FAST RECOVERY RECTIFIERS

Reverse Voltage : 50V to 1000V
Forward Current : 1.0Amp

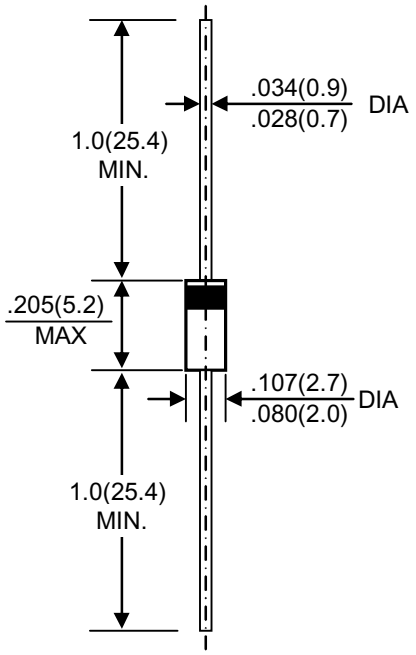
Features

High current capability
1.0 ampere operation at T_A=55℃
with no thermal runaway
Fast switching for high efficient
Exceeds environmental 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

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

Parameter	Symbol	FR101	FR102	FR103	FR104	FR105	FR106	FR107	Unit
Maximum Recerrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at T_A=55℃	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30.0							A
Maximum Forward Voltage at 1.0A DC and 25℃	V_F	1.3							V
Maximum Reverse Current at T_A=25℃ at Rated DC Blocking Voltage T_A=100℃	I_R	5.0 150							μA
Typical Junction Capacitance (Note 1)	C_J	15							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	65.0							℃/W
Maximum Reverse Recovery Time (Note 3)	T_{RR}	150				250	500		nS
Operating and Storage Temperature Range	T_J · Tstg	-65 to +150							℃

NOTES:

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

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

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

FAST RECOVERY RECTIFIERS

RATING AND CHARACTERTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

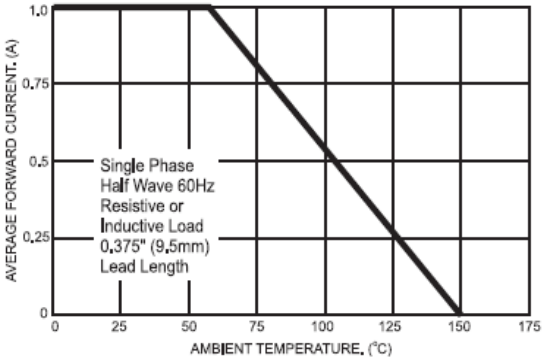


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

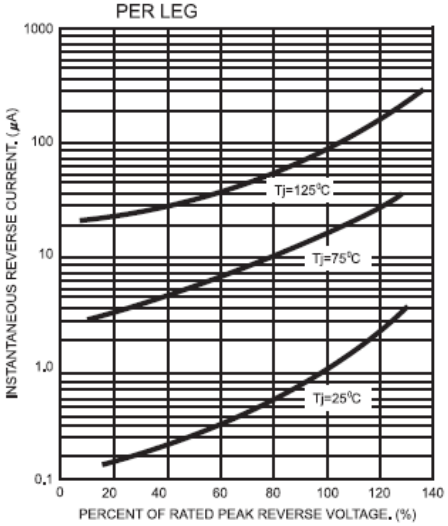


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

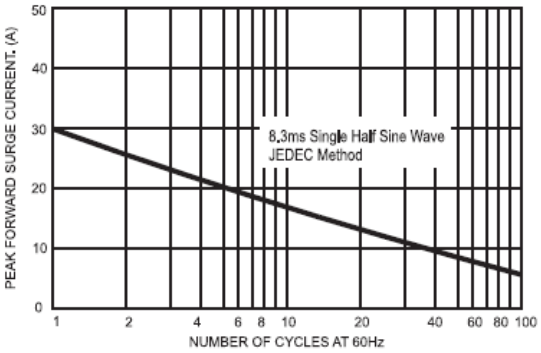


Fig.4 - TYPICAL JUNCTION CAPACITANCE

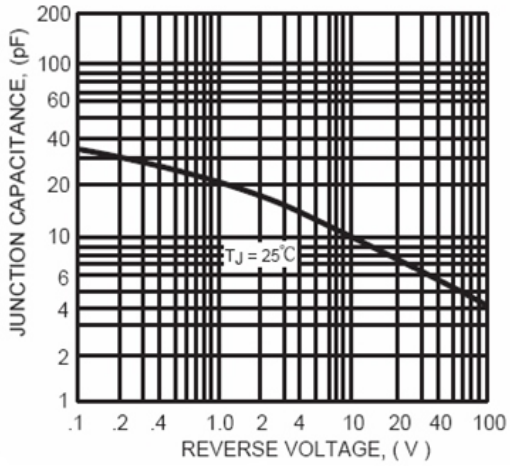


Fig.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

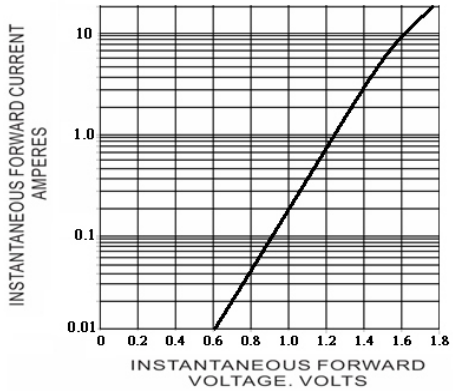


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM