



Micro Commercial Components

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20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

FR501GP THRU FR507GP

Features

- Halogen free available upon request by adding suffix "-HF"
- 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)

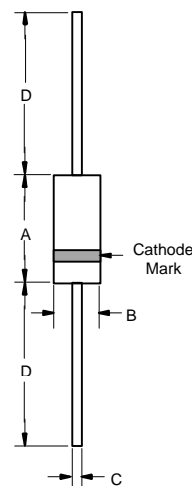
5 Amp Glass Passivated Fast Recovery Rectifier 50 to 1000 Volts

Maximum Ratings

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

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR501GP	FR501GP	50V	35V	50V
FR502GP	FR502GP	100V	70V	100V
FR503GP	FR503GP	200V	140V	200V
FR504GP	FR504GP	400V	280V	400V
FR505GP	FR505GP	600V	420V	600V
FR506GP	FR506GP	800V	560V	800V
FR507GP	FR507GP	1000V	700V	1000V

DO-201AD



Electrical Characteristics @ 25°C Unless Otherwise Specified

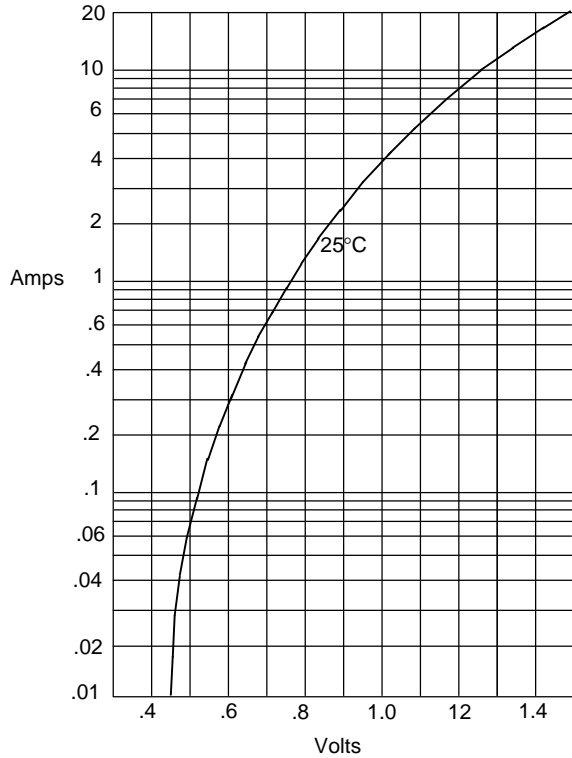
Average Forward Current	$I_{F(AV)}$	5 A	$T_A = 55^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	200A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.35V	$I_{FM} = 5.0\text{A};$ $T_A = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10 μA 150 μA	$T_A = 25^\circ\text{C}$ $T_A = 55^\circ\text{C}$
Maximum Reverse Recovery Time FR501-504GP FR505GP FR506-507GP	T_{rr}	150ns 250ns 500ns	$I_F=0.5\text{A}, I_R=1.0\text{A},$ $I_{rr}=0.25\text{A}$
Typical Junction Capacitance	C_J	65pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.287	.374	7.30	9.50	
B	.189	.208	4.80	5.30	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

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

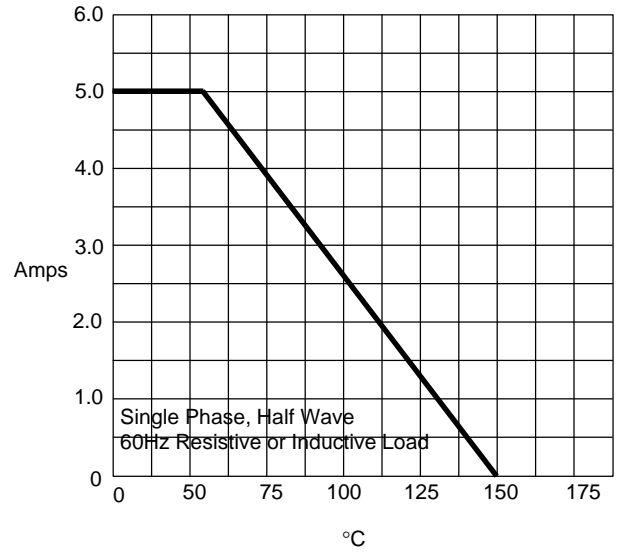
FR501GP thru FR507GP

Figure 1
Typical Forward Characteristics



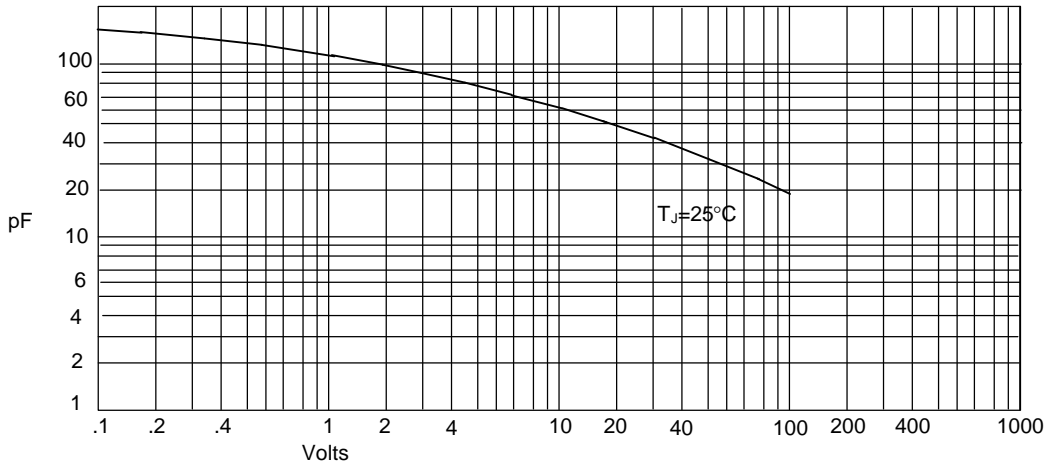
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



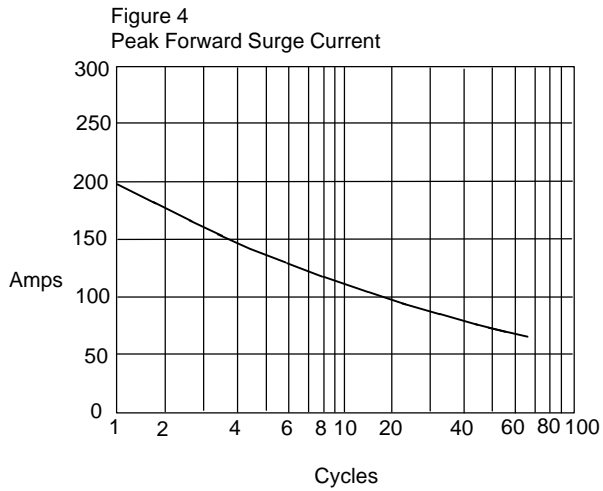
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



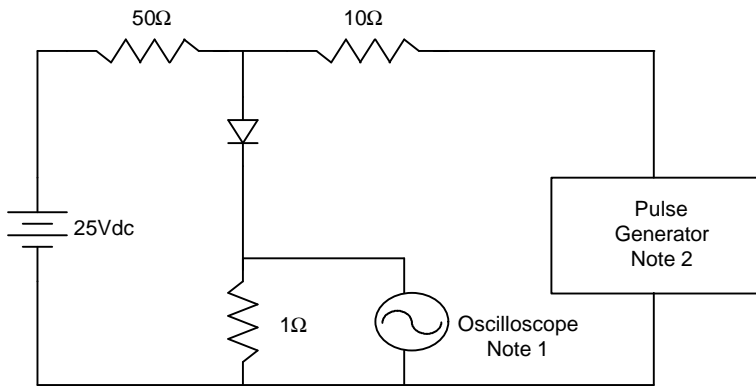
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

FR501GP thru FR507GP

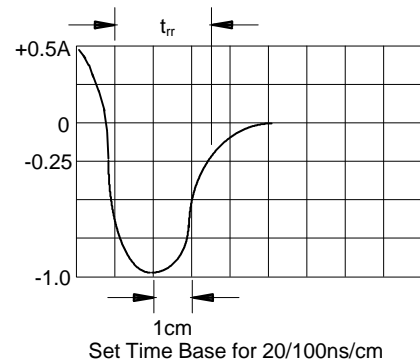


Peak Forward Surge Current - Amperes versus
Number Of Cycles At 60Hz - Cycles

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

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

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