



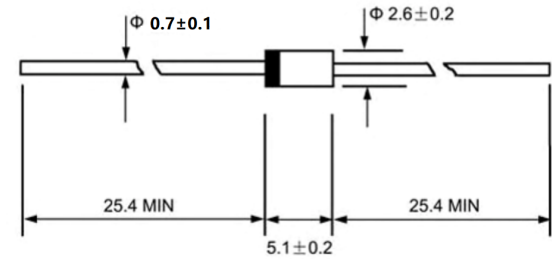
VOLTAGE RANGE: 50 --- 1000 V

CURRENT: 1.0 A

DO - 41

Features

- ◇ Low cost
- ◇ Glass passivated junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0



Dimensions in millimeters

Mechanical Data

- ◇ Case: JEDEC DO-41, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces, 0.34 grams
- ◇ Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

Parameter	Symbol	FR101G	FR102G	FR103G	FR104G	FR105G	FR106G	FR107G	UNITS
Maximum recurrent 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 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	I_{FSM}	30.0							A
Maximum instantaneous forward voltage at 1.0A	V_F	1.3							V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	I_R	5.0 100.0							μA
Maximum reverse recovery time (Note1)	t_{rr}	150			250		500		ns
Typical junction capacitance (Note2)	C_J	12.0							pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	55.0							$^\circ C/W$
Operating junction temperature range	T_J	- 55 ---- + 150							$^\circ C$
Storage temperature range	T_{STG}	- 55 ---- + 150							$^\circ C$

NOTE: 1. Measured with $I_F=0.5A$, $I_R=1A$, $t_r=0.25A$.

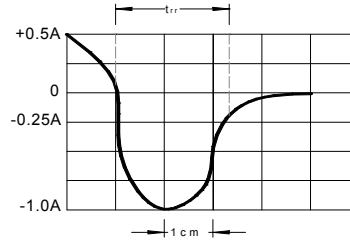
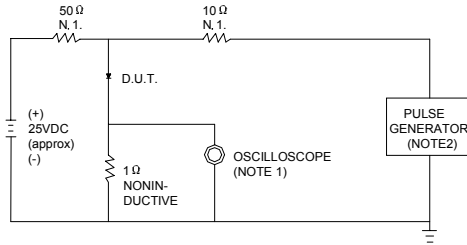
2. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient



Ratings AND Characteristic Curves

FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ . 22pF.
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω .

SET TIME BASE FOR 50/100 ns/cm

FIG.2 – TYPICAL FORWARD CURRENT DERATING CURVE

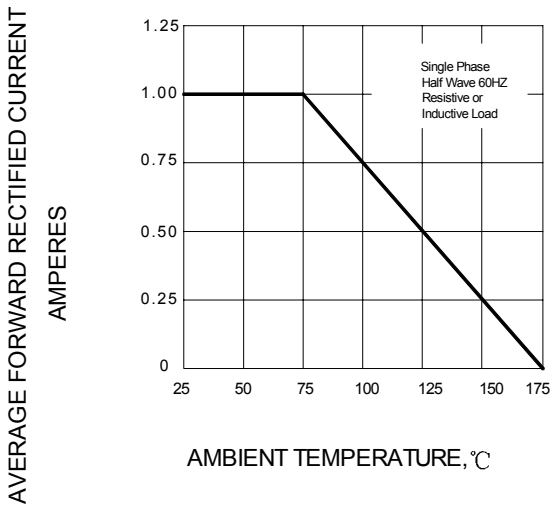


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

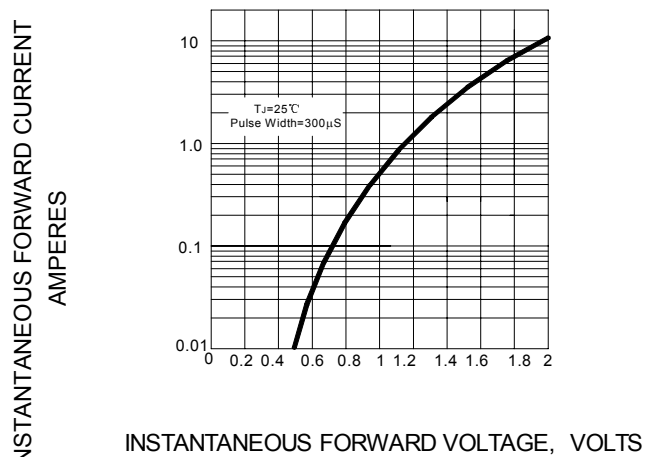


FIG.4 –PEAK FORWARD SURGE CURRENT

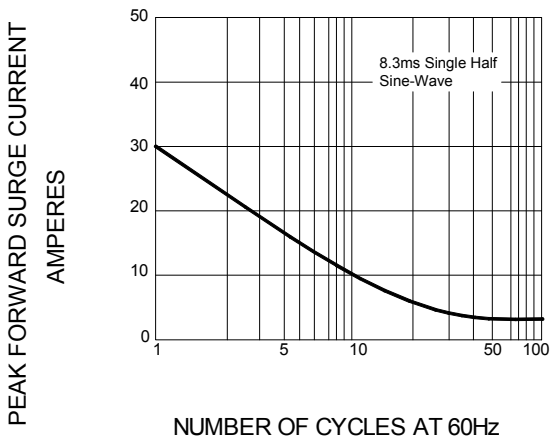
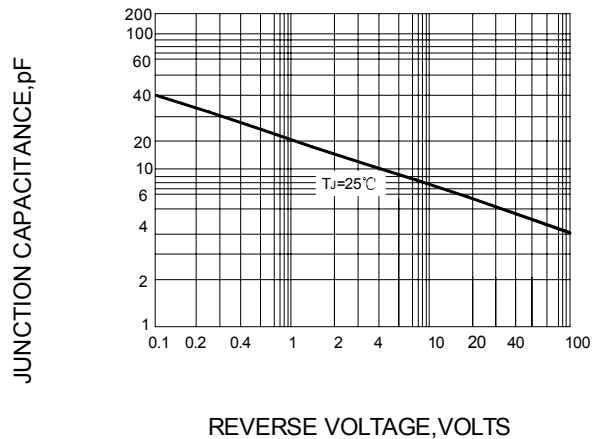


FIG.5 – TYPICAL JUNCTION CAPACITANCE



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
DO-41	5000/AMMO	50000	42X28X31	14.00	12.00