

# EM01Z-EM01A

Plastic Silicon Rectifiers

**VOLTAGE RANGE: 200 --- 600 V**

**CURRENT: 1.0 A**



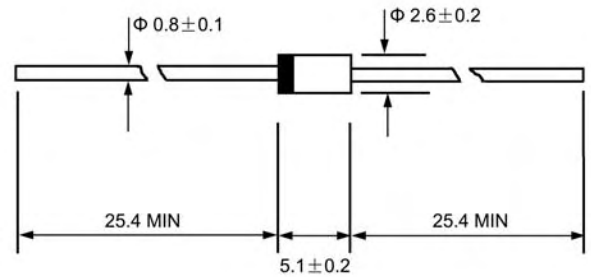
## Features

- ◇ 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
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces, 0.34 grams
- ◇ 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%.

		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, @ $T_A=75^\circ C$	$I_{F(AV)}$	1.0			A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	$I_{FSM}$	45.0			A
Maximum instantaneous forward voltage @ 1.0 A	$V_F$	0.97			V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	$I_R$	5.0 50.0			$\mu A$
Typical junction capacitance (Note1)	$C_J$	15			pF
Typical thermal resistance (Note2)	$R_{\theta JA}$	50			$^\circ C/W$
Operating junction temperature range	$T_J$	-55-----+150			$^\circ C$
Storage temperature range	$T_{STG}$	-55-----+150			$^\circ C$

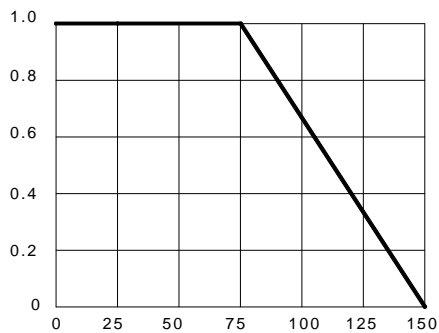
NOTE: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Thermal resistance from junction to ambient.

## Ratings AND Characteristic Curves

**FIG.1 – FORWARD DERATING CURVE**

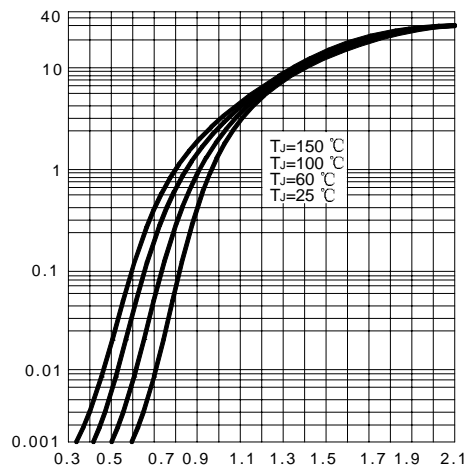
AVERAGE FORWARD CURRENT, AMPERES



AMBIENT TEMPERATURE, °C

**FIG.2 – TYPICAL FORWARD CHARACTERISTICS**

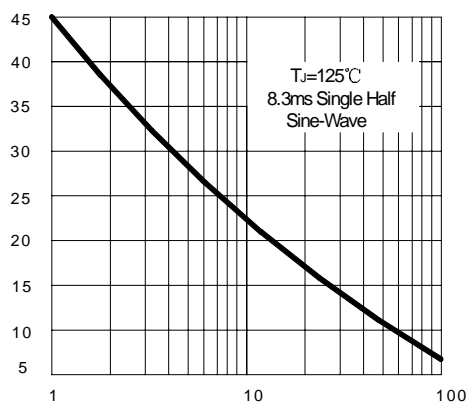
FORWARD CURRENT, AMPERES



FORWARD VOLTAGE, VOLTS

**FIG.3 – FORWARD SURGE CURRENT**

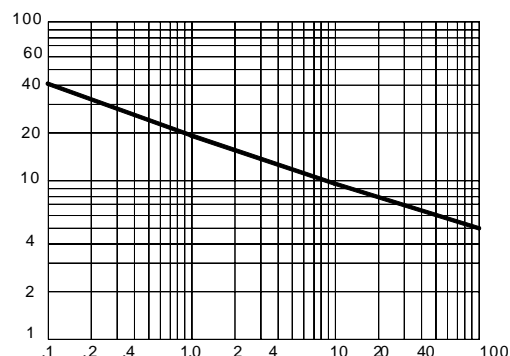
PEAK FORWARD SURGE CURRENT, AMPERES



NUMBER OF CYCLES AT 60Hz

**FIG.4 – TYPICAL JUNCTION CAPACITANCE**

JUNCTION CAPACITANCE, pF



REVERSE VOLTAGE, VOLTS