



1N4933 THRU 1N4937

FAST RECOVERY RECTIFIERS

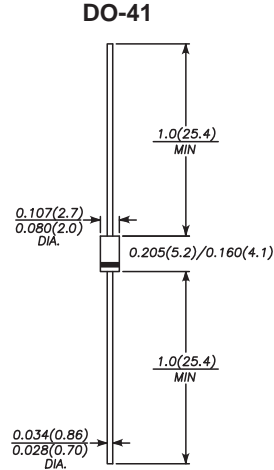
Reverse Voltage - 50 to 600 Volts Forward Current - 1.0 Ampere

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: 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



Dimensions in inches and (millimeters)

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 4933	1N 4934	1N 4935	1N 4936	1N 4937	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=75^\circ\text{C}$	$I_{(AV)}$	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	1.2					V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	5.0 100.0					μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	200					ns
Typical junction capacitance (NOTE 2)	C_J	15.0					pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	50.0					$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150					$^\circ\text{C}$

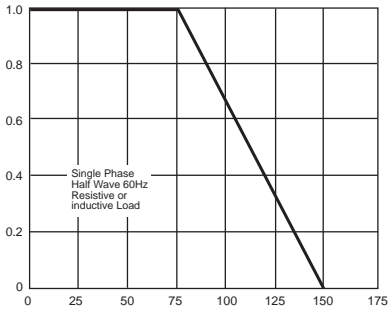
Note: 1. Reverse recovery condition $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



RATINGS AND CHARACTERISTIC CURVES 1N4933 THRU 1N4937

AVERAGE FORWARD, RECTIFIED CURRENT,
AMPERES

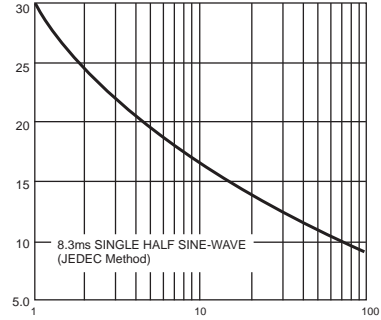
FIG. 1- FORWARD CURRENT DERATING CURVE



AMBIENT TEMPERATURE, °C

PEAK FORWARD SURGE CURRENT,
AMPERES

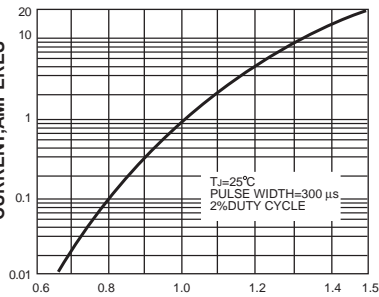
FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



NUMBER OF CYCLES AT 60 Hz

INSTANTANEOUS FORWARD CURRENT, AMPERES

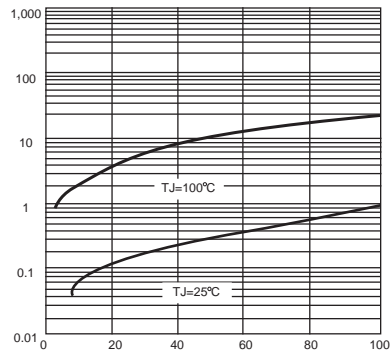
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

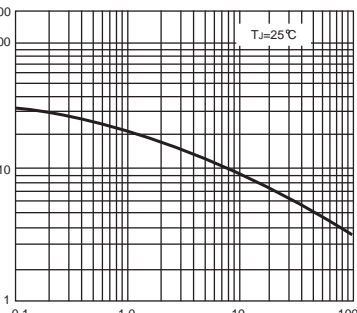
FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PERCENT OF PEAK REVERSE VOLTAGE, %

JUNCTION CAPACITANCE, pF

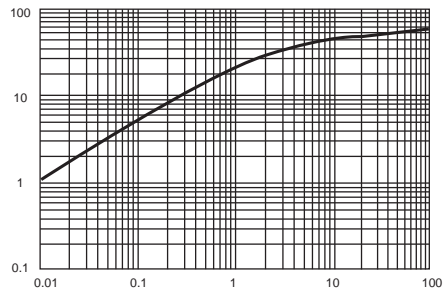
FIG. 5-TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t, PULSE DURATION, sec.