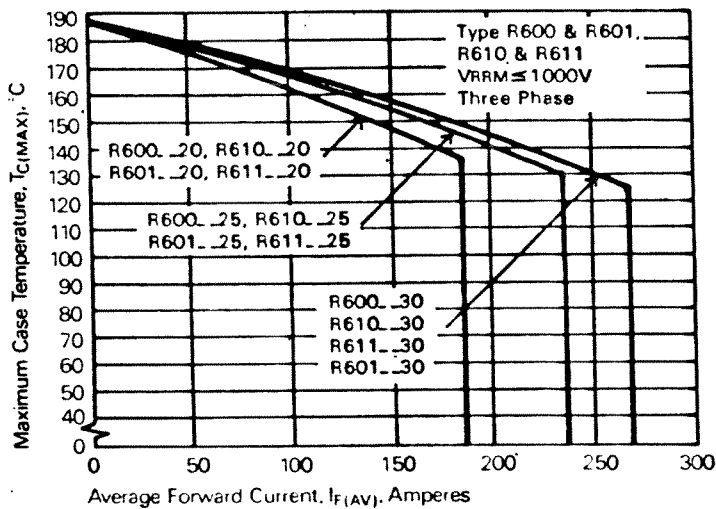
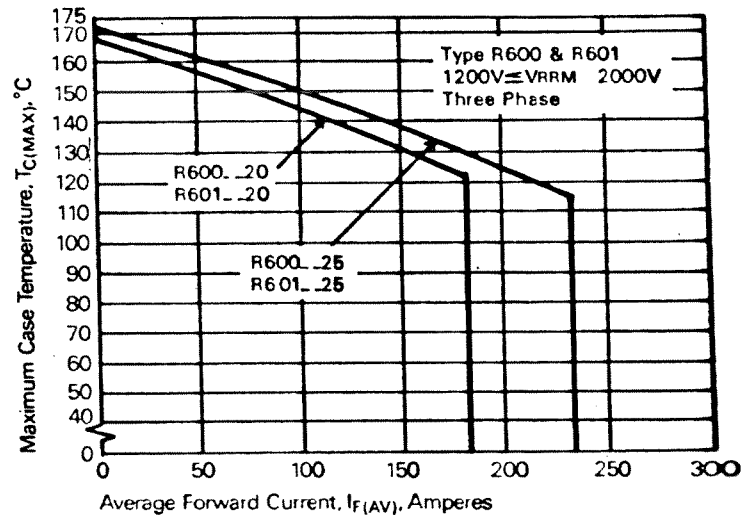
Characteristics	Symbol	Test Conditions	R600_20, R601_20	R600_25, R601_25	R600_30, R601_30	Units
Current - Conducting State Maximums						
Forward Voltage Drop	V_{FM}	$T_j = 25^\circ\text{C}$, $I_{FM} = 800\text{A}$	1.70	1.50	1.40	Volts
Voltage - Blocking State Maximums						
Repetitive Peak Reverse Voltage (Rated Limit)	V_{RRM}		2600	2600	2600	Volts
Non-rep. Trans. Peak Rev. Voltage (Rated Limit)	V_{RSM}	$V \leq 5.0\text{msec}$	2800	2800	2800	μsec
Reverse Leakage Current	I_{RRM}	T_j at max., V_{RRM} Rated	50	50	50	mA
Switching						
Typical Reverse Recovery Time	t_{rr}	$I_{FM} = 785\text{A}$, $t_p = 100\mu\text{sec}$, $di_R/dt = 25\text{A}/\mu\text{sec}$, $T_C = 25^\circ\text{C}$	9	11	13	μsec
Thermal						
Maximum Resistance, Case to Sink (Lubricated)	$R_{\theta(c-s)}$		0.10	0.10	0.10	$^\circ\text{C}/\text{Watt}$

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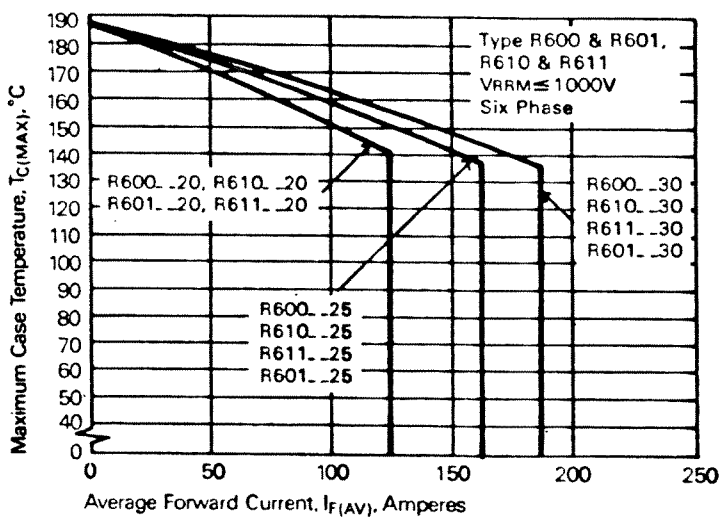
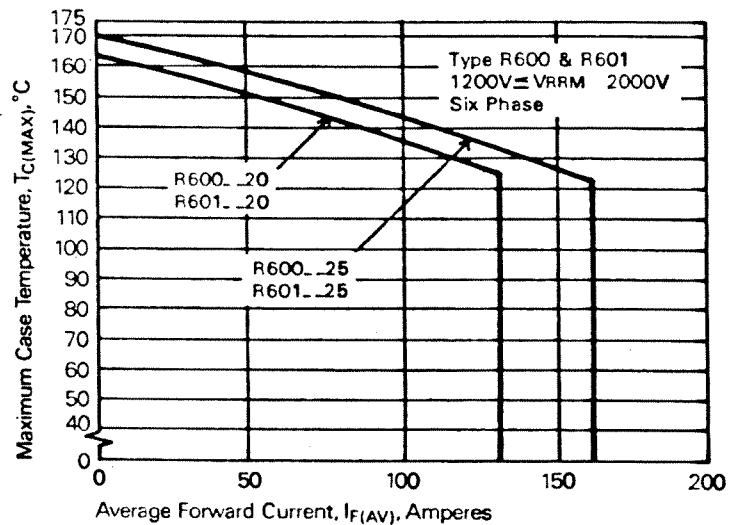
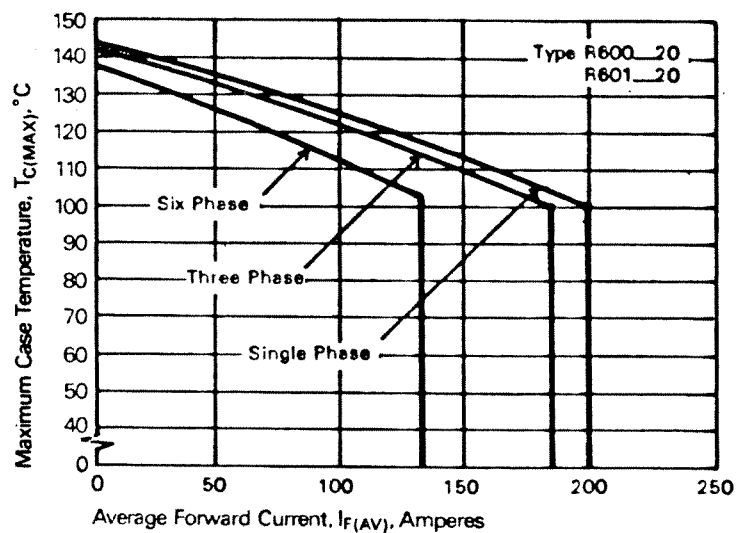
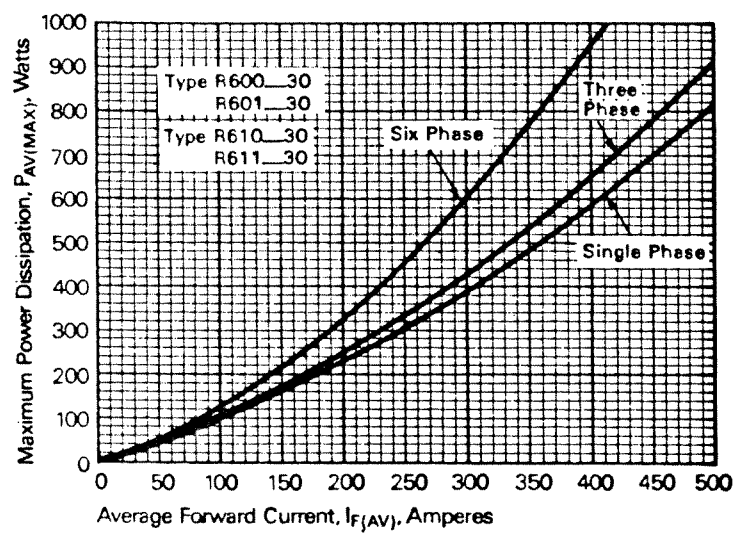
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