

FAST RECOVERY RECTIFIER
VOLTAGE RANGE 50 to 600 Volts
CURRENT 1 Ampere

FEATURES

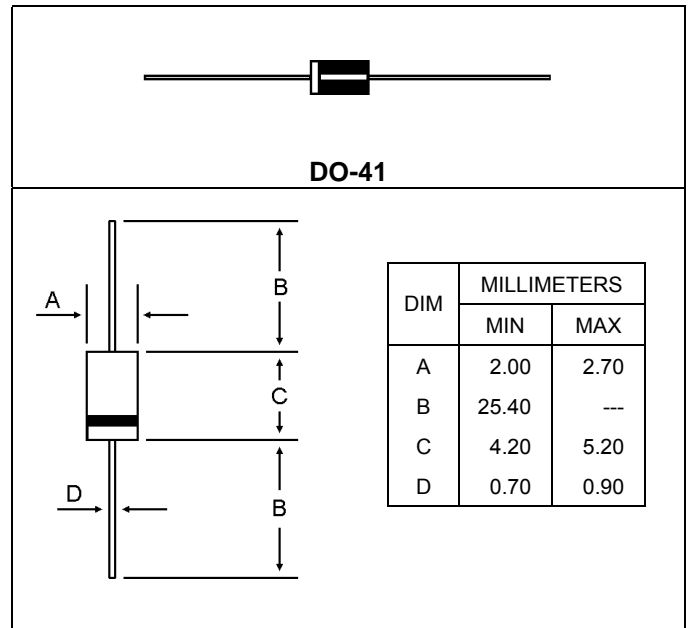
- * Low cost construction
- * Low reverse leakage
- * Fast switching for high efficiency
- * High forward surge current Capability
- * High Temperature soldering guaranteed:
 260°C/10 seconds, 0.375"(9.5 mm) lead length
 at lbs (2.3kg) tension.

MECHANICAL DATA

- * Case : Transfer Molded Plastic
- * Epoxy: UL94V-O rate flame retardant
- * Terminals : Plated axial lead, Solderable Per MIL-STD-202
 Method 208C
- * Polarity : Color band denotes cathode end
- * Mounting position: Any
- * Weight : 0.012 ounce, 0.33 grams (approx)

Plating pb free

The marking is indicated by part no. with "M".
 ex: 1N4933M ~1N4937M



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Characteristic	Symbol	1N4933-T52	1N4934-T52	1N4935-T52	1N4936-T52	1N4937-T52	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	V
Average Rectifier Forward Current Per Leg $T_C=75$	$I_{F(AV)}$	1.0					A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	I_{FSM}	30					A
Maximum Instantaneous Forward Voltage ($I_F=1.0$ Amp $T_C=25$)	V_F	1.3					V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C=25$) (Rated DC Voltage, $T_C=100$)	I_R	5.0 100					μA
Reverse Recovery Time (Note 3)	T_{rr}	200					ns
Typical Junction Capacitance (Note 1)	C_j	15					pF
Typical Thermal Resistance(Note 2)	$R_{\theta JA}$	50					$^{\circ}C/W$
Operating Temperature Range	T_J	-65 to +175					
Storage Temperature Range	T_{stg}	-65 to +175					

NOTES:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 volts
2. Thermal Resistance from Junction to Ambient temperature at .375"(9.5mm) lead length, P.C. board mounted.
3. Test conditions: $I_F=0.5$ A, $I_R=1.0$, $I_{RR}=0.25$ A

1N4933-T52 Thru 1N4937-T52

FIG-1 TYPICAL FORWARD CHARACTERISTICS

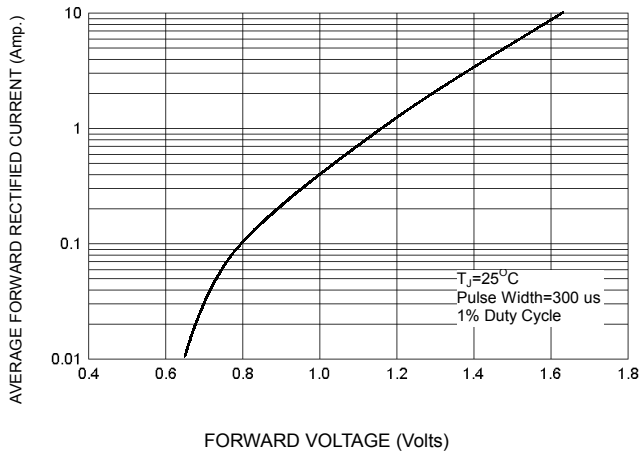


FIG-3 FORWARD CURRENT DERATING CURVE

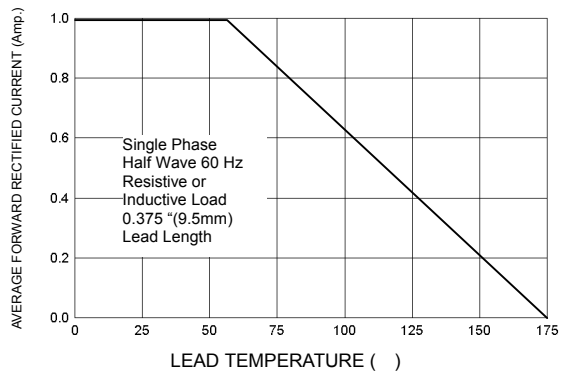


FIG-2 TYPICAL REVERSE CHARACTERISTICS

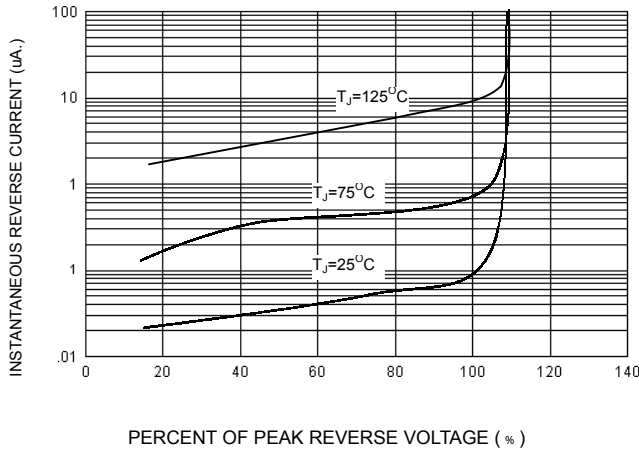


FIG-4 TYPICAL JUNCTION CAPACITANCE

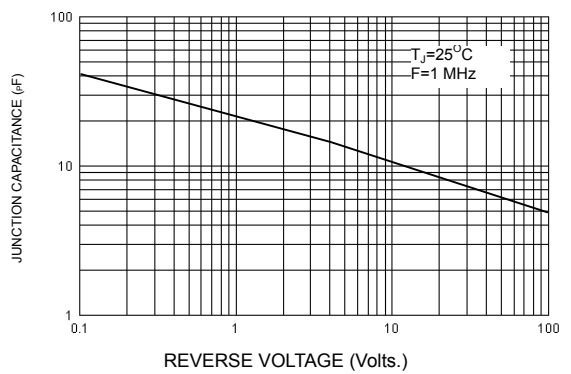
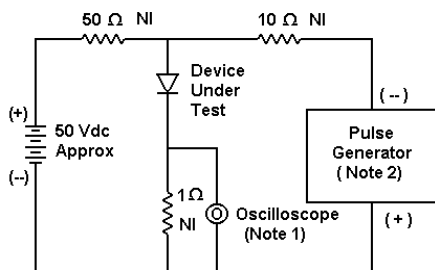
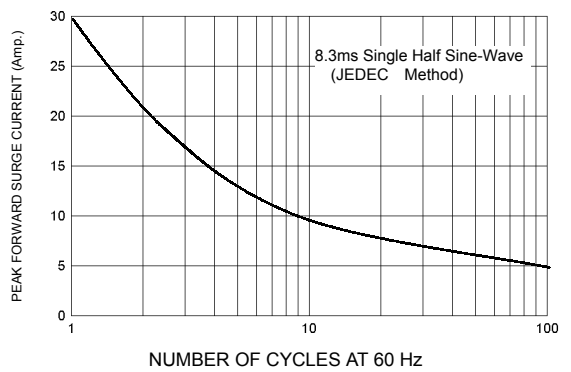
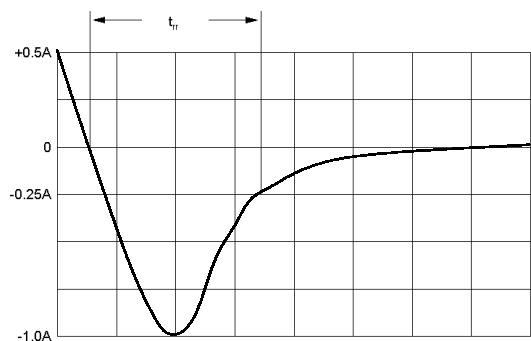


FIG-5 PEAK FORWARD SURGE CURRENT



- Notes:
 1. Rise Time = 7 ns max. Input Impedance = 1 M Ω , 22 pF
 2. Rise Time = 10 ns max. Input Impedance = 50 Ω



Set time base for 50/100 ns/cm

FIG-6 Reverse Recovery Time Characteristic and Test Circuit Diagram

THROUGH HOLE - AXIAL LEADED

Taping Specifications

Description	Dimension	Case Style	Specification(mm)
Component Pitch	A	DO-15, DO-35, DO-41, DO-7, A-405, R-3, R-1	5.0±0.5
		5KP, DO-201AD, R-6	10.0±0.5
Inside Tape Spacing	B	All	52.0±0.5
Lead To Lead Eccentricity	[C ₁ - C ₂]	All	1.0 Max.
Lead Extension	D	All	0.5 Max.
Lead Bending	E	All	1.2 Max.
Cumulative Pitch	G	All	1.5 per 10 pitch
Exposed Adhesive	H	All	0.8 Max.
Tape Width	J	All	6.0±0.4
Tape Leader	Beginning and end of reel or ammo pack		300.0 Min.
Empty Spaces	Consecutive missing components not allowed		<0.1%
Polarity Marking	All polarized components shall be oriented in the same direction. The cathode tape shall be colored and the anode tape shall be white or light beige.		

Dimensions apply to both sides of the reel

