

PLASTIC SILICON RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 1.0 A

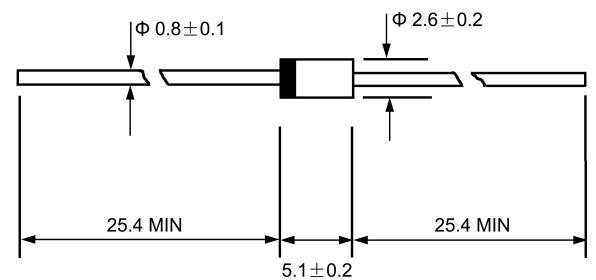
FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇ Case: JEDEC DO-41, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Mounting position: Any

DO - 41



Dimensions in millimeters

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%.

		1N 4001	1N 4002	1N 4003	1N 4004	1N 4005	1N 4006	1N 4007	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 9.5mm lead lengths, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	30							A
Maximum instantaneous forward voltage @ 1.0 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	5.0 50.0							μA
Typical junction capacitance (Note1)	C_J	15							pF
Typical thermal resistance (Note2)	$R_{\theta JA}$	50							$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55 ---- + 125							$^\circ\text{C}$
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.

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FIG.1 – TYPICAL FORWARD CHARACTERISTIC

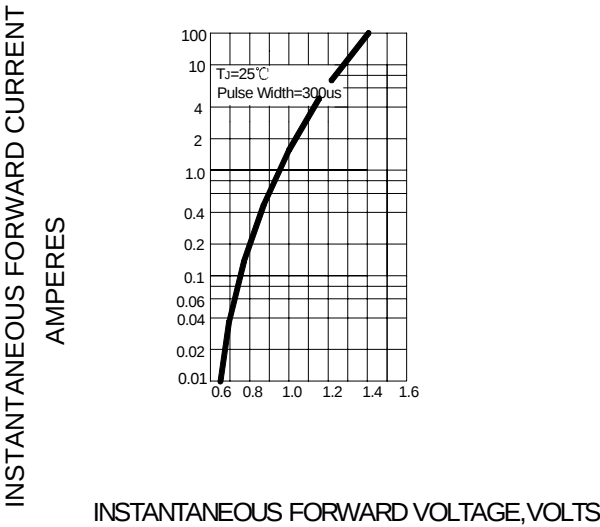


FIG.2 – TYPICAL JUNCTION CAPACITANCE

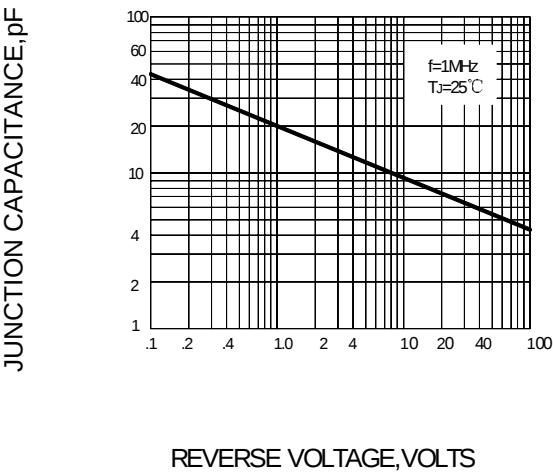


FIG.3 – PEAK FORWARD SURGE CURRENT

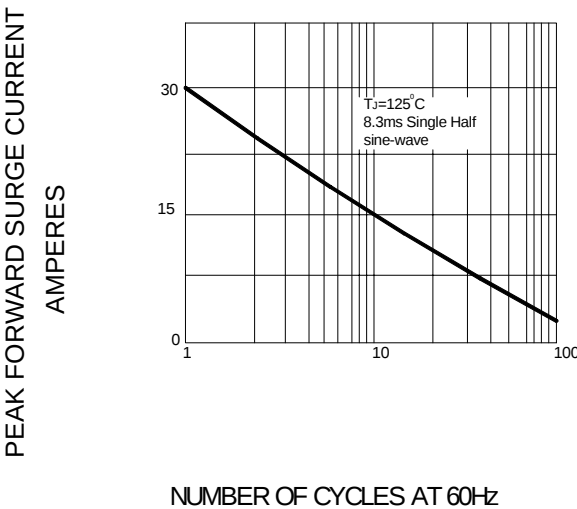


FIG.4 – FORWARD DERATING CURVE

