

PLASTIC SILICON RECTIFIERS

VOLTAGE RANGE: 200 --- 1300 V
CURRENT: 3.0 A

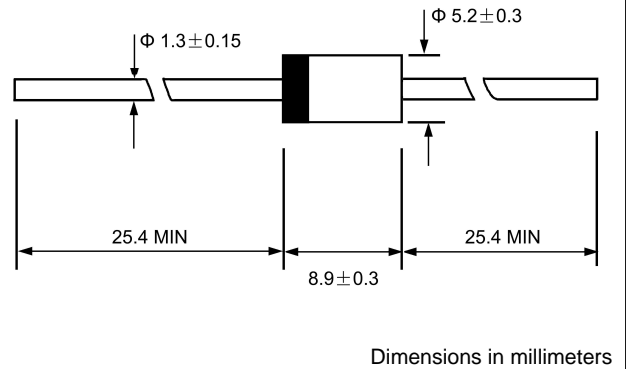
FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with Freon, Alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇ Case: JEDEC DO-27, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.041 ounces, 1.15 grams
- ◇ Mounting position: Any

DO - 27



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		BY 251	BY 252	BY 253	BY 254	BY 255	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 DC blocking voltage	V_{DC}	200	400	600	800	1300	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	3.0					A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	100.0					A
Maximum instantaneous forward voltage @ 3.0 A	V_F	1.1					V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	10.0 100.0					μA
Typical junction capacitance (Note1)	C_J	35					pF
Typical thermal resistance (Note2)	$R_{\theta JA}$	20					$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55 ---- + 150					$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ---- + 150					$^\circ\text{C}$

NOTE: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Thermal resistance from junction to ambient.

FIG.1 – TYPICAL FORWARD CHARACTERISTICS

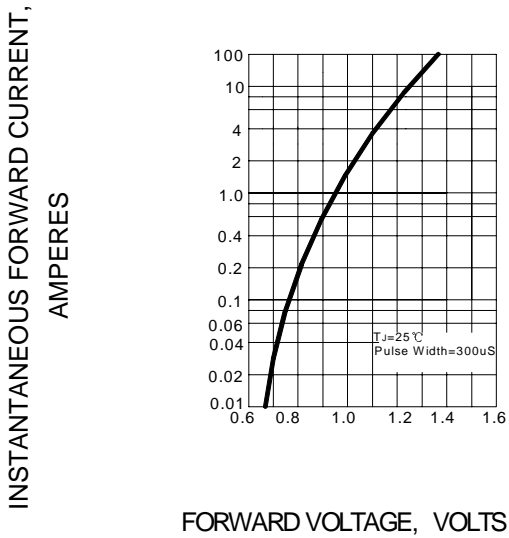


FIG.2 – TYPICAL CURRENT DERATING CURVE

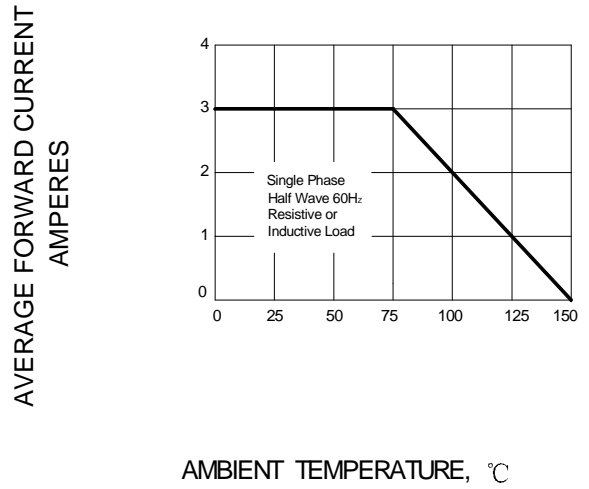


FIG.3 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

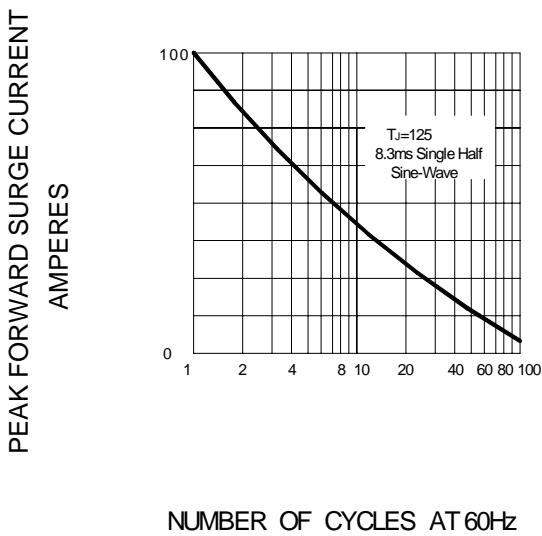


FIG.4 – TYPICAL JUNCTION CAPACITANCE

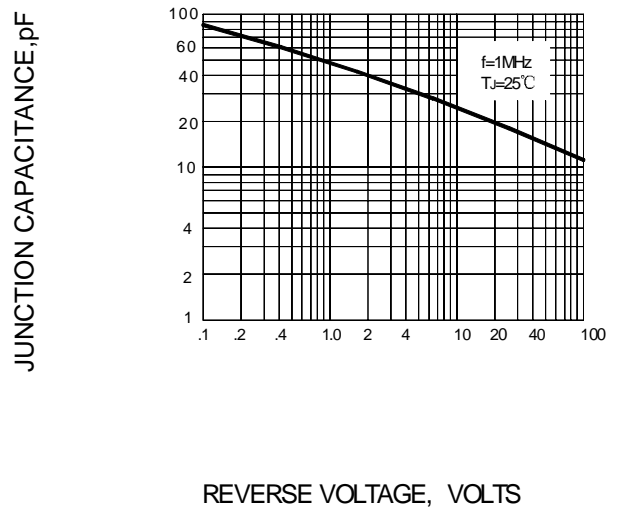
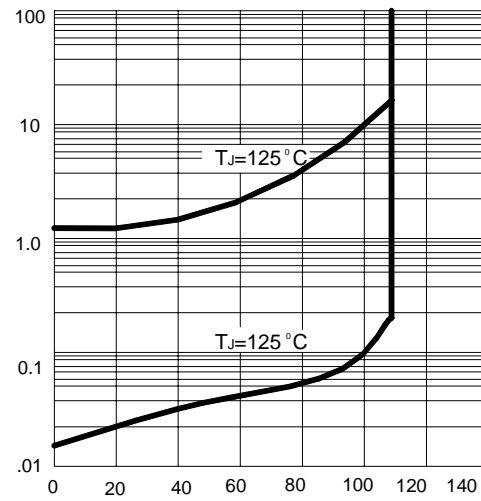


FIG.5 – TYPICAL REVERSE CHARACTERISTICS

REVERSE LEAKAGE CURRENT, MICRO AMPERES



PERCENT OF RATED PEAK REVERSE VOLTAGE, %