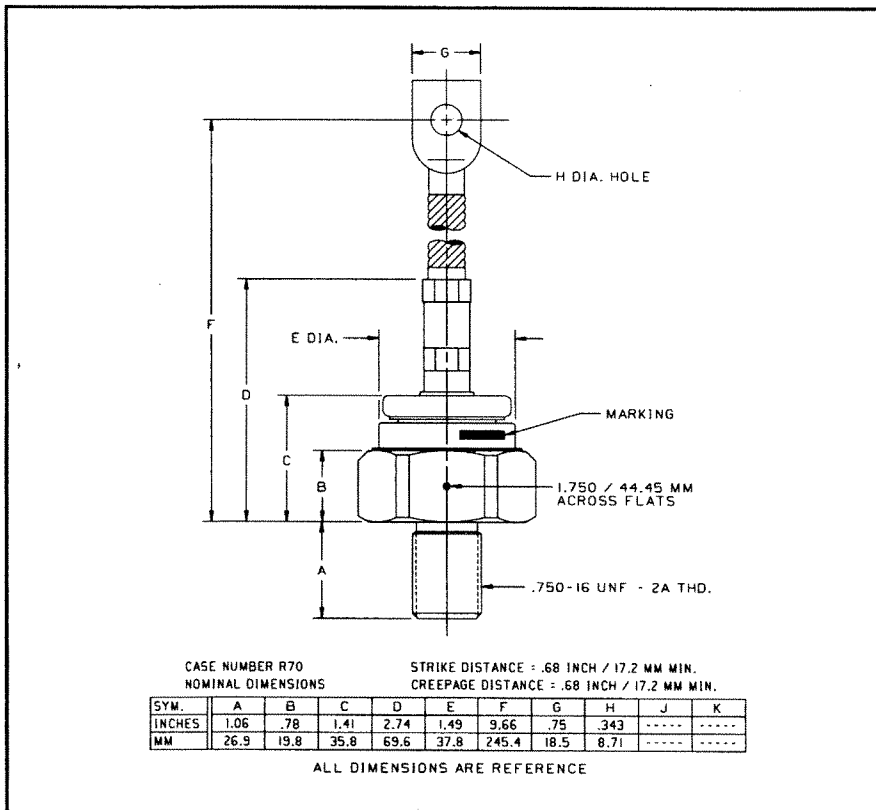


### General Purpose Rectifier

300-550 Amperes Average  
4400 Volts



R700/R701 (Outline Drawing)

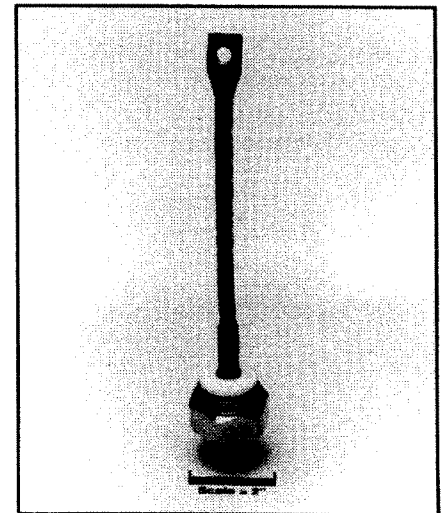
#### Ordering Information:

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	$t_{rr}$ ( $\mu$ 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



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**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



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

**Electrical and Thermal Characteristics**

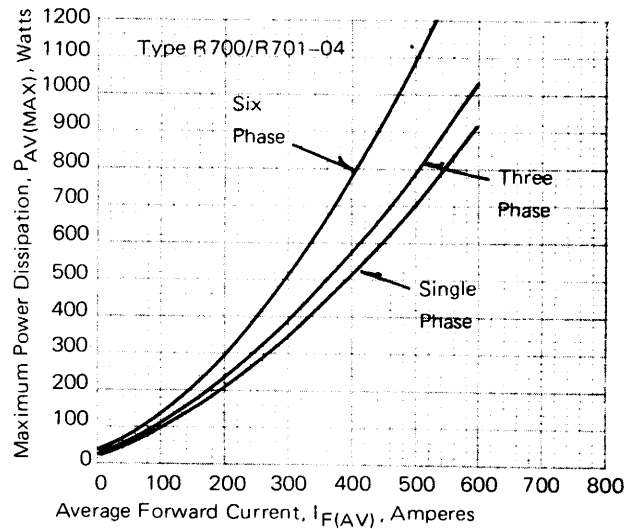
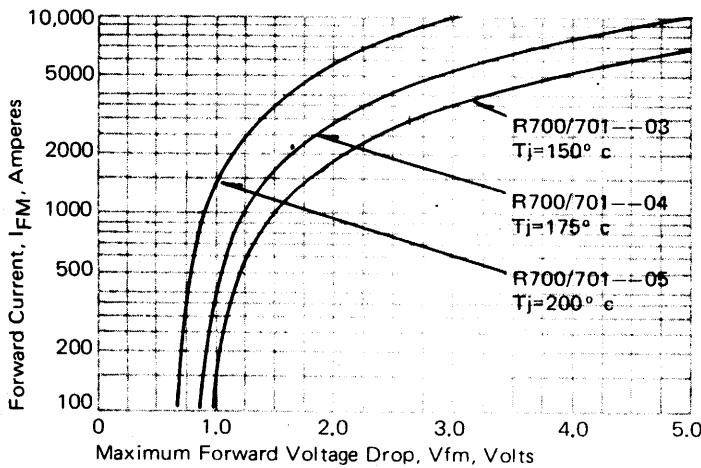
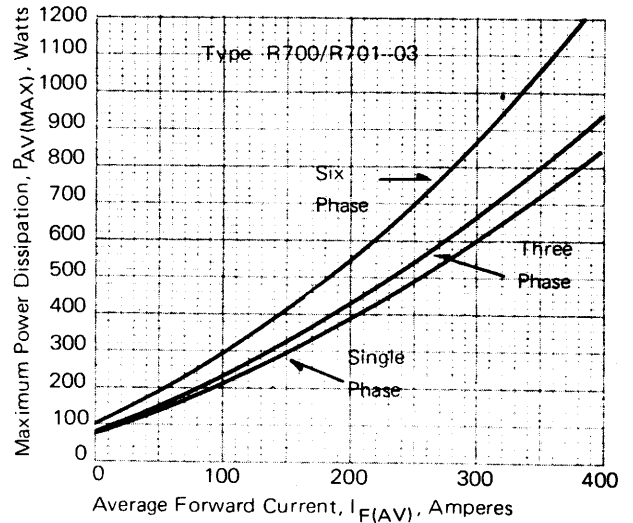
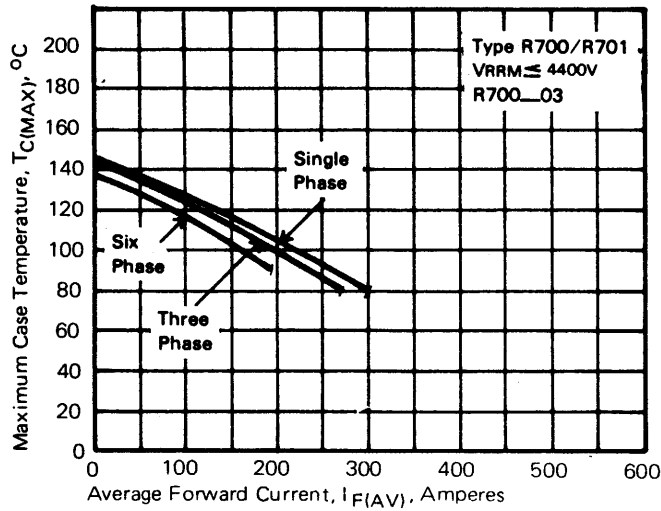
Characteristics	Symbol	Test Conditions	R700_03,	R700_04,	R700_05,	Units
			R701_03	R701_04	R701_05	
<b>Current - Conducting State Maximums</b>						
Forward Voltage Drop	$V_{FM}$	$T_j = 25^\circ\text{C}, I_{FM} = 1500\text{A}$	2.15	1.60	1.20	Volts
<b>Voltage - Blocking State Maximums</b>						
Repetitive 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
<b>Switching</b>						
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	$\mu\text{sec}$
<b>Thermal</b>						
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	$^\circ\text{C}/\text{Watt}$

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## R700/R701

### General Purpose Rectifier

300-550 Amperes Average, 4400 Volts

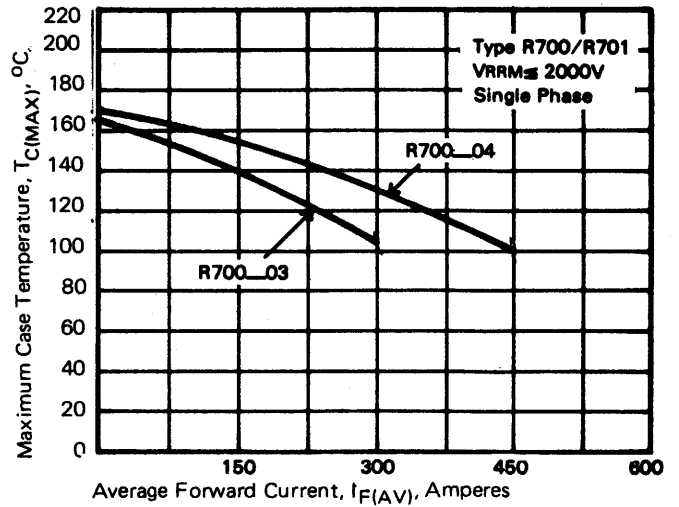
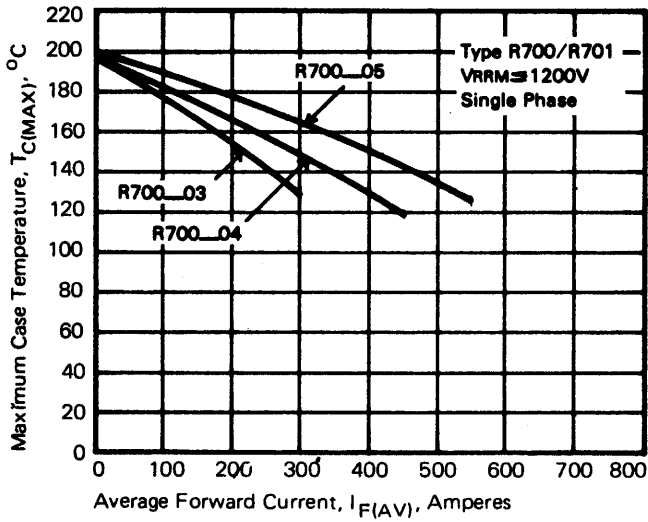


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## R700/R701

### General Purpose Rectifier

300-550 Amperes Average, 4400 Volts



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

