



BY251 THRU BY255

3.0 AMPS. SILICON RECTIFIERS



FEATURES

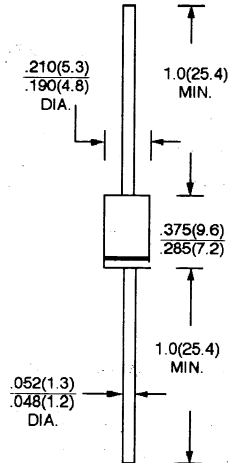
- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting Position: Any
- * Weight: 1.18 grams

VOLTAGE RANGE
50 to 1000 Volts
CURRENT
3.0 Amperes

DO-201AD



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL 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%

TYPE NUMBER	SYMBOLS	BY251	BY252	BY253	BY254	BY255	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	800	1300	V
Maximum RMS Voltage	V_{RMS}	140	280	420	560	910	V
Maximum D. C Blocking Voltage	V_{DC}	200	400	600	800	1300	V
Maximum Average Forward Rectified Current .375" (9.5mm) lead length @ $T_A = 75^\circ\text{C}$	$I_{F(AV)}$	3.0					A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150					A
Maximum Instantaneous Forward Voltage at 3.0A	V_F	1.0					V
Maximum D. C Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated D. C Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_R	5.0 100					μA μA
Typical Junction Capacitance (Note 1)	C_J	50					pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	18					$^\circ\text{C}/\text{W}$
Operating Temperature Range	T_J	-65 to +125					$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150					$^\circ\text{C}$

NOTES: 1. Measured at 1 MHz and applied reverse voltage of 4.0V D. C.
2. Thermal Resistance from Junction to Ambient 0.375"(9.5mm) Lead Length.

RATINGS AND CHARACTERISTIC CURVES (BY251 THRU BY255)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

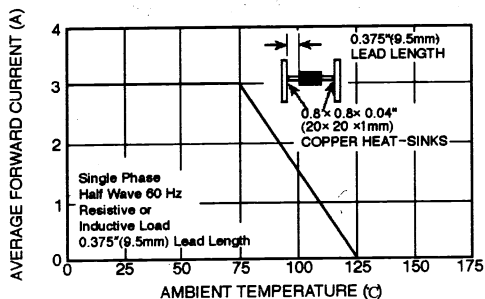


FIG. 2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

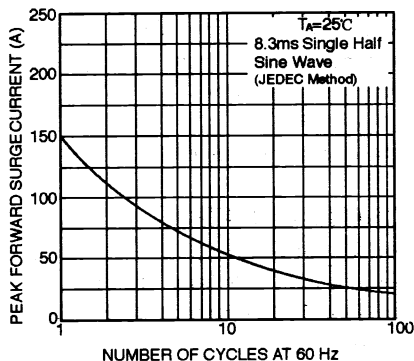


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

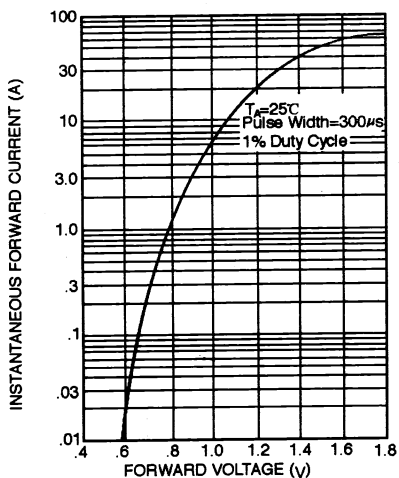


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

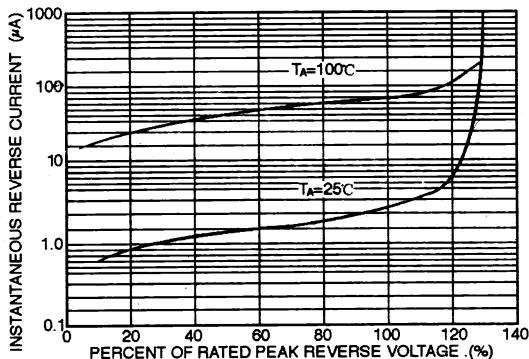


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

