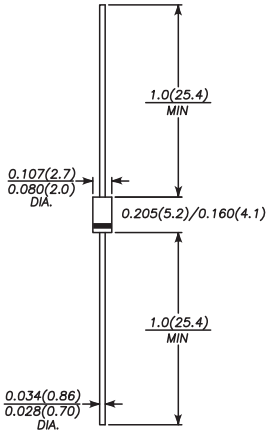
1N4942 THRU 1N4948

FAST RECOVERY RECTIFIERS

Reverse Voltage - 200 to 1000 Volts Forward Current - 1.0 Ampere

DO-41



Dimensions in inches and (millimeters)

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: 260°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	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 rectified current 0.375"(9.5mm) lead length at T_A=75°C	$I_{(AV)}$	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 instantaneous forward voltage at 1.0A	V_F	1.3					V
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)	$R_{\theta JA}$	50.0					°C/W
Operating junction and storage temperature range	T_J,T_{STG}	-55 to +150					°C

Note:1.Reverse recovery condition I_F=0.5A,I_R=1.0A,Irr=0.25A
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

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RATINGS AND CHARACTERISTIC CURVES 1N4942 THRU 1N4948

FIG. 1- FORWARD CURRENT DERATING CURVE

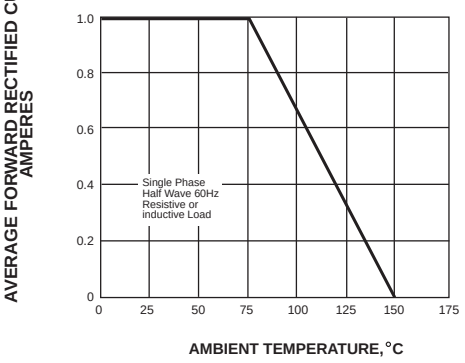


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

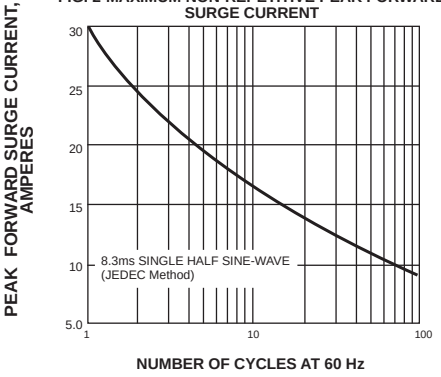


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

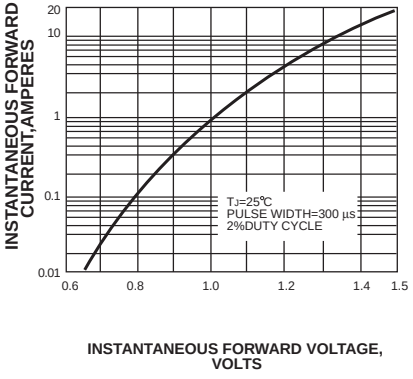


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

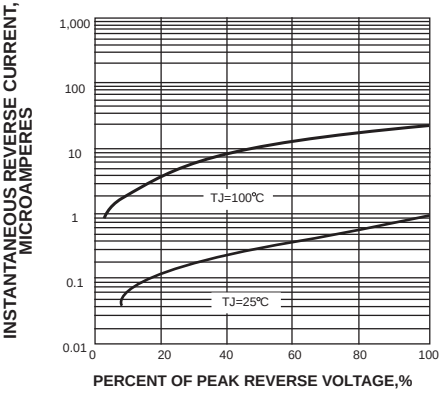


FIG. 5-TYPICAL JUNCTION CAPACITANCE

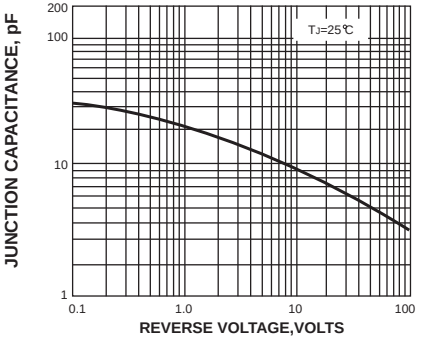
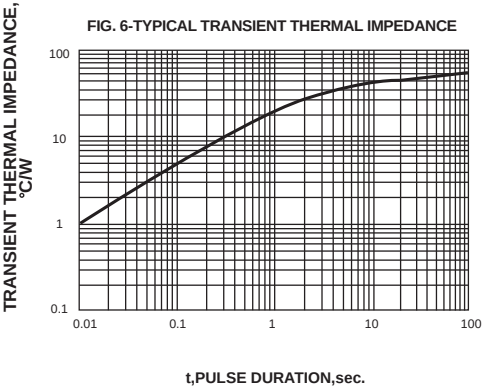


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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