

FAST RECOVERY RECTIFIER

1N4933S THRU 1N4937S

**VOLTAGE RANGE
CURRENT**

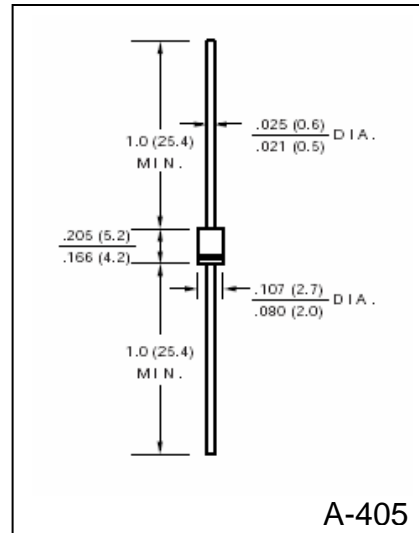
**50 to 600 Volts
1.0 Ampere**

FEATURES

- Fast Switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High Temperature soldering guaranteed:
260°C / 10 second, 0.375" (9.5mm) lead length

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Polarity: Color band denotes cathode end
- Mounting Position: any
- Weight: 0.0081 ounce, 0.23 gram



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 derate current by 20%

	SYMBOLS	1N4933S	1N4934S	1N4935S	1N4936S	1N4937S	UNIT
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 $T_c = 75^\circ C$	$I_{(AV)}$	1.0					Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	30					Amps
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.2					Volts
Maximum DC Reverse Current at Rated $T_A = 25^\circ C$	I_R	5.0					μA
DC Blocking Voltage per element $T_A = 125^\circ C$		100					
Maximum Reverse Recovery Time $I_R = 1.0A, V_R = 30V, di/dt = 50A/\mu S, I_{RR} = 10\% I_{RM}$	t_{tr}	200					nS
Maximum Reverse Recovery Current $I_R = 1.0A, V_R = 30V, di/dt = 50A/\mu S, I_{RR} = 10\% I_{RM}$	$I_{RM}(REC)$	2.0					Amps
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	15					pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	50					$^\circ C/W$
Operating Junction Temperature Range	T_J	(-55 to +150)					$^\circ C$
Storage Temperature Range	T_{STG}	(-55 to +150)					$^\circ C$

Notes:

1. Thermal resistance from Junction to ambient at 0.375" (9.5mm) lead length mounted on PCB



RATINGS AND CHARACTERISTIC CURVES 1N4933S THRU 1N4937S

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

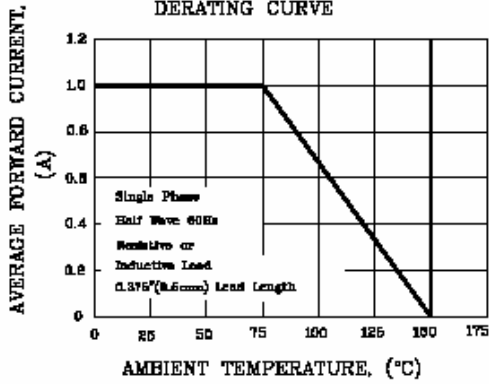


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

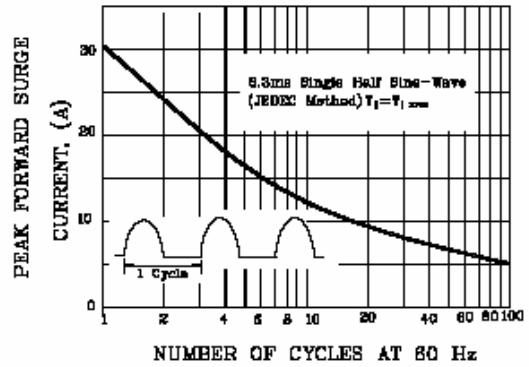


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

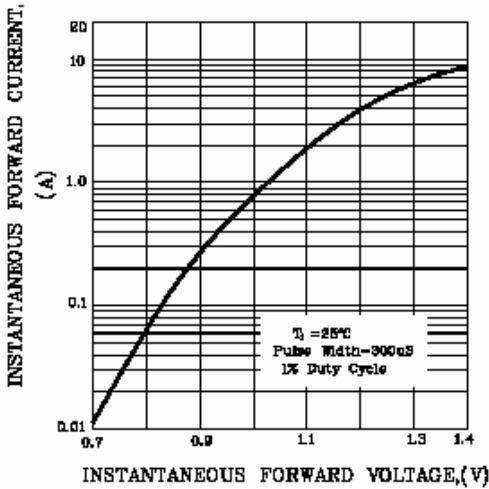


FIG.4-TYPICAL REVERSE CHARACTERISTICS

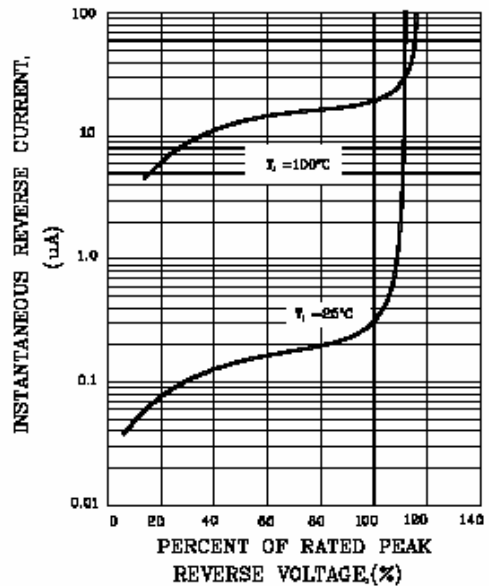


FIG.5-TYPICAL JUNCTION CAPACITANCE

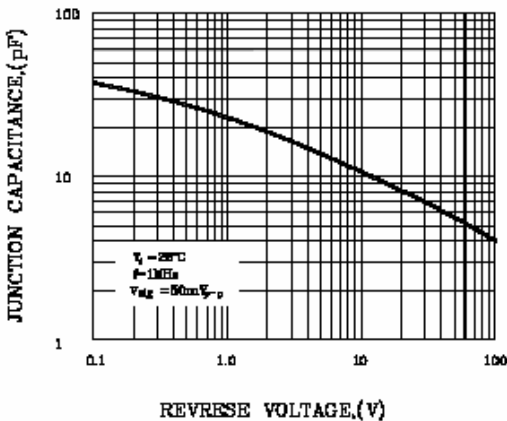


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

