



Micro Commercial Components



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# FR1001 THRU FR1007

## 10 Amp Rectifier 50 to 1000 Volts

### Features

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Halogen free available upon request by adding suffix "-HF"
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 300A Peak
- Low Reverse Leakage Current and Diffused Junction
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

### Maximum Ratings

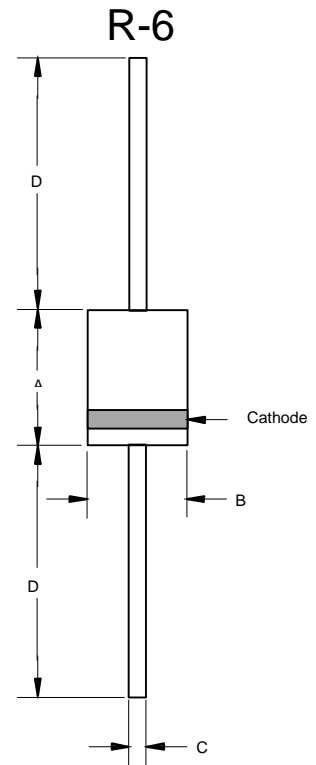
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

MCC Catalog Number	Device Marking	Maximum Reccurent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR1001	FR1001	50V	35V	50V
FR1002	FR1002	100V	70V	100V
FR1003	FR1003	200V	140V	200V
FR1004	FR1004	400V	280V	400V
FR1005	FR1005	600V	420V	600V
FR1006	FR1006	800V	560V	800V
FR1007	FR1007	1000V	700V	1000V

### Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	10 A	$T_A = 55^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	300A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	1.3V	$I_{FM} = 10A;$ $T_A = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	10 $\mu$ A 50 $\mu$ A	$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$
Maximum Reverse Recovery Time FR1001-FR1004 FR1005 FR1006-FR1007	$T_{rr}$	150ns 250ns 500ns	$I_F=0.5A, I_R=1.0A,$ $I_{rr}=0.25A$

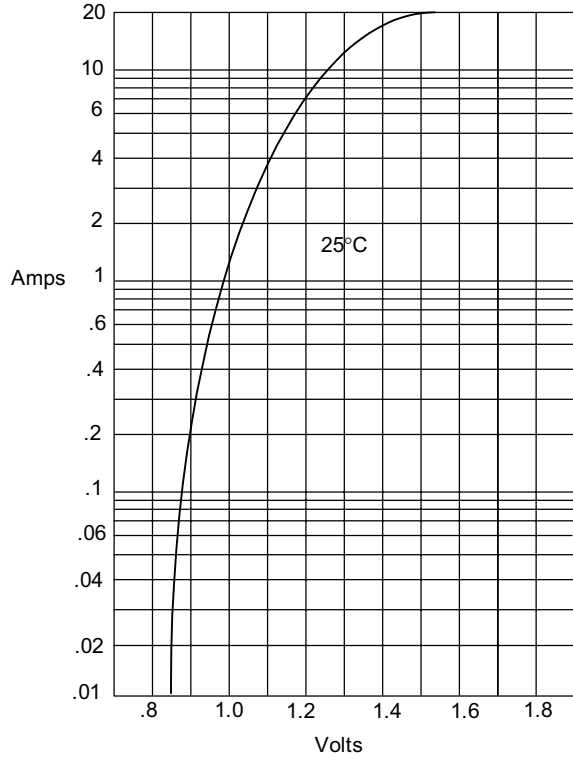
Notes:1.High Temperature Solder Exemption Applied, see EU Directive Annex 7.



DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.340	.360	8.60	9.10	
B	.340	.360	8.60	9.10	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

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Figure 1  
Typical Forward Characteristics



Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve

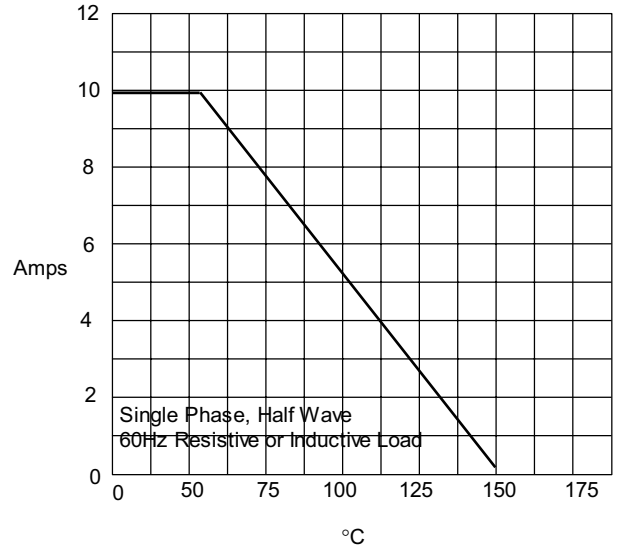
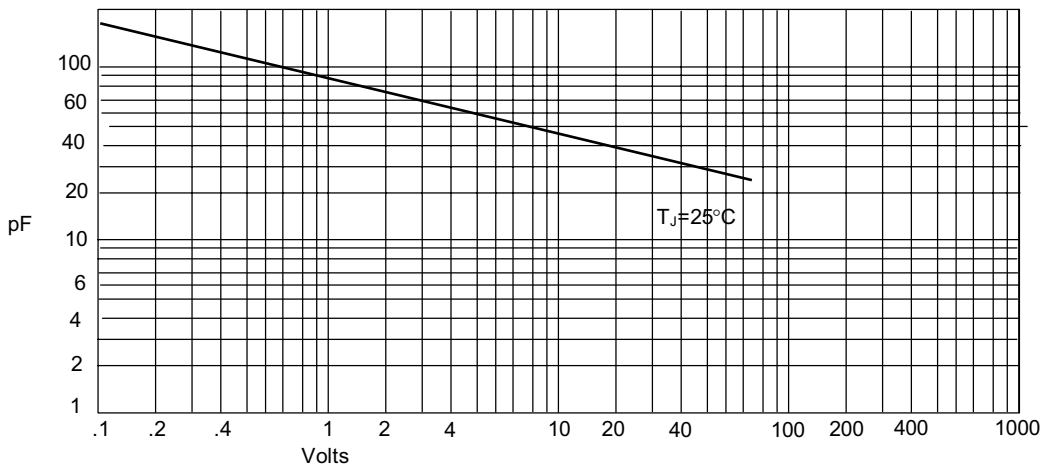


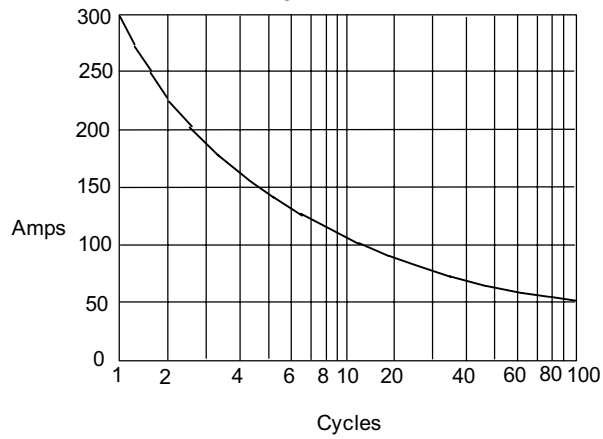
Figure 3  
Junction Capacitance



Junction Capacitance - pF versus  
Reverse Voltage - Volts

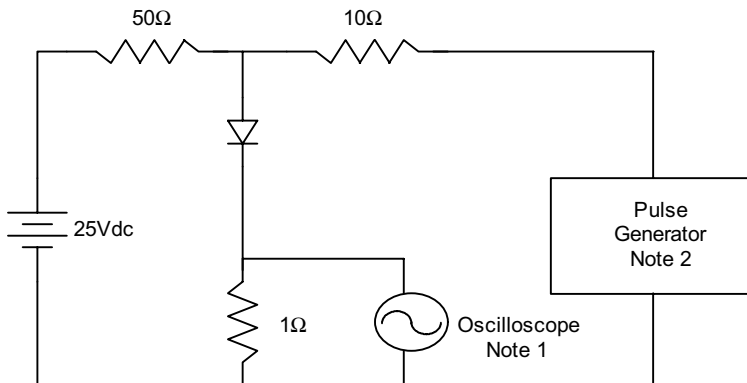
# FR1001 thru FR1007

Figure 4  
Peak Forward Surge Current

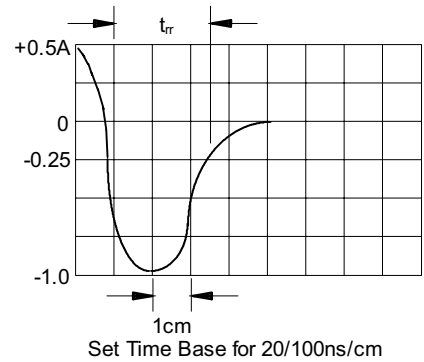


Peak Forward Surge Current - Amperes versus  
Number Of Cycles At 60Hz - Cycles

Figure 5  
Reverse Recovery Time Characteristic And Test Circuit Diagram



- Notes:
1. Rise Time = 7ns max.  
Input impedance = 1 megohm, 22pF
  2. Rise Time = 10ns max.  
Source impedance = 50 ohms
  3. Resistors are non-inductive





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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 500pcs/Reel
Part Number-AP	Ammo Packing: 450pcs/Ammo Box
Part Number-BP	Bulk: 4.8Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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