

PLASTIC SILICON RECTIFIERS

VOLTAGE RANGE: 200 --- 600 V

CURRENT: 1.0 A

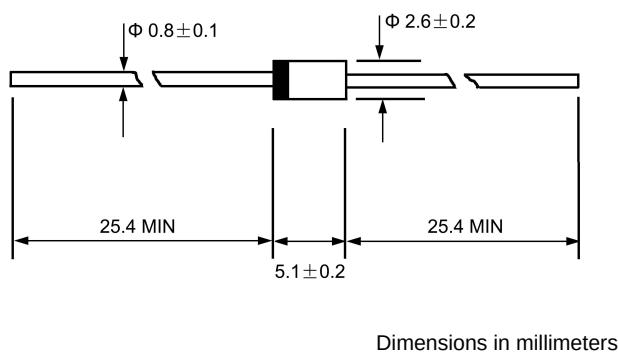
FEATURES

- ◇ 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--41, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL- STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces, 0.34 grams
- ◇ Mounting position: Any

DO - 41



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%.

		EM01Z	EM01	EM01A	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	200	400	600	V
Maximum RMS voltage	V_{RMS}	140	280	420	V
Maximum DC blocking voltage	V_{DC}	200	400	600	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	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}	45.0			A
Maximum instantaneous forward voltage @ 1.0 A	V_F	0.97			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			$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	-55-----+150			$^\circ\text{C}$
Storage temperature range	T_{STG}	-55-----+150			$^\circ\text{C}$

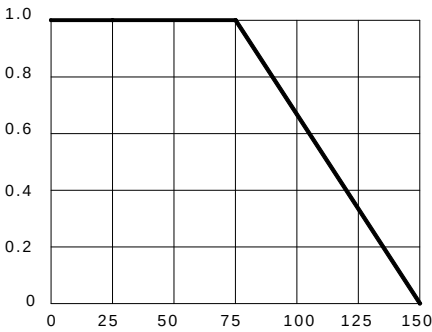
NOTE: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Thermal resistance from junction to ambient.

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FIG.1 – FORWARD DERATING CURVE

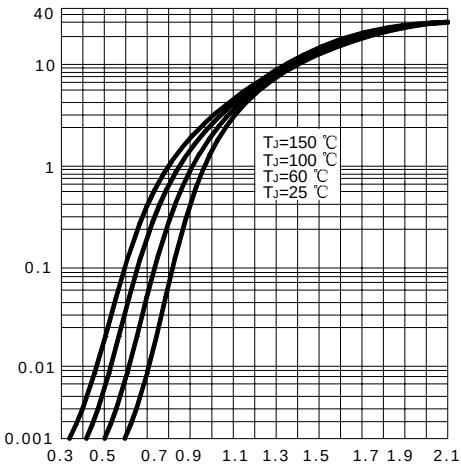
AVERAGE FORWARD CURRENT, AMPERES



AMBIENT TEMPERATURE, °C

FIG.2 – TYPICAL FORWARD CHARACTERISTICS

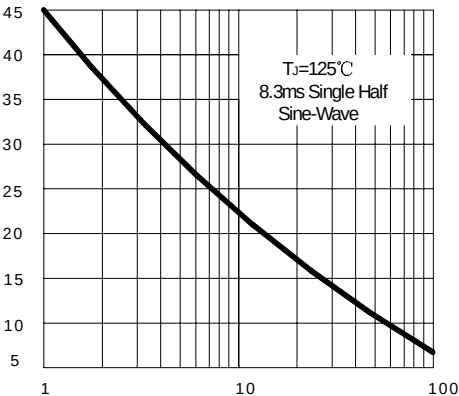
FORWARD CURRENT, AMPERES



FORWARD VOLTAGE, VOLTS

FIG.3 – FORWARD SURGE CURRENT

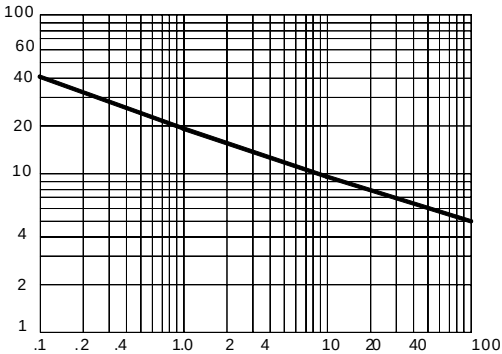
PEAK FORWARD SURGE CURRENT, AMPERES



NUMBER OF CYCLES AT 60Hz

FIG.4-TYPICAL JUNCTION CAPACITANCE

JUNCTION CAPACITANCE , pF



REVERSE VOLTAGE, VOLTS