



1N4942~1N4948

FAST RECOVERY PLASTIC RECTIFIER

VOLTAGE 200 to 1000 Volts **CURRENT** 1.0 Amperes

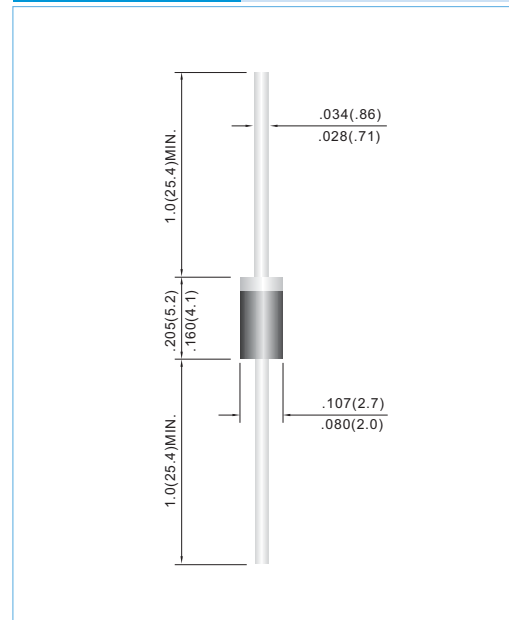
DO-41 Unit: inch(mm)

FEATURES

- High current capability.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Exceeds environmental standards of MIL-S-19500/228
- Fast Recovery for high efficiency.
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: Molded plastic, DO-41
- Terminals: Axial leads, solderable to MIL-STD-750, Method 2026
- Polarity: Color Band denotes cathode end
- Mounting Position: Any
- Weight: 0.0118 ounce, 0.336 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.

PARAMETER	SYMBOL	1N4942	1N4944	1N4946	1N4947	1N4948	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	800	1000	V
Maximum Average Forward Current .375"(9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	1.0					A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	30					A
Maximum Forward Voltage at 1.0A	V_F	1.3					V
Maximum DC Reverse Current at $T_J=25^\circ\text{C}$ Rated DC Blocking Voltage $T_J=100^\circ\text{C}$	I_R	5.0 500					μA
Maximum Reverse Recovery Time (Note 1)	t_{rr}	150	250		500		ns
Typical Junction capacitance (Note 2)	C_J	12					pF
Typical Junction Resistance(Note 3)	$R_{\theta JA}$	41					$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150					$^\circ\text{C}$

NOTES:1. Reverse Recovery Test Conditions: $I_F=.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=.25\text{A}$

2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC

3. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted



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RATING AND CHARACTERISTIC CURVES

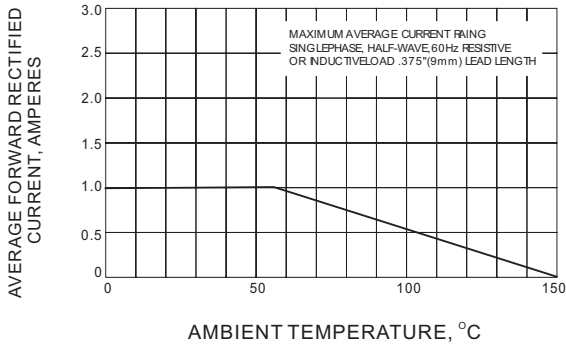


Fig.1 FORWARD CURRENT DERATING CURVE

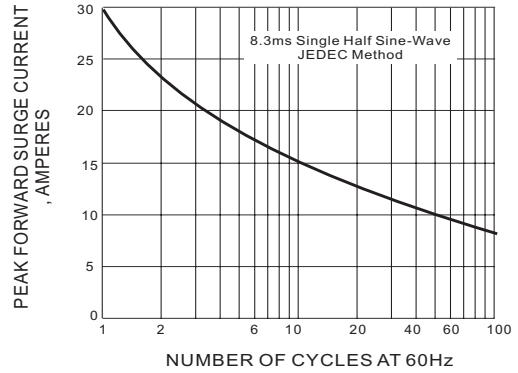


Fig.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

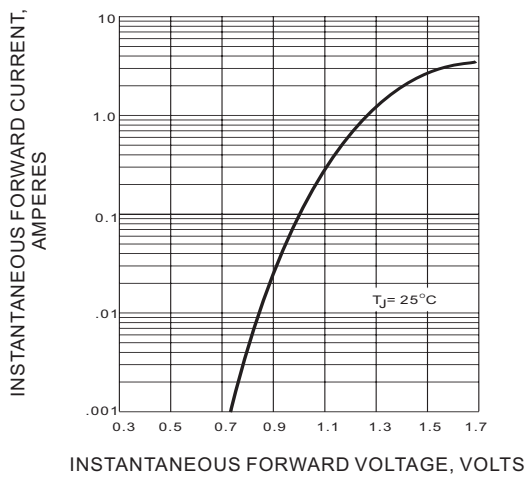


Fig.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

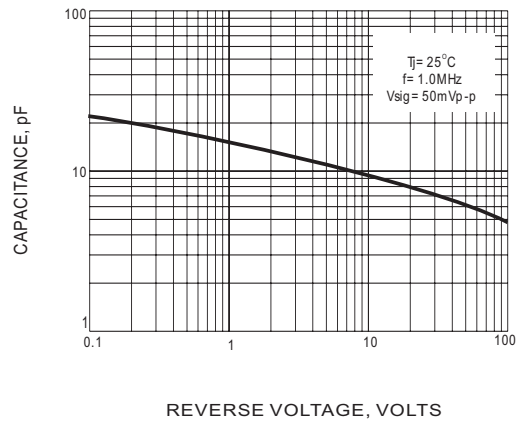


Fig.4 TYPICAL JUNCTION CAPACITANCE

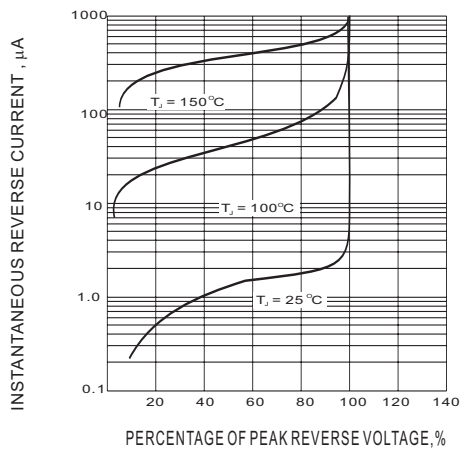


Fig.5-TYPICAL REVERSE CHARACTERISTIC