



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F, EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,  
KWUN TONG, KOWLOON, HONG KONG.  
TEL: 2790-0314 FAX: 2790-0206



GENERAL PURPOSE SILICON RECTIFIER

BY251 THRU BY255

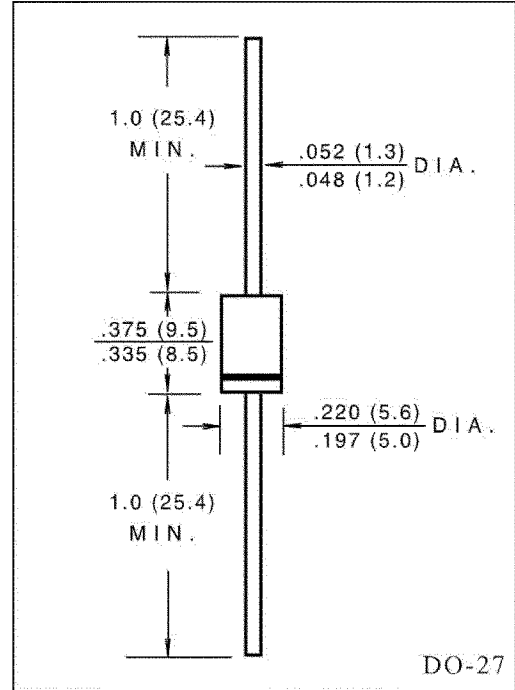
VOLTAGE RANGE 200 to 1300 Volts  
CURRENT 3.0 Ampere

FEATURES

- Low cost construction.
- Low forward voltage drop
- Low reverse leakage
- High forward surge current capability.
- High temperature soldering guaranteed:  
260°C/10 seconds, 0.375" (9.5mm) lead length  
at 5 lbs (2.3kg) tension.

MECHANICAL DATA

- Case: transfer molded plastic
- Epoxy: UL94V - 0 rate flame retardant.
- Polarity: Color band denotes cathode end.
- Lead: Plated axial lead, solderable per MIL - STD - 202E  
method 208C
- Mounting position: Any
- Weight: 0.042 ounce, 1.19grams



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 derate current by 20%

	SYMBOLS	BY251	BY252	BY253	BY254	BY255	UNIT
Maximum Repetitive 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, 0.375" (9.5mm) lead length at $T_A = 75^\circ C$	$I_{(AV)}$	3.0					Amps
Peak Forward Surge Current 8.3ms single half sine - wave superimposed on rated load (JEDEC method )	$I_{FSM}$	150					Amps
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	1.1					Volts
Maximum DC Reverse Current at rated DC blocking voltage	$I_R$	$T_A = 25^\circ C$					$\mu A$
		$T_A = 150^\circ C$					
Maximum Full Load Reverse Current, full cycle average 0.375" (9.5mm) lead length at $T_L = 105^\circ C$	$I_{R(AV)}$	500					$\mu A$
Typical Junction Capacitance (Note 1)	$C_J$	40					pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$	30					$^\circ C/W$
Operating and Storage Temperature Range	$T_J$	(-65 to +175)					$^\circ C$
Storage Temperature Range	$T_{STG}$	(-65 to +175)					$^\circ C$

NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Thermal Resistance from Junction to Ambient at 0.375" (9.5mm) lead length, P.C. board mounted with 0.8" X 0.8"  
(20 X 20mm) copper heatsink.



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RATINGS AND CHARACTERISTIC CURVES BY251 THRU BY255

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

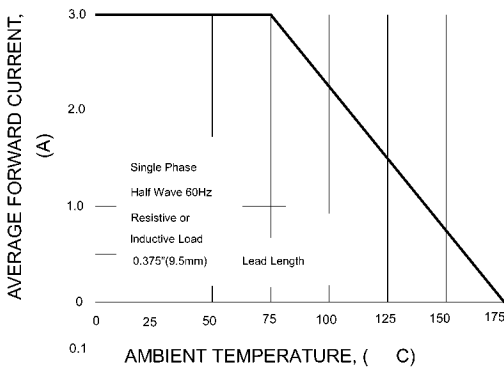


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

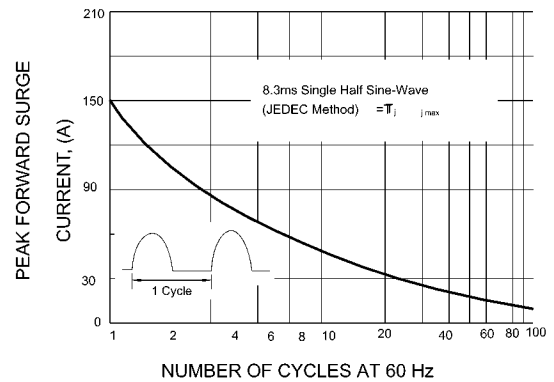


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

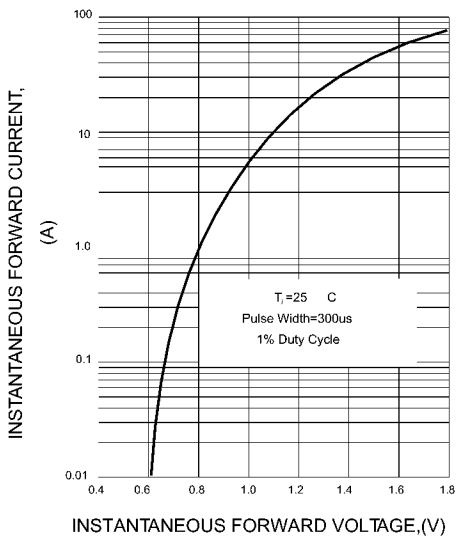


FIG.4-TYPICAL REVERSE CHARACTERISTICS

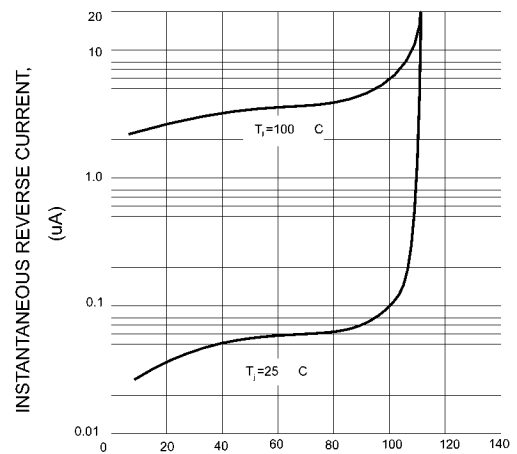


FIG.5-TYPICAL JUNCTION CAPACITANCE

