Micro Commercial Components
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FR301GP THRU FR307GP

3 Amp Fast Recovery Rectifier 50 to 1000 Volts

Features

- Halogen free available upon request by adding suffix "-HF"
- Low Forward Voltage Drop and High Current Capability
- Fast Switching Speed For High Efficiency
- Glass Passivated Junction
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- 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

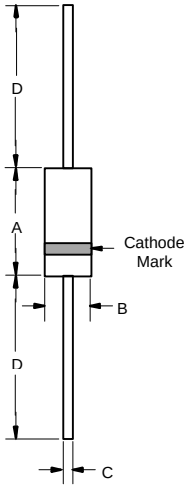
MCC Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR301GP	FR301GP	50V	35V	50V
FR302GP	FR302GP	100V	70V	100V
FR303GP	FR303GP	200V	140V	200V
FR304GP	FR304GP	400V	280V	400V
FR305GP	FR305GP	600V	420V	600V
FR306GP	FR306GP	800V	560V	800V
FR307GP	FR307GP	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3 A	T_A = 55°C
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	I_{FM} = 3.0A; T_A = 25°C
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5µA 100µA	T_A = 25°C T_A = 55°C
Maximum Reverse Recovery Time FR301GP-304GP FR305GP FR306GP-307GP	T_{rr}	 150ns 250ns 500ns	 I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	50pF	Measured at 1.0MHz, V_R=4.0V

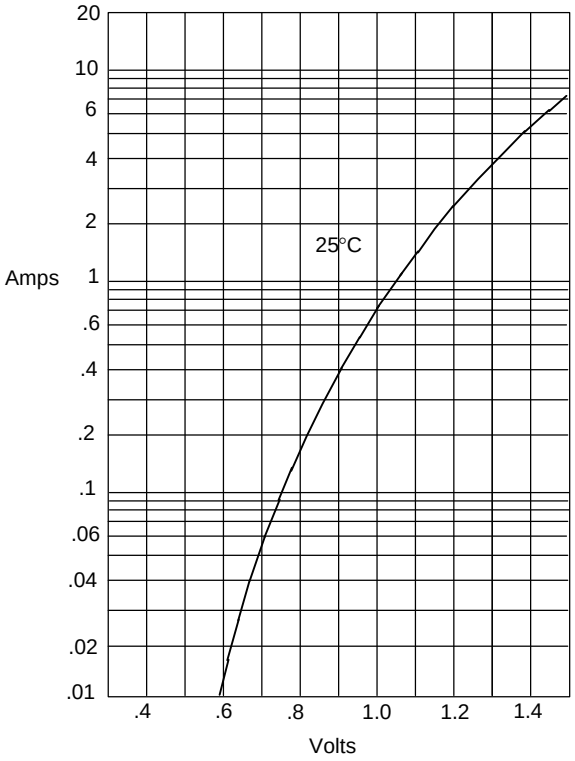
Notes:1.High Temperature Solder Exemption Applied, see EU Directive Annex 7.

DO-201AD



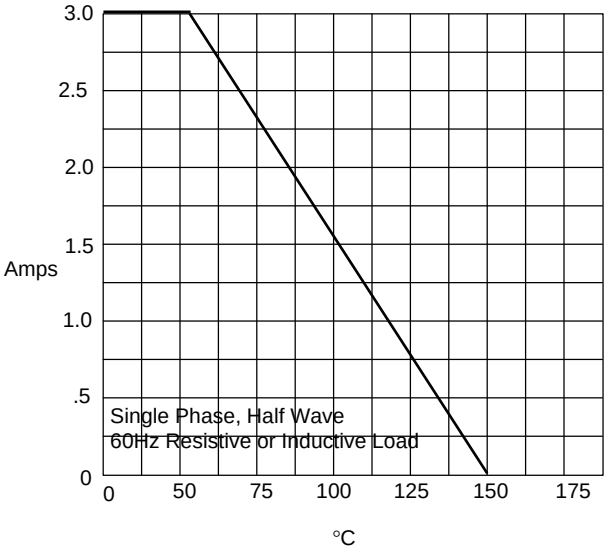
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.287	.374	7.30	9.50	
B	.189	.208	4.80	5.30	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



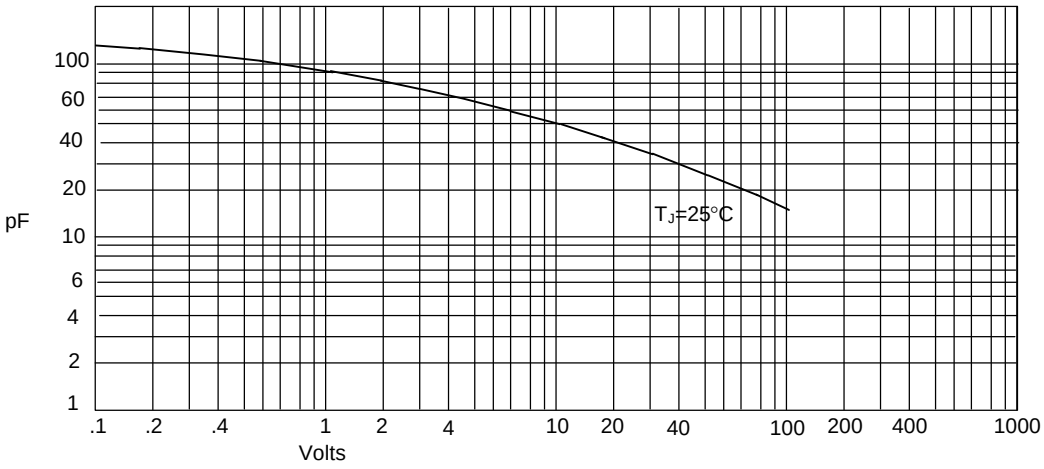
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



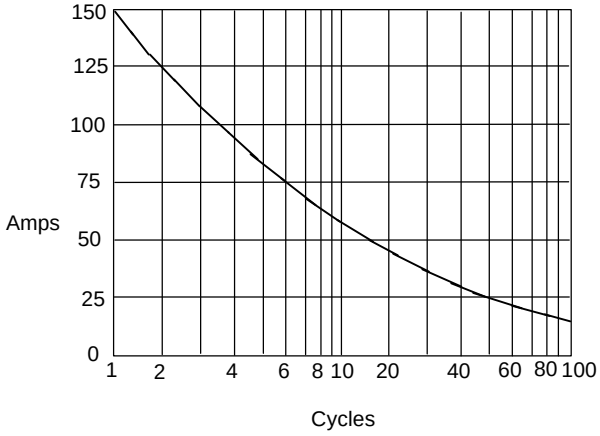
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature -°C

Figure 3
Junction Capacitance



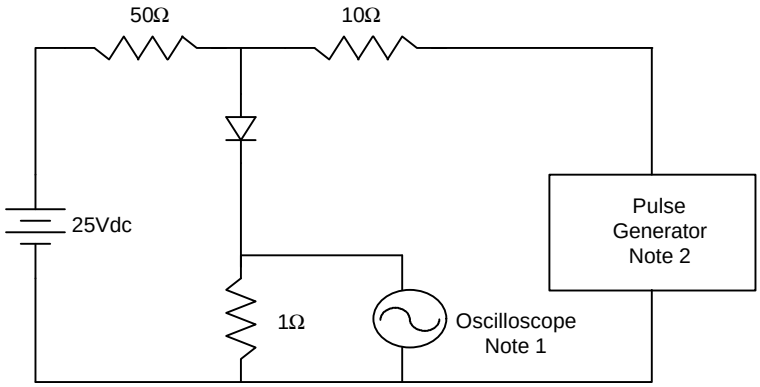
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

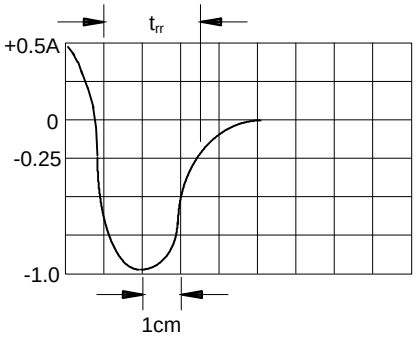
Figure 4
Peak Forward Surge Current



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

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram





Set Time Base for 20/100ns/cm

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: 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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