FR101 THRU FR107

FAST RECOVERY RECTIFIER

GROWCHILD ELECTRONICS™

REVERSE VOLTAGE: **50 to 1000 VOLTS**

FORWARD CURRENT: **1.0 AMPERE**

http://www.njzrg.com

FEATURES

· High current capability

· 1.0 ampere operation at T_A=55℃ with no thermal runaway.

· Fast switching for high efficiency

· Exceeds environmental standards of MIL-S-19500/228

· Low leakage.

MECHANICAL DATA

Case: Molded plastic, DO-41

Epoxy: UL 94V-O rate flame retardant

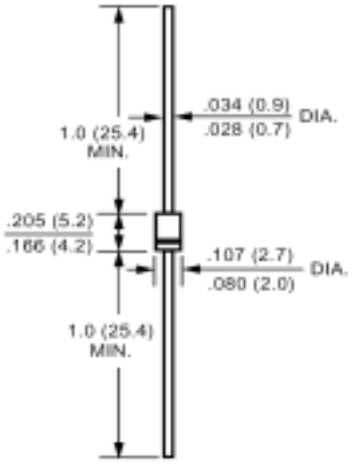
Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting position: Any

Weight: 0.012ounce, 0.33gram

DO-41



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60H_Z, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	*FR101*	*FR102*	*FR103*	*FR104*	*FR105*	*FR106*	*FR107*	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	**Volts**
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	**Volts**
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	**Volts**
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at T_A=55℃	$I_{(AV)}$	1.0							**Amp**
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							**Amp**
Maximum Forward Voltage at 1.0A DC and 25℃	V_F	1.3							**Volts**
Maximum Reverse Current at T_A=25℃	I_R	5.0							**uAmp**
at Rated DC Blocking Voltage T_A=100℃		500							
Typical Junction Capacitance (Note 1)	C_J	12							**pF**
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50							**℃/W**
Maximum Reverse Recovery Time (Note 3)	T_{RR}	150				250	500		**nS**
Operating and Storage Temperature Range	T_J，Tstg	-55 to +150							**℃**

NOTES:

1- Measured at 1 MH_Z and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance From Junction to Ambient 0.375"(9.5mm) lead length P.C.B. Mounted.

3- Reverse Recovery Test Conditions：I_F=.5A，I_R=1A，I_{RR}=.25A.

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RATINGS AND CHARACTERISTIC CURVES

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FIG.1- MAXIMUM TYPICAL FORWARD CURRENT DERATING CURVE

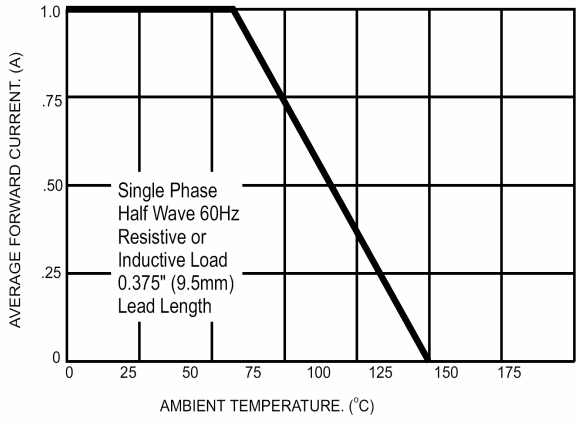

FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

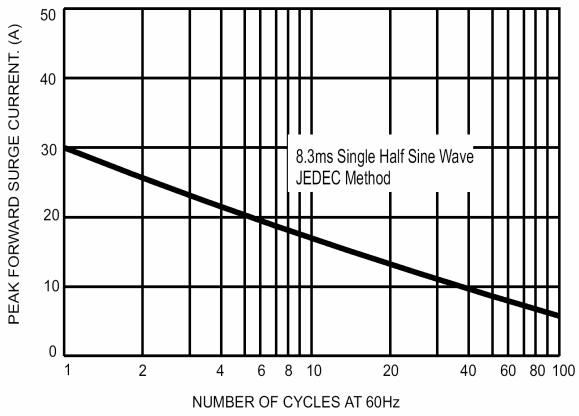

FIG.3- TYPICAL FORWARD CHARACTERISTICS

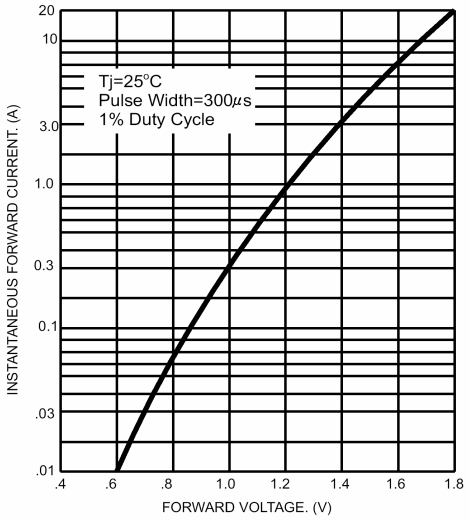

FIG.4- TYPICAL JUNCTION CAPACITANCE

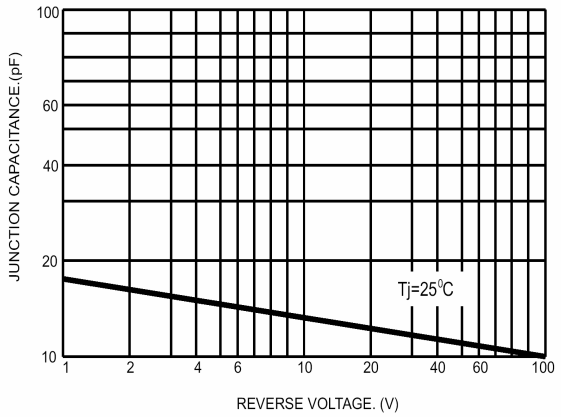

FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM