

1N4942 THRU 1N4948

FAST RECOVERY RECTIFIER

REVERSE VOLTAGE: 200 to 1000 VOLTS
FORWARD CURRENT: 1.0 AMPERE

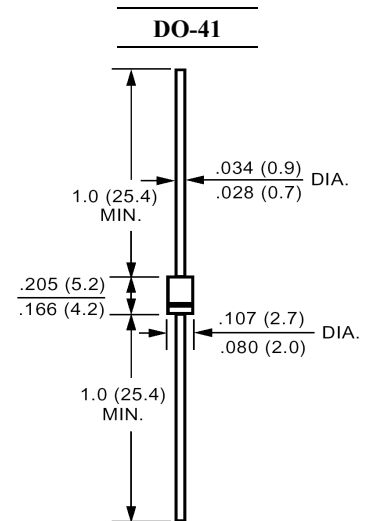
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FEATURES

- High surge current capability
- 1.0 ampere operation at $T_A=55$ with no thermal runaway.
- Void-free Plastic in a DO-41 package.
- 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



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

	Symbols	1N4942	1N4944	1N4946	1N4947	1N4948	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	200	400	600	800	1000	Volts
Maximum RMS Voltage	V _{RMS}	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	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 at Rated DC Blocking Voltage T _A =100	I _R	5.0 500					uAmp
Typical Junction Capacitance (Note 1)	C _J	12					pF
Typical Thermal Resistance (Note 2)	R _{θJA}	50					/W
Maximum Reverse Recovery Time (Note 3)	T _{RR}	150		250	500		nS
Operating and Storage Temperature Range	T _J , T _{stg}	-55 to +150					

NOTES:

1- Measured at 1 MHz 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

<http://www.njzrg.com>

FIG.1- MAXIMUM TYPICAL FORWARD CURRENT DERATING CURVE

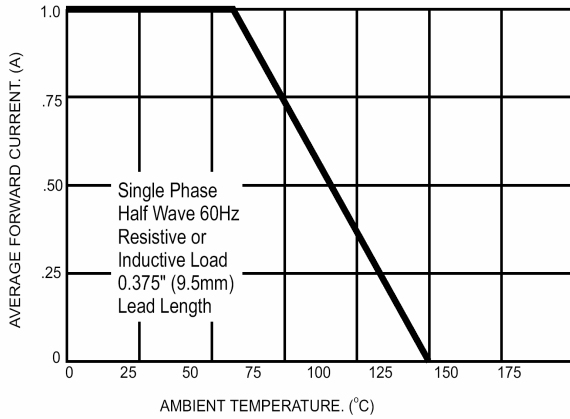


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

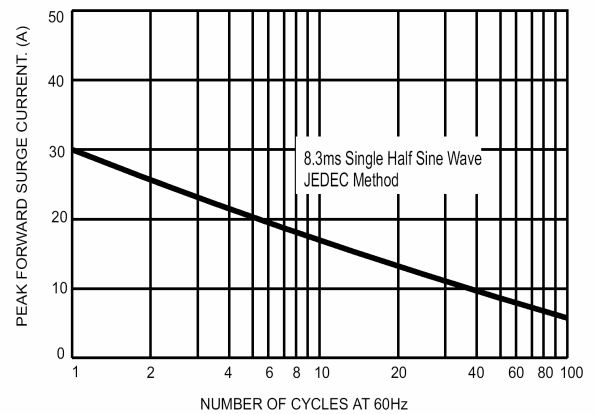


FIG.3- TYPICAL FORWARD CHARACTERISTICS

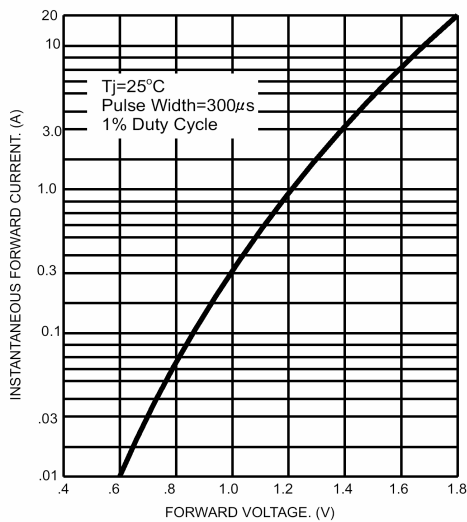


FIG.4- TYPICAL JUNCTION CAPACITANCE

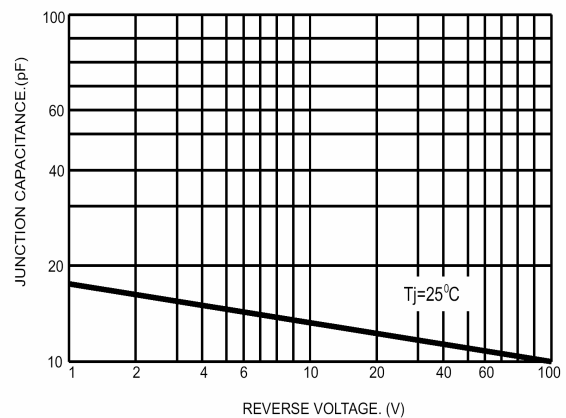


FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

