TOP ONE SEMI CONDUCTOR

MEDIUM CURRENT PLASTIC RECTIFIER

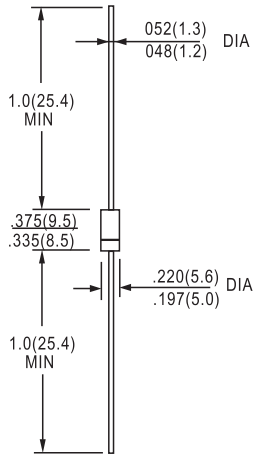
BY251 THRU BY255

200V-1300V 3.0A

FEATURES

- Exce High surge current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Low leakage
- Void-free molded in DO-201AD plastic package
- High current operation of 3 Amperes at T_A=95 ¢J with no thermal runaway
- eds environmental standards of MIL-S-19500/228

DO-27



Dimensions in inches and (milli

MECHANICAL DATA

- Case: JEDEC DO-201AD Molded plastic
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.04 ounce, 1.1 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ¢J ambient temperature unless otherwise specified.

60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

RANTINGS	SYMBOLS	BY251	BY252	BY253	BY254	BY255	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	800	1300	Volts
Maximum RMS Voltage	V_{RMS}	140	280	420	560	910	Volts
Maximum DC Blocking Voltage	V_{DC}	200	400	600	800	1300	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at T_A=95 ¢J	$I_{(AV)}$	3.0					Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	100.0					Amps
Maximum Instantaneous Forward Voltage T_J=25 ¢J at 3.0A T_J=100 ¢J	V_F	1.1 1.0					Volts Volts
Maximum DC Reverse Current T_A=25 ¢J at Rated DC Blocking Voltage T_A=100 ¢J	I_R	5.0 1000					£g A £g A
Typical Junction capacitance (Note 2) T_J=25 ¢J	C_J	40					$_P$F
Typical Reverse Recovery Time (Note 3)	T_{RR}	2.5					£g A
Typical Thermal Resistance (Note 1)	R £KJA	15.0					¢J/W
Operating Junction Temperature Range	T_J	-50 to +150					¢J
Storage Temperature Range	T_{STG}	-50 to +150					¢J

NOTES:

1. Thermal Resistance From Junction to applied at Ambient 0.375"(9.5mm) lead length P.C.Board mounted.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, Irr=0.25A.

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RATINGS AND CHARACTERISTIC CURVES BY251 THRU BY255

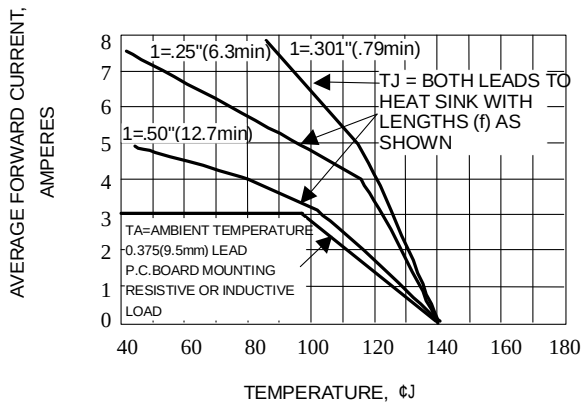

Fig. 1-FORWARD CURRENT DERATING CURVE

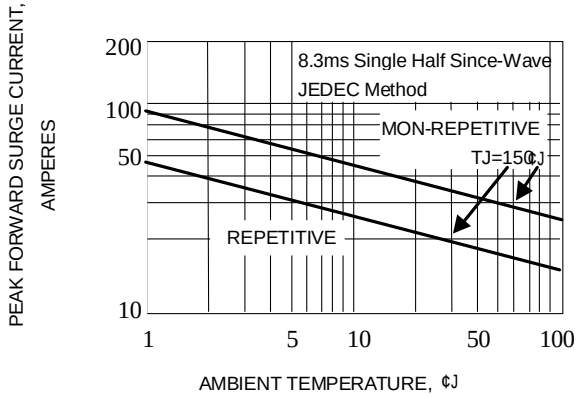

Fig. 2-MAXIMUM PEAK FORWARD SURGE CURRENT

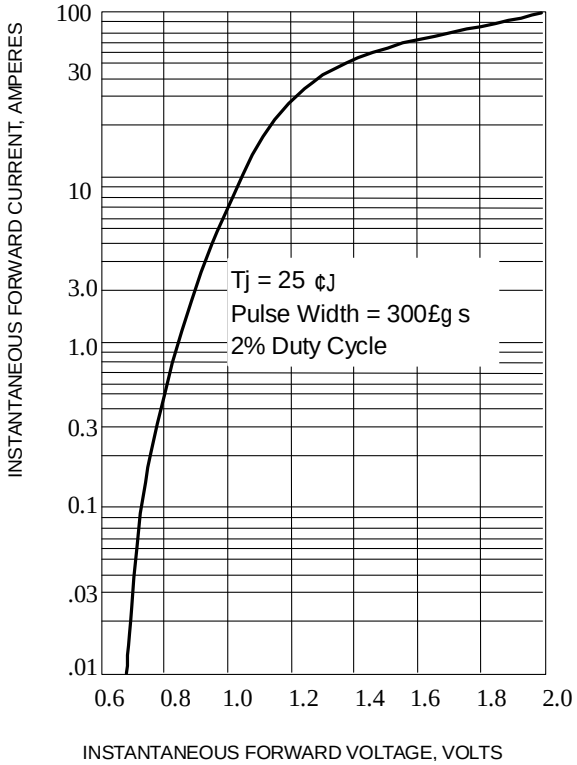

Fig. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

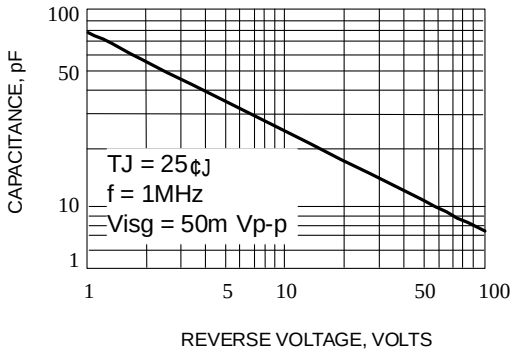

Fig. 4-TYPICAL JUNCTION CAPACITANCE

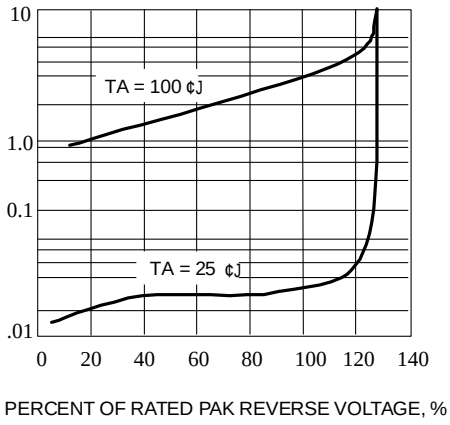

Fig. 5-TYPICAL REVERSE CHARACTERISTICS