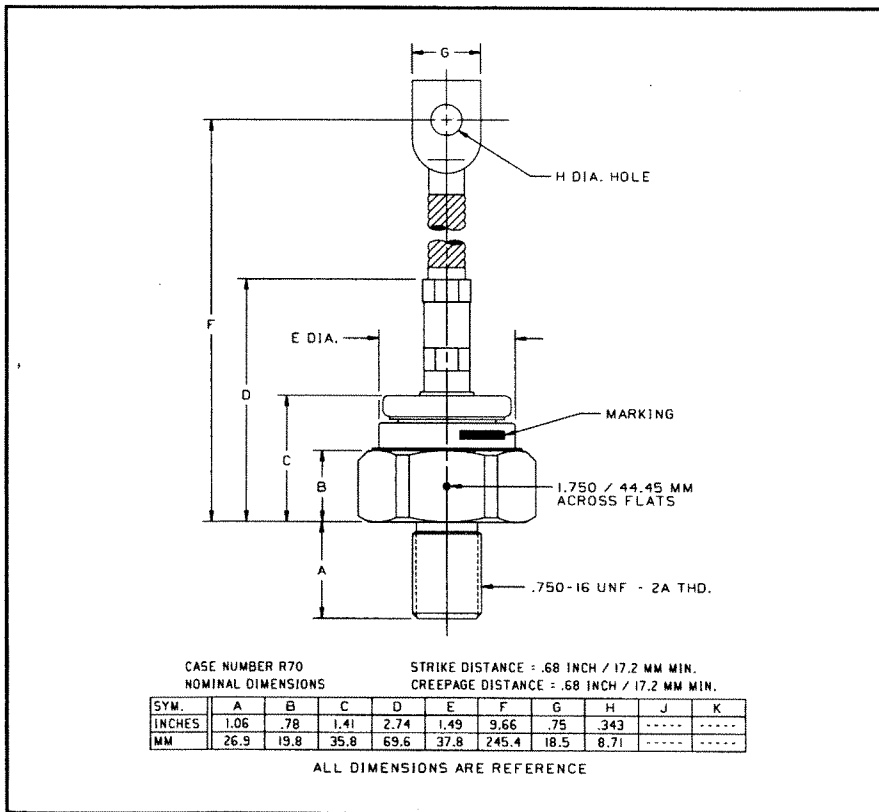


General Purpose Rectifier

300-550 Amperes Average
4400 Volts



R700/R701 (Outline Drawing)

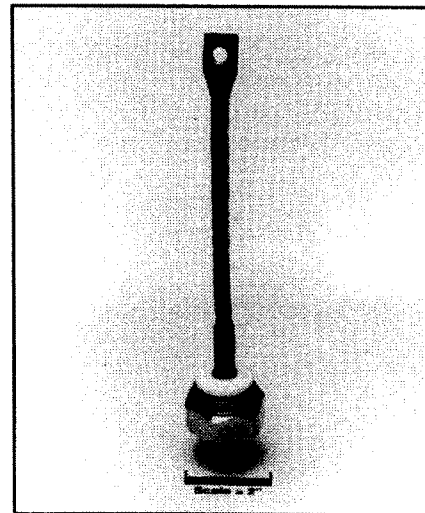
Ordering Information:

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
R700 Std. Polarity	100	01	300	03	15	X	JEDEC	X	R70	UA
	200	02								
	400	04								
R701 (Rev. Polarity)	600	06	550	05	9 (Typ.)	X				
	800	08								
	1000	10								
	1200	12								
	1400	14								
	1600	16								
	1800	18								
	2000	20								
	2200	22								
	2400	24								
	2600	26								
2800	28									
3000	30									
3500	35									
4000	40									
4400	44									

Example: Type R700 rated at 300A average with $V_{RRM} = 4400V$, and standard flexible lead, order as:

Type	Voltage	Current	Time	Circuit	Leads
R 7 0 0	4 4	0 3	X	X	U A



R700/R701

General Purpose Rectifier

300-550 Amperes Average, 4400 Volts

Features:

- Standard and Reverse Polarities
- Stud Top Terminals Available
- Flat Base, Flange Mounted Design Available
- High Surge Current Ratings
- High Rated Blocking Voltages
- Electrical Selection for Parallel and Series Operation
- High Voltage Creepage and Strike Paths
- Compression Bonded Encapsulation

Applications:

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



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

R700/R701

General Purpose Rectifier

300-550 Amperes Average, 4400 Volts

Absolute Maximum Ratings

Characteristics	Symbol	R700_ _03,	R700_ _04,	R700_ _05,	Units
		R701_ _03	R701_ _04	R701_ _05	
RMS Forward Current	$I_{F(rms)}$	470	700	865	Amperes
Average Forward Current	$I_{F(av)}$	300	450	550	Amperes
One-half Cycle Surge Current	I_{FSM}	7000	8500	10000	Amperes
3 Cycle Surge Current	I_{FSM}	5250	6400	7500	Amperes
10 Cycle Surge Current	I_{FSM}	4200	5100	6000	Amperes
I^2t (for Fusing), Times = 8.3 milliseconds	I^2t	204000	266000	416500	A^2sec
Storage Temperature	T_{stg}	-65 to +200	-65 to +200	-65 to +200	$^{\circ}C$
Operating Temperature	T_j	Up to 1400V	1400V to 2200V	2200V to 4400V	
		-65 to +200	-65 to +175	-65 to +150	$^{\circ}C$
Mounting Torque		360	360	360	in-lb



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

R700/R701

General Purpose Rectifier

300-550 Amperes Average, 4400 Volts

Electrical and Thermal Characteristics

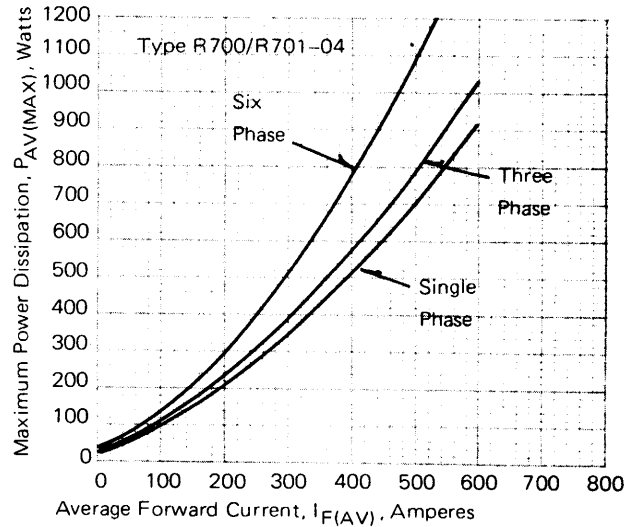
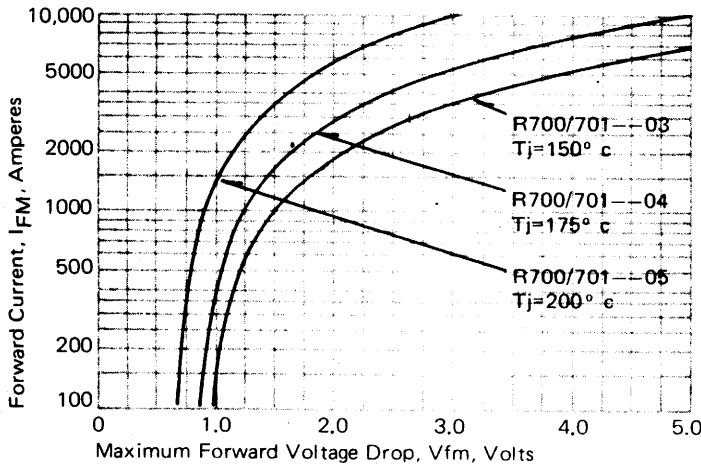
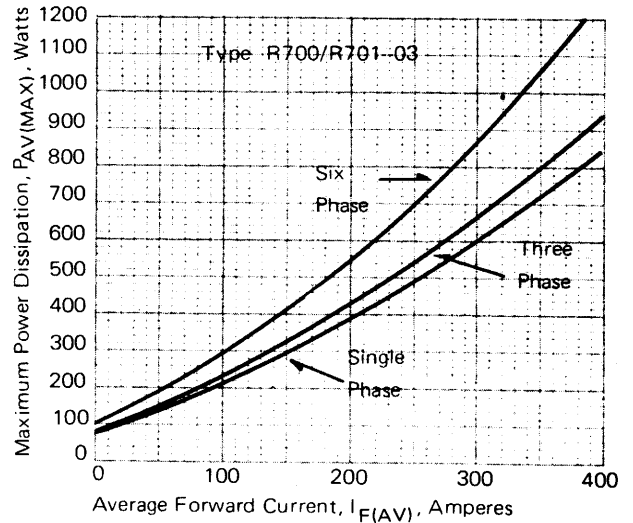
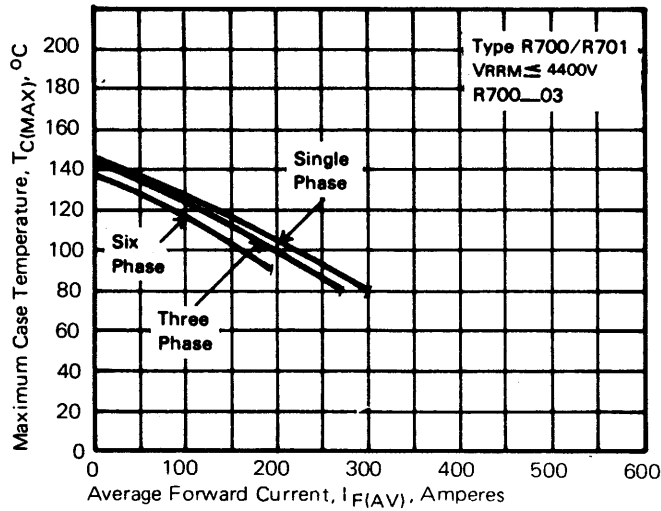
Characteristics	Symbol	Test Conditions	R700_03,	R700_04,	R700_05,	Units
			R701_03	R701_04	R701_05	
Current - Conducting State Maximums						
Forward Voltage Drop	V_{FM}	$T_j = 25^\circ\text{C}, I_{FM} = 1500\text{A}$	2.15	1.60	1.20	Volts
Voltage - Blocking State Maximums						
Repetitive Peak Reverse Voltage (Rated Limit)	V_{RRM}		4400	2600	1600	Volts
Non-rep. Trans. Peak Rev. Voltage (Rated Limit)	V_{RSM}	$t \leq 5.0\text{msec}$	4600	2800	1800	Volts
Reverse Leakage Current	I_{RRM}	T_j at max., V_{RRM} Rated	50	50	50	mA
Switching						
Typical Reverse Recovery Time	t_{rr}	$I_{FM} = 1500\text{A}, t_p = 190\mu\text{sec},$ $di_R/dt = 25\text{A}/\mu\text{sec}, T_C = 25^\circ\text{C}$	9	11	15	μsec
Thermal						
Maximum Resistance, Junction to Case	$R_{\theta(j-c)}$		0.12	0.12	0.12	$^\circ\text{C}/\text{Watt}$
Maximum Resistance, Case to Sink (Lubricated)	$R_{\theta(c-s)}$		0.04	0.04	0.04	$^\circ\text{C}/\text{Watt}$

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

R700/R701

General Purpose Rectifier

300-550 Amperes Average, 4400 Volts

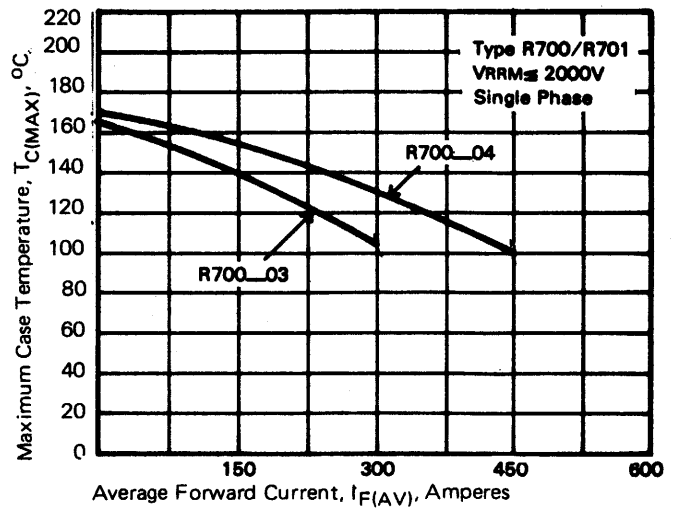
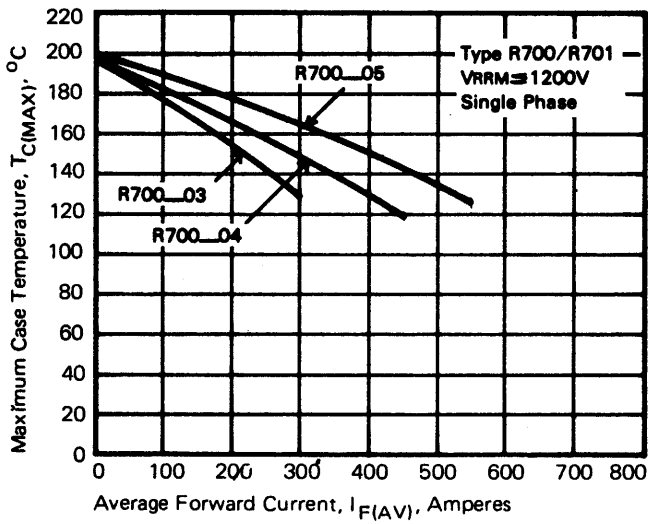
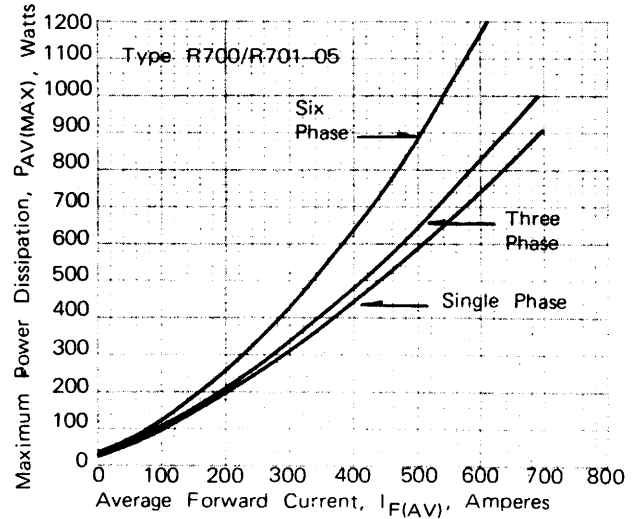
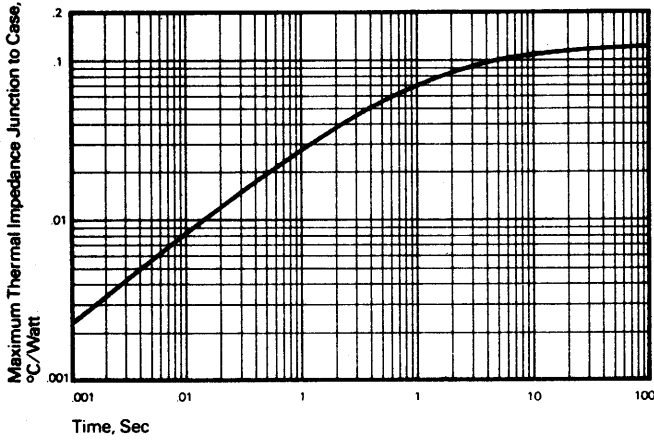


Powerex, Inc., Hillis Street, Youngwood, Pennsylvania 15697 (412) 925-7272
 Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

R700/R701

General Purpose Rectifier

300-550 Amperes Average, 4400 Volts



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

R700/R701
General Purpose Rectifier
 300-550 Amperes Average, 4400 Volts

