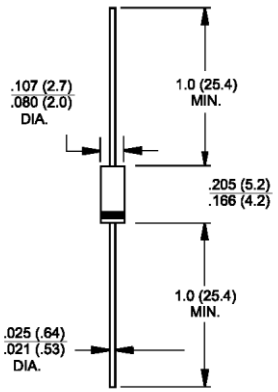
1N4933S thru 1N4937S

1.0 Amp. Fast Recovery Rectifiers
Voltage Range 50 to 600 Volts Forward Current 1.0 Ampere

Features

- Fast switching for high efficiency
- Low cost
- Diffused junction
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0

A-405



Dimensions in inches and (millimeters)

Mechanical Data

- Case: JEDEC A-405 molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.008 ounce, 0.22 gram
- Mounting Position: Any

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%

Parameter	Symbols	1N4933S	1N4934S	1N4935S	1N4936S	1N4937S	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 currentat @T_A=75°C	$I_{F(AV)}$	1.0					Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0					Amps
Maximum forward voltage at 1.0A DC	V_F	1.2					Volts
Maximum DC reverse current @T_J=25°C at rated DC blocking voltage @T_J=100°C	I_R	5.0 100					uA
Maximum reverse recovery time (Note 1)	t_{rr}	200					nS
Maximum reverse recovery time (Note 2)	t_{rr}	130					nS
Typical junction capacitance (Note 3)	C_J	15					pF
Typical thermal resistance (Note 4)	$R_{\theta JA}$	50					°C/W
Operating temperature range	T_J	-50 to +125					°C
Storage temperature range	T_{STG}	-50 to +150					°C

Notes: 1. Measured with I_F=1.0A,V_R=30V,di/dt=50A/us.
2. Measured with I_F=0.5A,I_R=1A,I_{RR}=0.25A.
3. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
4. Thermal Resistance Junction to Ambient.

RATINGS AND CHARACTERISTIC CURVES

(T_A = 25°C unless otherwise noted)

FIG.1 - FORWARD CURRENT DERATING CURVE

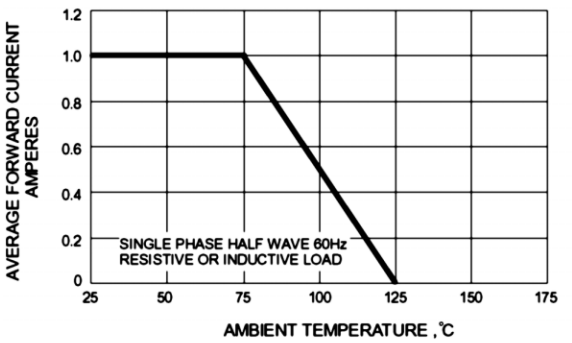


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

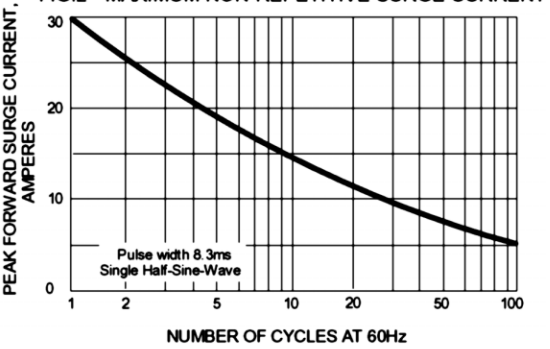


FIG.3 - TYPICAL JUNCTION CAPACITANCE

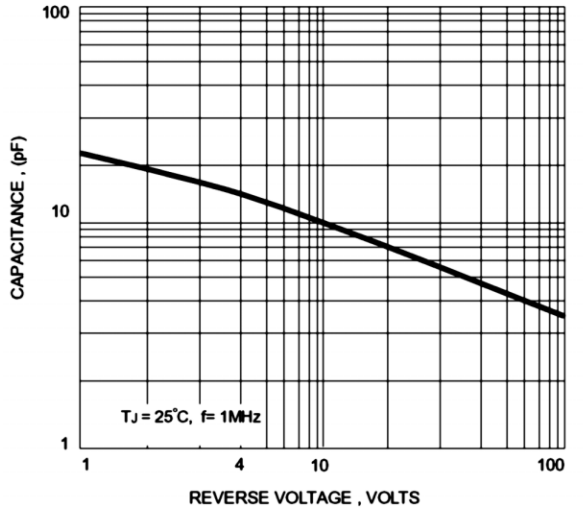


FIG.4 - TYPICAL FORWARD CHARACTERISTICS