BY251 THRU BY255

3.0 AMP SILICON RECTIFIERS

FEATURES

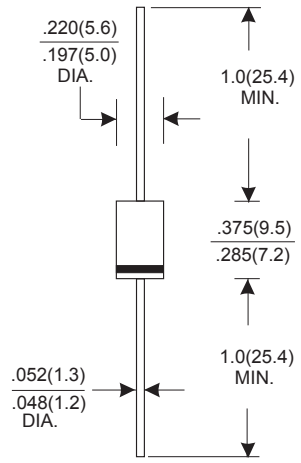
* Low forward voltage drop
* High current capability
* High reliability
* High surge current capability

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: Axial leads, solderable per MIL-STD-202, method 208 guranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any
* Weight: 1.10 grams

VOLTAGE RANGE
200 to 1300 Volts
CURRENT
3.0 Amperes

DO-27



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25℃ ambient temperature unless otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	BY251	BY252	BY253	BY254	BY255	UNITS
Maximum Recurrent Peak Reverse Voltage	200	400	600	800	1300	V
Maximum RMS Voltage	140	280	420	560	910	V
Maximum DC Blocking Voltage	200	400	600	800	1300	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=75℃	3.0					A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	200					A
Maximum Instantaneous Forward Voltage at 3.0A	1.0					V
Maximum DC Reverse Current Ta=25℃	5.0					μA
at Rated DC Blocking Voltage Ta=100℃	50					μA
Typical Junction Capacitance (Note 1)	40					pF
Typical Thermal Resistance RθJA (Note 2)	30					℃/W
Operating and Storage Temperature Range T_J, T_{STG}	-65 — +150					℃

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal Resistance from Junction to Ambient .375" (9.5mm) lead length.

RATING AND CHARACTERISTIC CURVES (BY251 THRU BY255)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

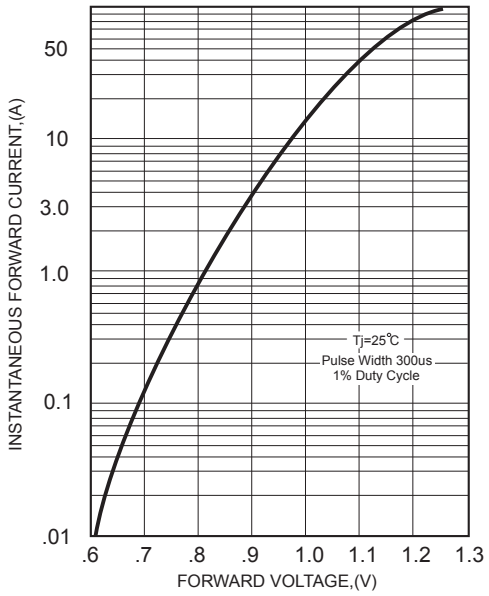


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

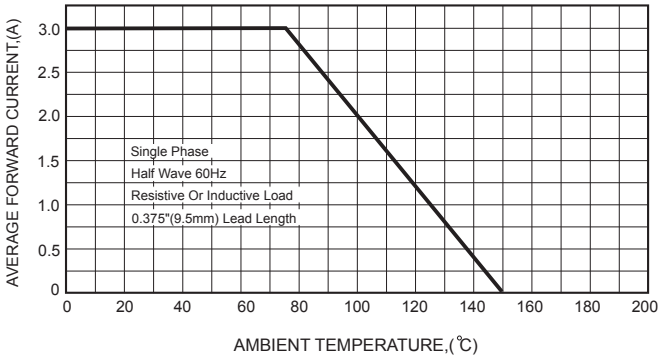


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

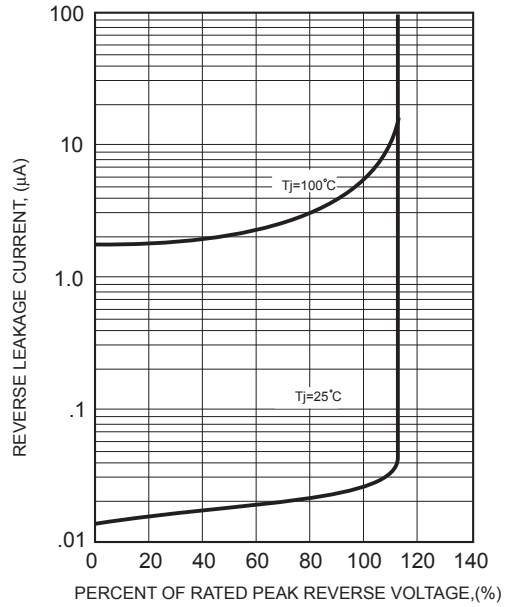


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

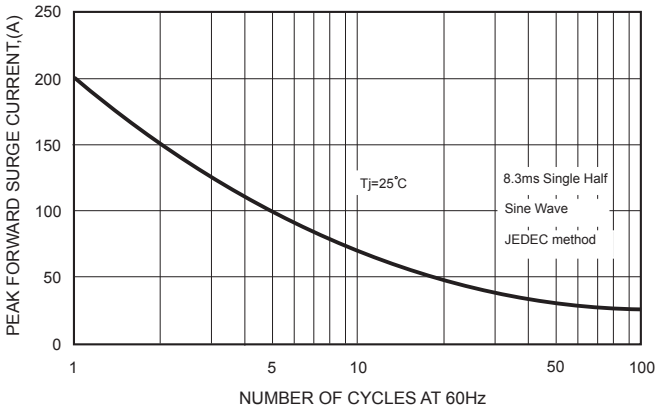


FIG.5-TYPICAL JUNCTION CAPACITANCE