

PLASTIC SILICON RECTIFIER

VOLTAGE RANGE: 50 --- 1200 V
CURRENT: 3.0 A

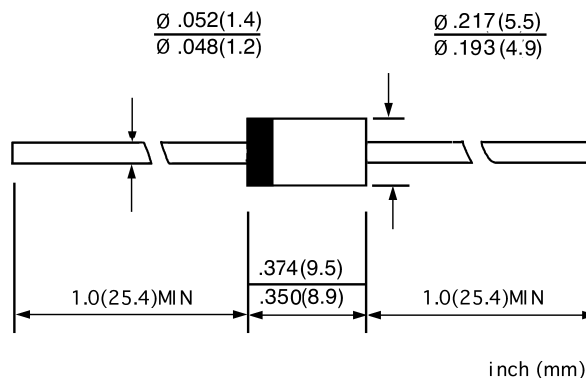
FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with Free, Alcohol, Isopropanol and similar solvents

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, 50 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		1N 4139	1N 4140	1N 4141	1N 4142	1N 4143	1N 4144	1N 4145	1N 4146	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	1200	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	840	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	1200	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 10ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	300.0								A
Maximum instantaneous forward voltage @ 3.0 A	V_F	1.0								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.

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2. Thermal resistance from junction to ambient.

FIG.1 – TYPICAL FORWARD CHARACTERISTIC

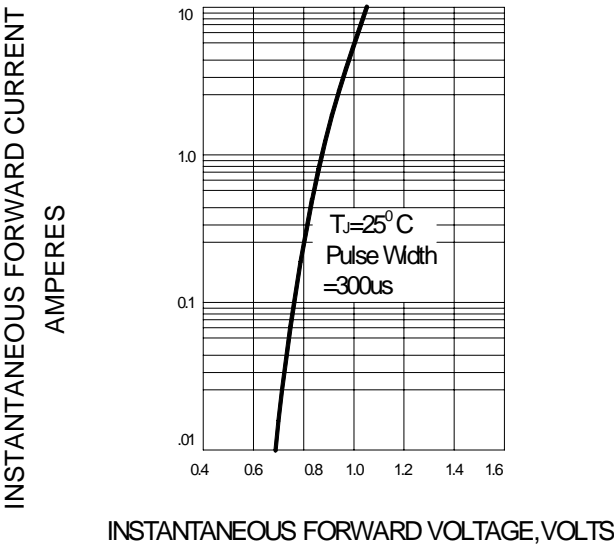


FIG.2 – TYPICAL JUNCTION CAPACITANCE

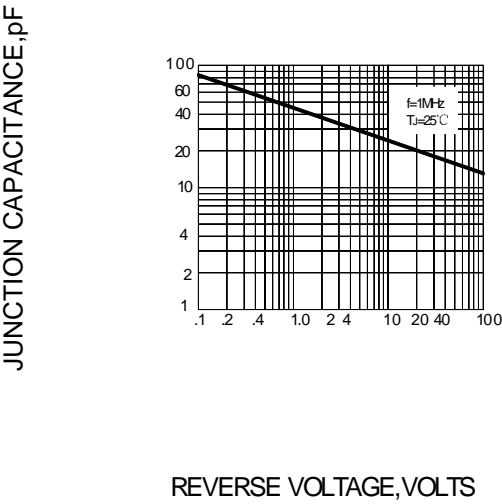


FIG.3 – PEAK FORWARD SURGE CURRENT

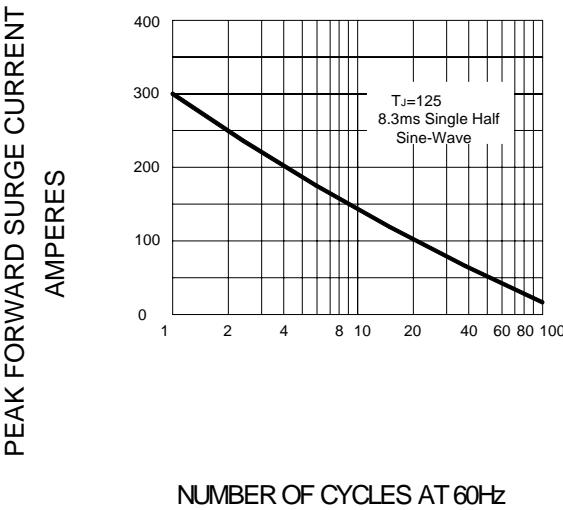


FIG.4 – FORWARD DEATING CURVE

