Technical Data
Data Sheet N0552, Rev. A

Green Products

BY251 THRU BY255

GENERAL PURPOSE SILICON RECTIFIER

Reverse Voltage - 200 to 1300 Volts Forward Current - 3.0 Ampere

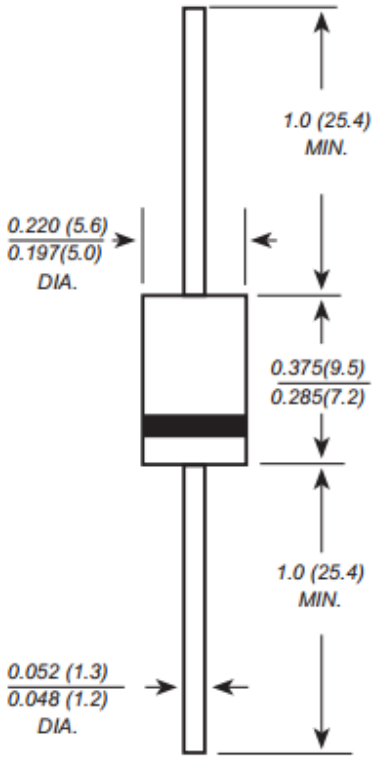
FEATURES

- **The plastic package carries Underwriters Laboratory Flammability Classification 94V-0**
- **Construction utilizes void-free molded plastic technique**
- **Low reverse leakage**
- **High forward surge current capability**
- **High temperature soldering guaranteed: 260℃ /10 seconds,0.375”(9.5mm) lead length, 5 lbs. (2.3kg) tension**

MECHANICAL DATA

- **Case: DO-201AD molded plastic body**
- **Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026**
- **Polarity: Color band denotes cathode end**
- **Mounting Position: Any**
- **Weight:0.04 ounce, 1.10 grams**

MECHANICAL DIMENSIONS: In Inches/mm



DO-201AD

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MARKING DIAGRAM

BY251 = Part Name

Cautions: Molding resin
Epoxy resin UL:94V-0

ORDERING INFORMATION

Device	Package	Shipping
BY251-BY255	DO-201AD (Pb-Free)	1250pcs / tape

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

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 current derate by 20%.

Characteristic	Symbol	BY251	BY252	BY253	BY254	BY255	Unit
Maximum repetitive peak reverse voltage Maximum DC blocking voltage	V_{RRM} V_{DC}	**200**	**400**	**600**	**800**	**1300**	V
Maximum RMS voltage	V_{RMS}	**140**	**280**	**420**	**560**	**910**	V
Maximum average forward rectified current 0.375”(9.5mm) lead length at @T_A = 75°C	$I_{(AV)}$	3.0					A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150					A
Maximum instantaneous forward voltage at 3.0A	V_F	1.1					V
Maximum DC reverse current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 100°C	I_R	10.0 500					μA
Typical Junction Capacitance (Note 1)	C_J	30.0					pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	20.0					°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175					°C

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal resistance from junction to ambient at 0.375”(9.5mm)lead length, P.C.B. mounted

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RATINGS AND CHARACTERISTIC CURVES BY251 THRU BY255

FIG. 1- FORWARD CURRENT DERATING CURVE

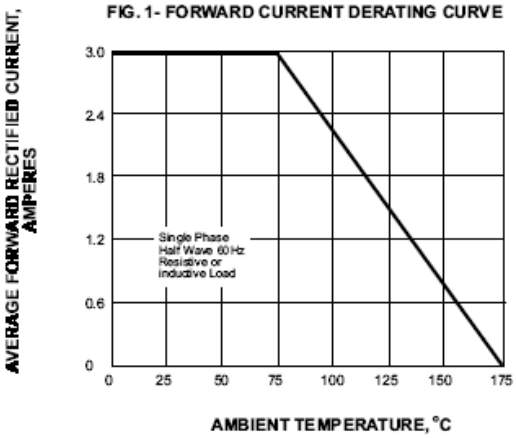


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

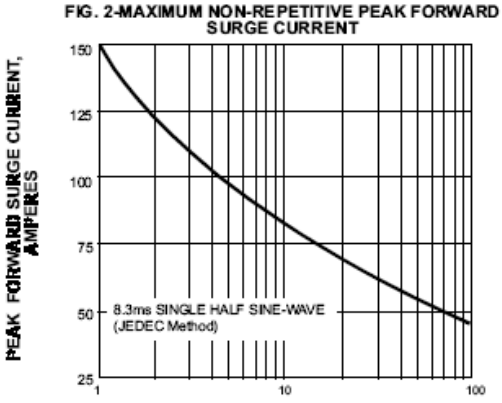


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

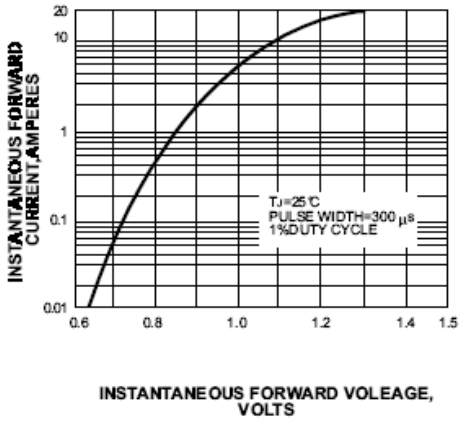


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

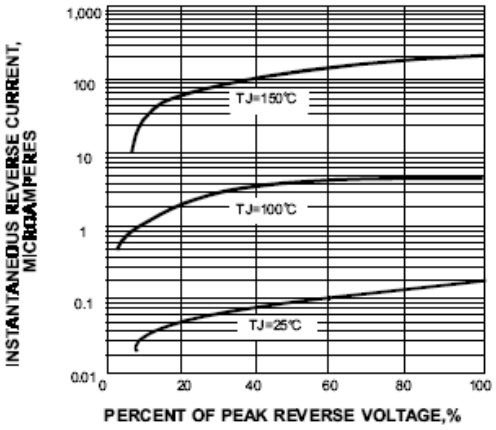


FIG. 5-TYPICAL JUNCTION CAPACITANCE

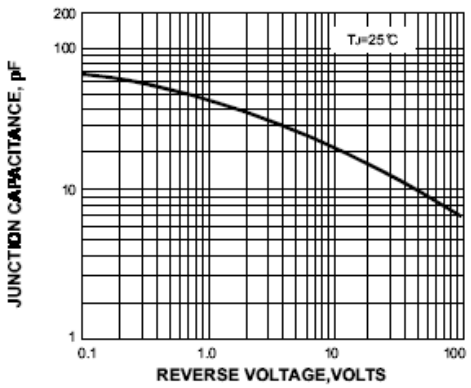
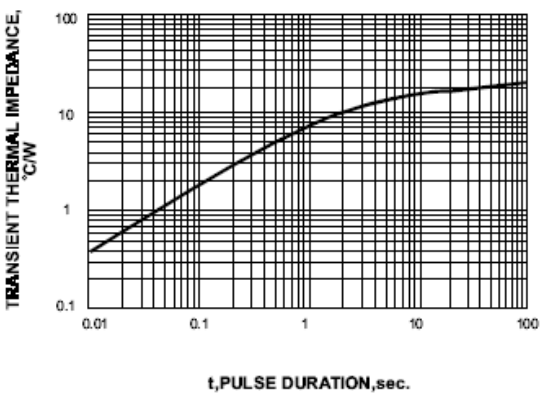


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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