FAST RECOVERY RECTIFIERS

Reverse Voltage - 50 to 600 V Forward Current - 1 A

Features

- Low reverse leakage
- High forward surge current capability
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique

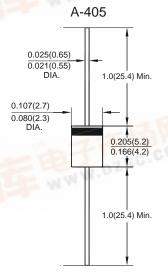
Mechanical Data

- Case: A-405, Molded plastic.
- Terminals: Plated Axial leads, solderable per MIL-STD-750,

method 2026

• Polarity: Color band denotes cathode end

• Mounting Position: Any



Dimensions in inches and (millimmeters)

Absolute Maximum Ratings and Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, 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	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"(9.5 mm) lead lengths at T _A = 75 °C	I _{F(AV)}	1					Α
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	30 30 N. DZSG.C					A
Maximum Instantaneous Forward Voltage at 1 A	V _F	1.2					V
Maximum DC Reverse Current at $T_A = 25$ °C at Rated DC Blocking Voltage at $T_A = 100$ °C	I _R	5 50					μA
Maximum Reverse Recovery Time 1)	t _{rr}	200					ns
Typical Junction Capacitance 2)	CJ	15					pF
Typical Thermal Resistance 3)	$R_{\theta JA}$	50					°C/W
Operating and Storage Temperature Range	T _J ,T _S	- 65 to + 150					°C

¹⁾ Reverse recovery condition $I_F = 0.5 A$, $I_R = 1 A$, $I_{rr} = 0.25 A$



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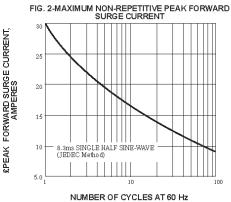
Dated: 20/02/2008 C

¹⁾ Measured at 1 MHz and applied reverse voltage of 4 V D.C.

²⁾ Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B mounted.

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE 0.6 Single Phase Half Wave 60Hz Resistive or inductive Load 0.4 25 100 125 150 175



AMBIENT TEMPERATURE, °C

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

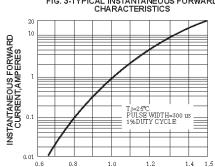
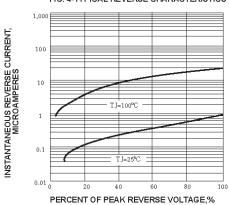
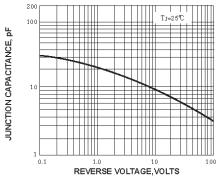


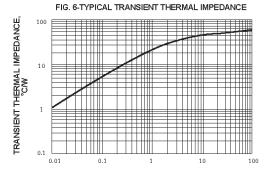
FIG. 4-TYPICAL REVERSE CHARACTERISTICS



INSTANTANEOUS FORWARD VOLEAGE, VOLTS

FIG. 5-TYPICAL JUNCTION CAPACITANCE





t,PULSE DURATION,sec.



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