

**Micro Commercial Components** 



Micro Commercial Components 20736 Marilla Street Chatsworth CA 91311

Phone: (818) 701-4933 Fax: (818) 701-4939 FR501 THRU FR507

## **Features**

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Low Forward Voltage Drop and High Current Capability
- Fast Switching Speed For High Efficiency
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)

# Maximum Ratings

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

MCC	Device	Maximum	Maximum	Maximum
Catalog	Marking	Recurrent	RMS	DC
Number		Peak Reverse	Voltage	Blocking
		Voltage	_	Voltage
FR501	FR501	50V	35V	50V
FR502	FR502	100V	70V	100V
FR503	FR503	200V	140V	200V
FR504	FR504	400V	280V	400V
FR505	FR505	600V	420V	600V
FR506	FR506	800V	560V	800V
FR507	FR507	1000V	700V	1000V

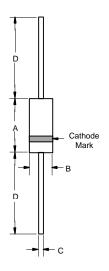
### Electrical Characteristics @ 25°C Unless Otherwise Specified

rectifical characteristics \(\ext{\omega} \) confess otherwise specified						
Average Forward	I <sub>F(AV)</sub>	5 A	$T_A = 55^{\circ}C$			
Current						
Peak Forward Surge	I <sub>FSM</sub>	200A	8.3ms, half sine			
Current						
Maximum			$I_{FM} = 5.0A;$			
Instantaneous	$V_{F}$	1.35V	T <sub>A</sub> = 25°C			
Forward Voltage						
Maximum DC						
Reverse Current At	$I_R$	10μΑ	$T_A = 25^{\circ}C$			
Rated DC Blocking		150μΑ	$T_A = 55^{\circ}C$			
Voltage		•	,,			
Maximum Reverse						
Recovery Time						
FR501-504	$T_{rr}$	150ns	$I_F=0.5A, I_R=1.0A,$			
FR505		250ns	I <sub>rr</sub> =0.25A			
FR506-507		500ns				
Typical Junction	$C_{J}$	65pF	Measured at			
Capacitance			1.0MHz, V <sub>R</sub> =4.0V			

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

# 5 Amp Fast Recovery Rectifier 50 to 1000 Volts

## **DO-201AD**



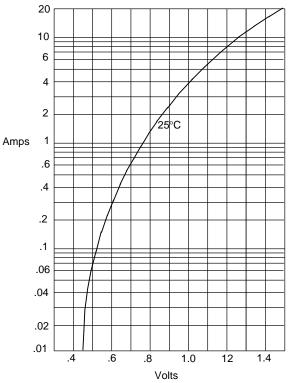
DIMENSIONS								
	INCHES		MM					
DIM	MIN	MAX	MIN	MAX	NOTE			
Α	.287	.374	7.30	9.50				
В	.189	.208	4.80	5.30				
С	.048	.052	1.20	1.30				
D	1.000		25.40					

## FR501 thru FR507

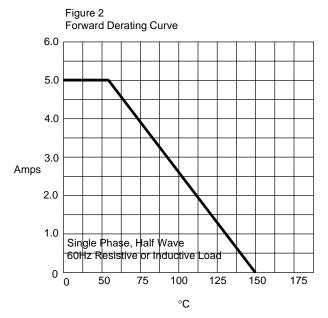
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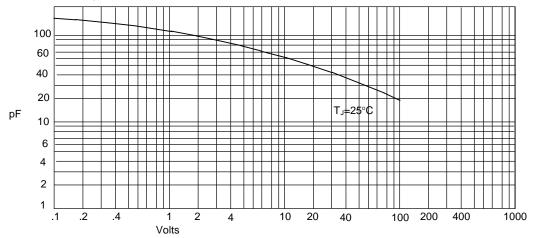




Instantaneous Forward Current - Amperesversus Instantaneous Forward Voltage - Volts





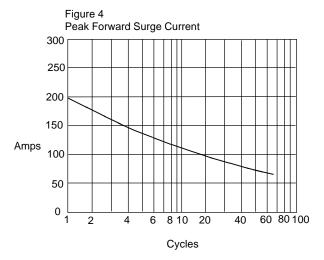


Junction Capacitance - pF*versus* Reverse Voltage - Volts

# FR501 thru FR507

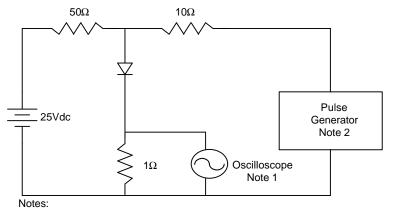


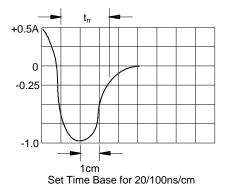
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Peak Forward Surge Current - Amperesversus Number Of Cycles At 60Hz - Cycles

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram





1. Rise Time = 7ns max.

Input impedance = 1 megohm, 22pF

2. Rise Time = 10ns max.

Source impedance = 50 ohms

3. Resistors are non-inductive



### **Ordering Information:**

Device	Packing
Part Number-TP	Tape&Reel: 1.2Kpcs/Reel
Part Number-AP	Ammo Packing: 1.2Kpcs/Ammo Box
Part Number-BP	Bulk: 12Kpcs/Carton

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