

1.0Amp Fast Recovery Rectifiers

1N4942~1N4948

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

Mechanical Data

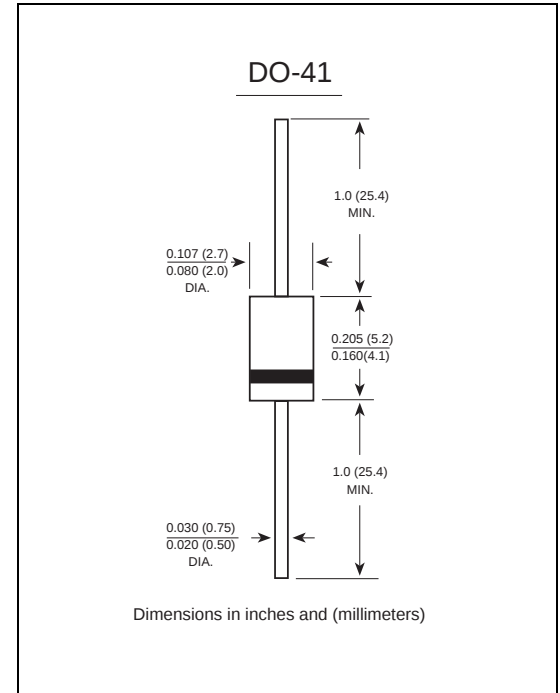
Case: JEDEC DO-41 molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight :0.012 ounce, 0.33 grams



Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	1N 4942	1N 4944	1N 4946	1N 4947	1N 4948	UNITS
Maximum repetitive 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 0.375”(9.5mm) lead length at T _A =75°C	I _(AV)	1.0					Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30.0					Amps
Maximum instantaneous forward voltage at 1.0A	V _F	1.3					Volts
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	5.0 50.0					µA
Maximum reverse recovery time (NOTE 1)	t _{rr}	150		250		500	ns
Typical junction capacitance (NOTE 2)	C _J	15.0					pF
Typical thermal resistance (NOTE 3)	R _{θJA}	50.0					°C/W
Operating junction and storage temperature range	T _J ,T _{STG}	-65 to +150					°C

Note1.Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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

Ratings And Characteristic Curves

1N4942 THRU 1N4948

FIG. 1- FORWARD CURRENT DERATING CURVE

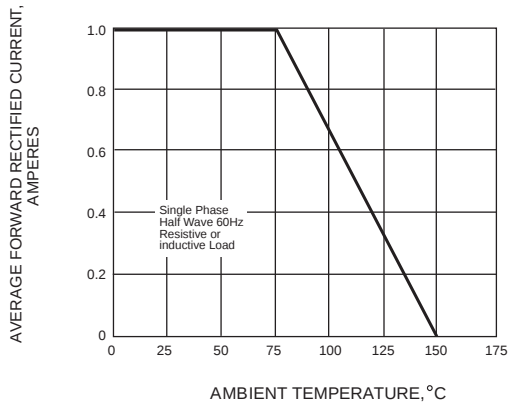


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

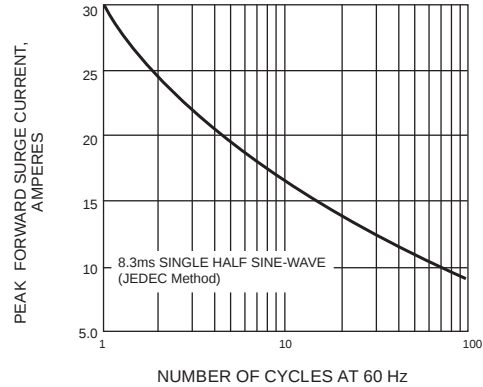


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

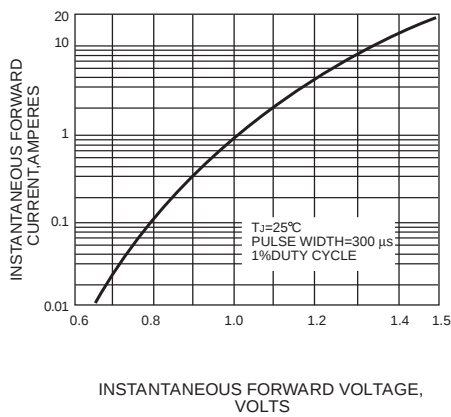


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

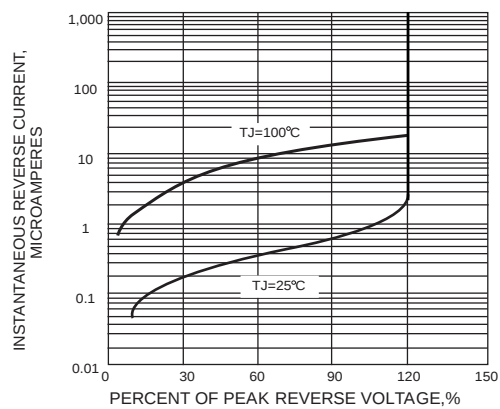


FIG. 5-TYPICAL JUNCTION CAPACITANCE

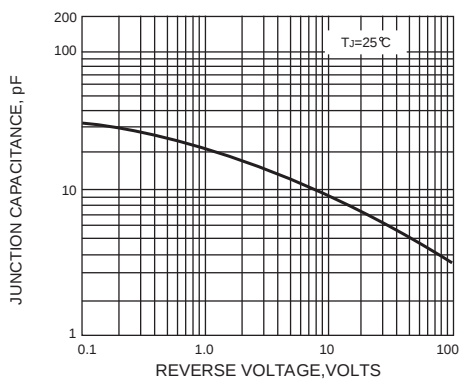


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

