

FR101 - FR107

1.0 AMP. Fast Recovery Rectifiers

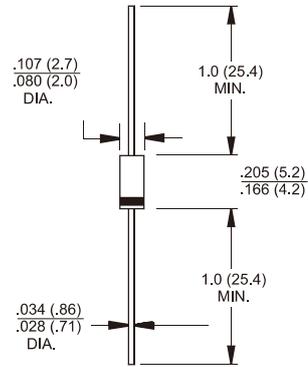
DO-41

Features

- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss.
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.

Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, Lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.34 grams



Dimensions in inches and (millimeters)
Marking Diagram



- FR10X = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	FR 101	FR 102	FR 103	FR 104	FR 105	FR 106	FR 107	Units
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length @T _A = 55 °C	I _{F(AV)}	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	30							A
Maximum Instantaneous Forward Voltage @ 1.0A	V _F	1.2							V
Maximum DC Reverse Current at Rated DC Blocking Voltage(Note1)	I _R					5.0			uA
						150			uA
Maximum Reverse Recovery Time (Note4)	T _{rr}	150			250	500			nS
Typical Junction Capacitance (Note 2)	C _j	10							pF
Typical Thermal Resistance (Note 3)	R _{θJA} R _{θJC}	65 8							°C /W
Operating Temperature Range T _J	T _J	-65 to +150							°C
Storage Temperature Range T _{STG}	T _{STG}	-65 to +150							°C

- Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C
3. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.
4. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

RATINGS AND CHARACTERISTIC CURVES (FR101 THRU FR107)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

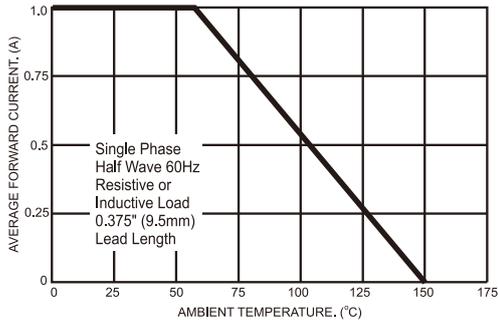


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

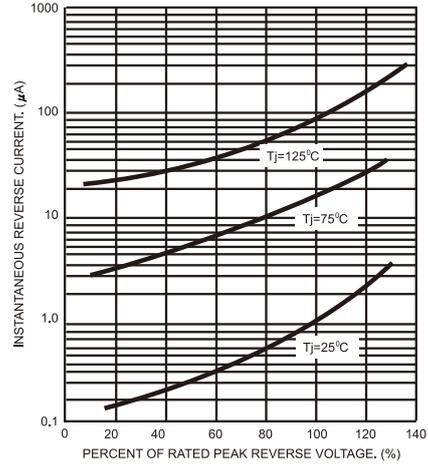


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

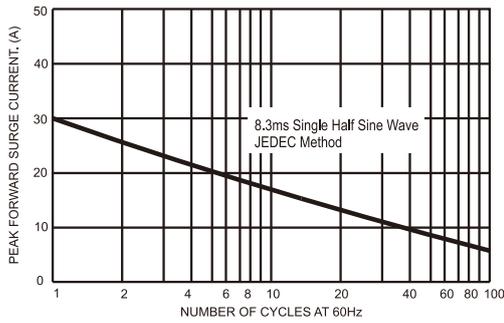


FIG.5- TYPICAL FORWARD CHARACTERISTICS

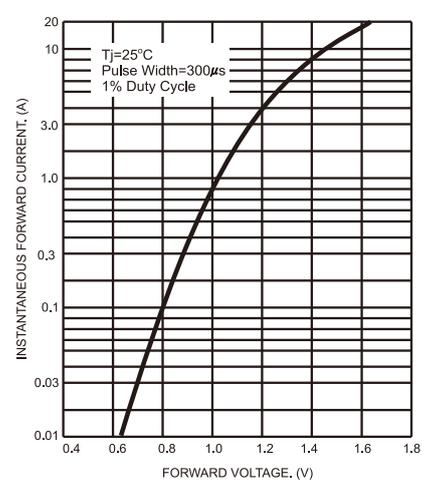


FIG.4- TYPICAL JUNCTION CAPACITANCE

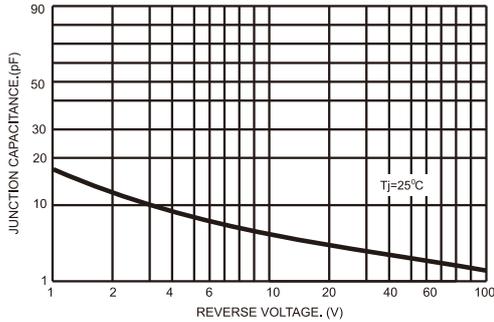


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

