

**Micro Commercial Components** 



Micro Commercial Components 20736 Marilla Street Chatsworth CA 91311

Phone: (818) 701-4933 Fax: (818) 701-4939

# FR101GP THRU FR107GP

## **Features**

- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Fast Switching Speed For High Efficiency
- Glass Passivated Junction
- 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
FR101GP	FR101GP	50V	35V	50V
FR102GP	FR102GP	100V	70V	100V
FR103GP	FR103GP	200V	140V	200V
FR104GP	FR104GP	400V	280V	400V
FR105GP	FR105GP	600V	420V	600V
FR106GP	FR106GP	800V	560V	800V
FR107GP	FR107GP	1000V	700V	1000V

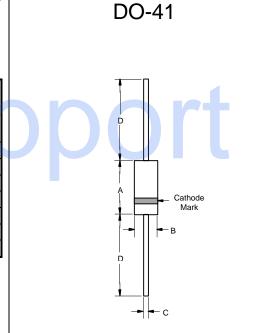
#### Electrical Characteristics @ 25°C Unless Otherwise Specified

ilectifical characteristics @ 25 c offices offici wise specified					
Average Forward	I <sub>F(AV)</sub>	1 A	T <sub>A</sub> = 55°C		
Current					
Peak Forward Surge	$I_{FSM}$	30A	8.3ms, half sine		
Current					
Maximum			$I_{FM} = 1.0A;$		
Instantaneous	$V_{F}$	1.3V	$T_A = 25^{\circ}C$		
Forward Voltage					
Maximum DC					
Reverse Current At	$I_R$	5.0μΑ	$T_A = 25^{\circ}C$		
Rated DC Blocking		100μΑ	T <sub>A</sub> = 100°C		
Voltage					
Maximum Reverse					
Recovery Time					
FR101GP-104GP	$T_{rr}$	150ns	$I_{F}=0.5A, I_{R}=1.0A,$		
FR105GP	- 11	250ns	I <sub>rr</sub> =0.25A		
FR106GP-107GP		500ns	-11 -12-11		
Typical Junction	CJ	15pF	Measured at		
Capacitance			1.0MHz, V <sub>R</sub> =4.0V		

<sup>\*</sup>Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

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

# 1 Amp Glass Passivated Rectifier 50 to 1000 Volts



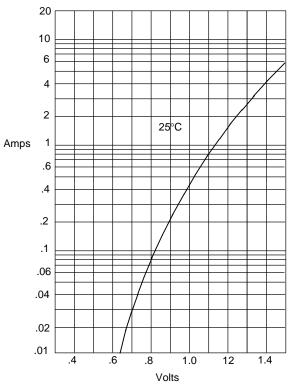
DIMENSIONS							
	INCHES		MM				
DIM	MIN	MAX	MIN	MAX	NOTE		
Α	.166	.205	4.10	5.20			
В	.080	.107	2.00	2.70			
С	.028	.034	.70	.90			
D	1.000		25.40				

#### FR101GP thru FR107GP

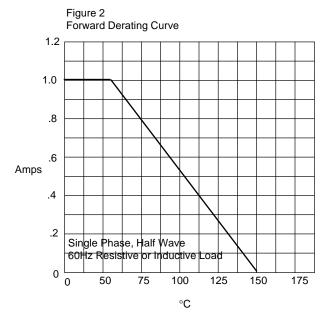
 $\cdot M \cdot C \cdot C \cdot$ 

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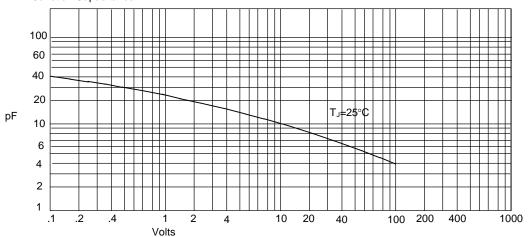




Instantaneous Forward Current - Amperesversus Instantaneous Forward Voltage - Volts







Junction Capacitance - pF*versus* Reverse Voltage - Volts

### FR101GP thru FR107GP



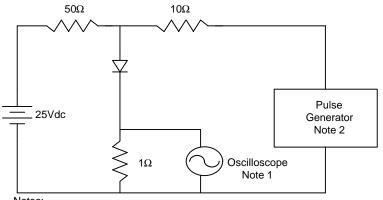
Figure 4
Peak Forward Surge Current

60
40
40
30
40
10
0
1 2 4 6 8 10 20 40 60 80 100

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

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: 5Kpcs/Reel
Part Number-AP	Ammo Packing: 5Kpcs/Ammo Box
Part Number-BP	Bulk: 50Kpcs/Carton

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

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