

Micro Commercial Components



Micro Commercial Components 20736 Marilla Street Chatsworth CA 91311

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FR151GP THRU FR157GP

Features Epoxy meets UL 94 V-0 flammability rating

- Moisture Sensitivity Level 1
- Glass Passivated Junction
- Fast Switching Speed For High Efficiency
- Lead Free Finish/RoHS Compliant (Note1) ("P"Suffix designates 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
FR151GP	FR151GP	50V	35V	50V
FR152GP	FR152GP	100V	70V	100V
FR153GP	FR153GP	200V	140V	200V
FR154GP	FR154GP	400V	280V	400V
FR155GP	FR155GP	600V	420V	600V
FR156GP	FR156GP	800V	560V	800V
FR157GP	FR157GP	1000V	700V	1000V

Flectrical Characteristics @ 25°C Unless Otherwise Specified

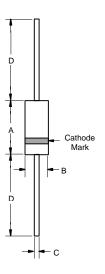
riecti icai characteristics @ 25 c dilless dillei wise specified					
Average Forward	I _{F(AV)}	1.5 A	$T_A = 55^{\circ}C$		
Current					
Peak Forward Surge	I _{FSM}	50A	8.3ms, half sine		
Current					
Maximum			$I_{FM} = 1.5A;$		
Instantaneous	V_{F}	1.3V	T _A = 25°C		
Forward Voltage					
Maximum DC					
Reverse Current At	I_R	5.0μΑ	$T_A = 25^{\circ}C$		
Rated DC Blocking		100μA	T _A = 100°C		
Voltage		•			
Maximum Reverse					
Recovery Time					
FR151GP-154GP	T_{rr}	150ns	$I_F=0.5A, I_R=1.0A,$		
FR155GP		250ns	I _{rr} =0.25A		
FR156GP-157GP		500ns			
Typical Junction	Cک	20pF	Measured at		
Capacitance			1.0MHz, V _R =4.0V		

^{*}Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

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

1.5 Amp Glass **Passivated Fast Recovery Rectifier** 50 to 1000 Volts

DO-15



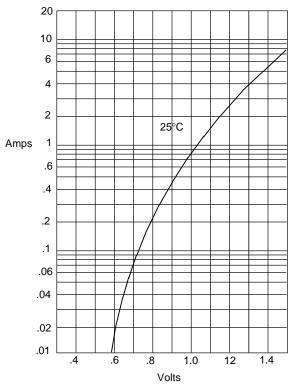
DIMENSIONS							
	INCHES		MM				
DIM	MIN	MAX	MIN	MAX	NOTE		
Α	.230	.300	5.80	7.60			
В	.104	.140	2.60	3.60			
С	.026	.034	.70	.90			
D	1.000		25.40				

FR151GP thru FR157GP

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Figure 1
Typical Forward Characteristics



2.5 2.0 Amps 1.5

Figure 2

3.0

0

Forward Derating Curve

Single Phase, Half Wave 60Hz Resistive or Inductive

75

50

°C

Average Forward Rectified Current - Amperes/ersus

Ambient Temperature - °C

100

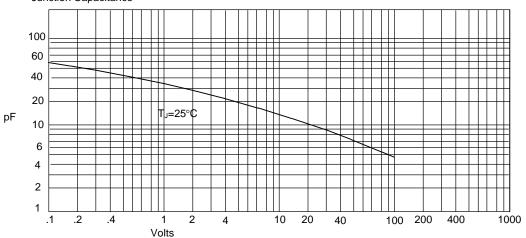
125

150

175

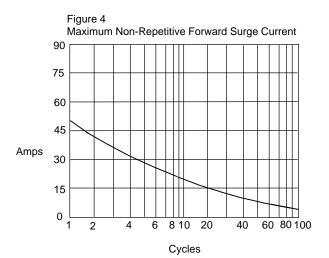
Instantaneous Forward Current - Amperes*versus* Instantaneous Forward Voltage - Volts

Figure 3
Junction Capacitance



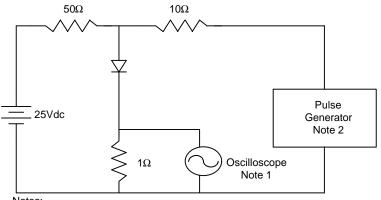
FR151GP thru FR157GP

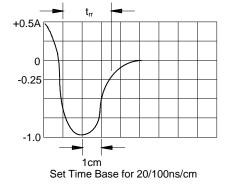




Peak Forward Surge Current - Amperesversus Number Of Cycles At 60Hz - Cycles

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



Ordering Information:

Device	Packing
Part Number-TP	Tape&Reel: 4Kpcs/Reel
Part Number-BP	Bulk: 25Kpcs/Carton

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