TOP ONE SEMI CONDUCTOR

GLASS PASSIVATED JUNCTION FAST SWITCHING RECTIFIER

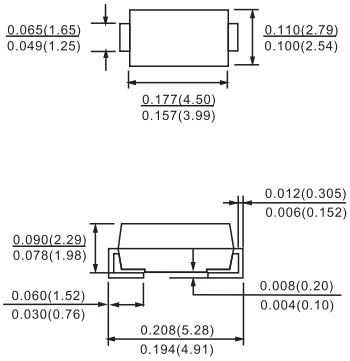
1N4933 THRU 1N4937

50V-600V 1.0A

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Capable of meeting environmental standards of MIL-S-19500
- For use in high frequency rectifier circuits
- Fast switching for high efficiency
- Glass passivated cavity-free junction
- 1.0 Ampere operation at T_A=75°C with no thermal runaway
- Typical I_R less than 0.1mA

DO-214AC(SMA)



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic over glass 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, 0.34 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS

PARAMETER	SYMBOL	1N4933	1N4934	1N4935	1N4936	1N4937	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	145	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 length at T_A = 75 °C	$I_{F(AV)}$	1.0					A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30					A
Operating junction and storage temperature range	T_J, T_{STG}	- 65 to + 175					°C

ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS		SYMBOL	1N4933	1N4934	1N4935	1N4936	1N4937	UNIT
Maximum instantaneous forward voltage	1.0 A		V_F	1.2					V
Maximum DC reverse current at rated DC blocking voltage		T_A = 25 °C	I_R	5.0					μA
		T_A = 125 °C		100					
Maximum reverse recovery time	I_F = 1.0 A, V_R = 30 V		t_{rr}	200					ns
Typical junction capacitance	4.0 V, 1 MHz		C_J	15					pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	1N4933	1N4934	1N4935	1N4936	1N4937	UNIT
Typical thermal resistance	$R_{\theta JA}$ (1)	55					°C/W

Note

(1) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5 mm) lead length, PCB mounted

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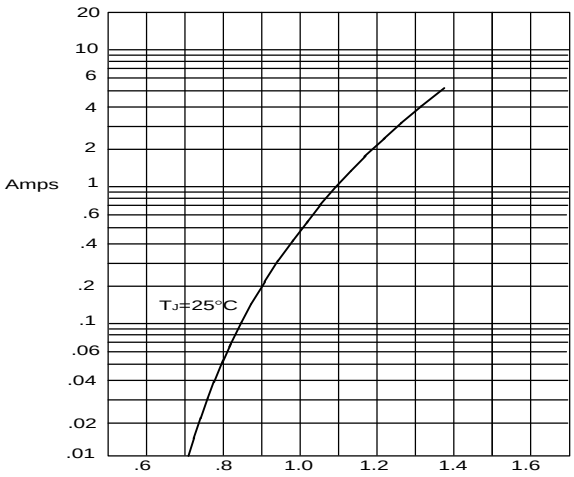
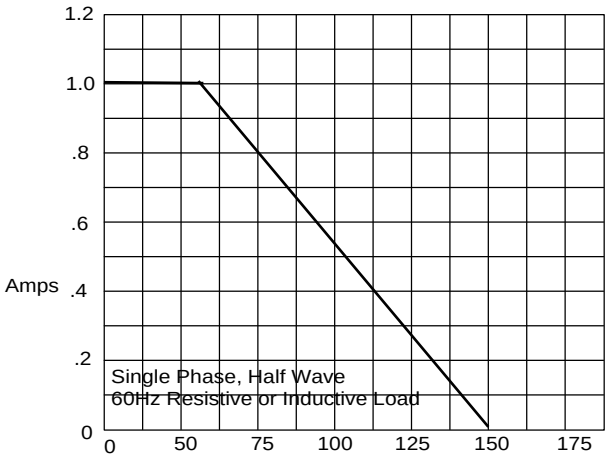
ATINGS AND CHARACTERISTIC CURVES 1N4933 THRU 1N4937

Figure 1 Typical Forward Characteristics



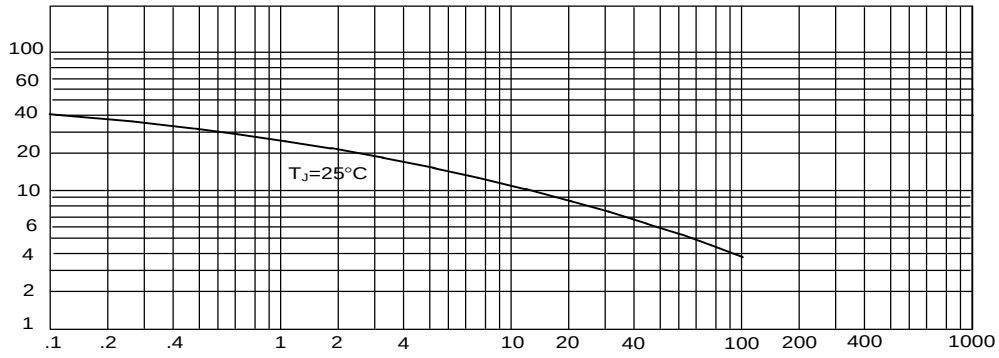
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2 Forward Derating Curve



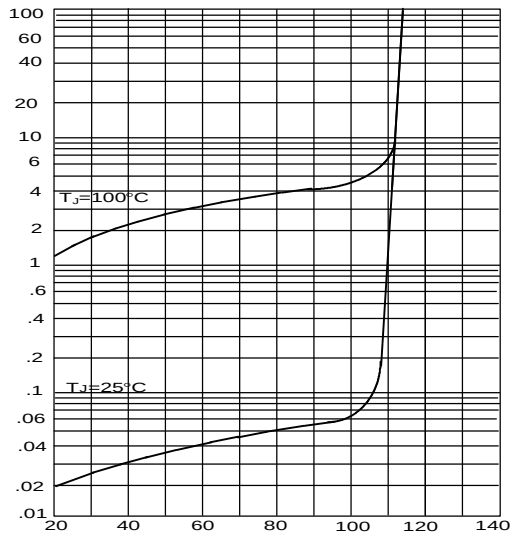
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature -°C

Figure 3 Junction Capacitance



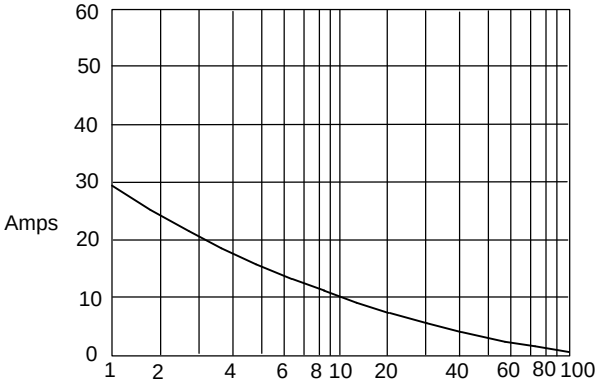
Junction Capacitance - pF *versus* Reverse Voltage - Volts

Figure 4 Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes

Figure 5 Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles