III. Fast / Ultra Fast / Super Fast Recovery Rectifier

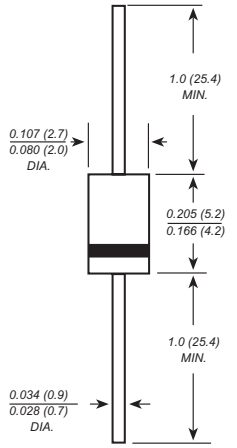
1.0A Fast Recovery Rectifier
1N4933~1N4937 (Package: DO-41)

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℃/10 seconds, 0.375”(9.5mm) lead length, 5 lbs. (2.3 kg) tension

MECHANICAL DATA

- Case : 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 : 0.27 grams



Case: DO-41
Dimensions in inches and (millimeters)

Ratings & Electrical Characteristics

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

Characteristic	Symbol	1N4933	1N4934	1N4935	1N4936	1N4937	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	Volts
Maximum average forward rectified current 0.375” (9.5mm) lead length at Ta = 75℃	Io	1.0					Amps
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	1.2					Volts
Maximum DC reverse current Ta=25℃ at rated DC blocking voltage Ta=100℃	I_R	5.0 50.0					μA
Maximum reverse recovery time (Note1)	Trr	200					ns
Typical junction capacitance (Note 2)	Cj	15.0					PF
Typical thermal resistance (Note 3)	R_{th}-JA	50.0					℃ / W
Operating junction and storage temperature range	Tj, Tstg	-65 to +150					℃

Note :
1. Reverse recovery condition I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0 volts D.C.
3. Thermal resistance from junction to ambient at 0.375” (9.5mm) lead length P.C.B. mounted

Ratings and Characteristic Curves of 1N4933~1N4937

FIG. 1- FORWARD CURRENT DERATING CURVE

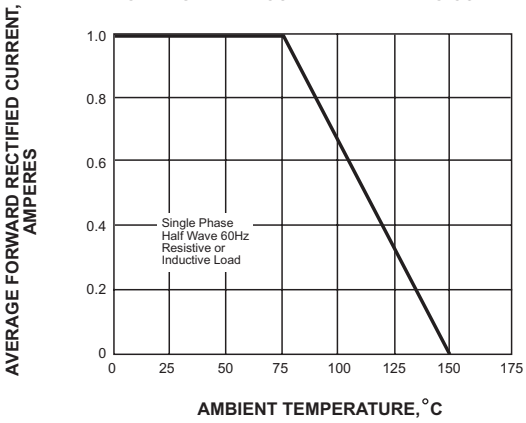


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

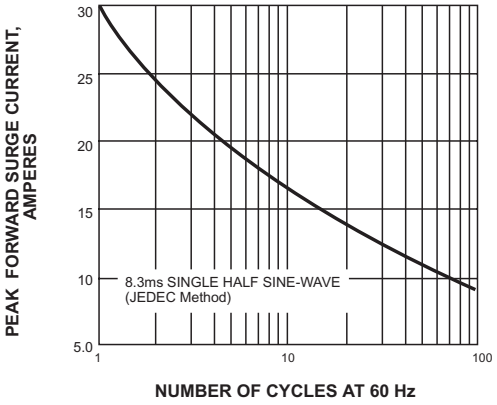


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

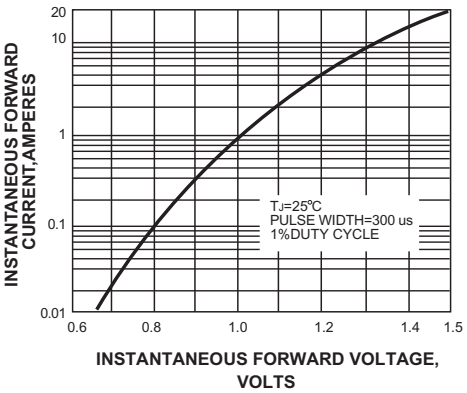


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

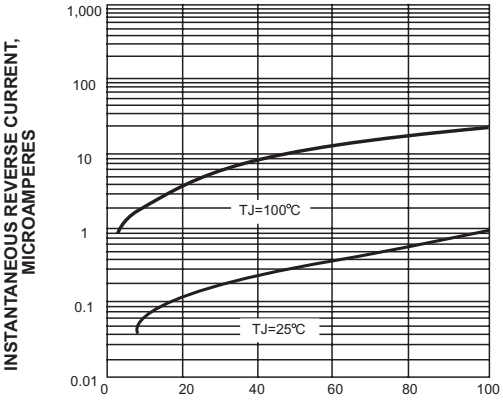


FIG. 5-TYPICAL JUNCTION CAPACITANCE

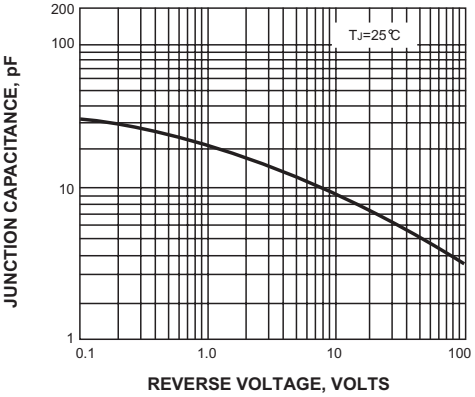


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE