



## PLASTIC SILICON RECTIFIER

**1S1941(Z)---1S1944(Z)**

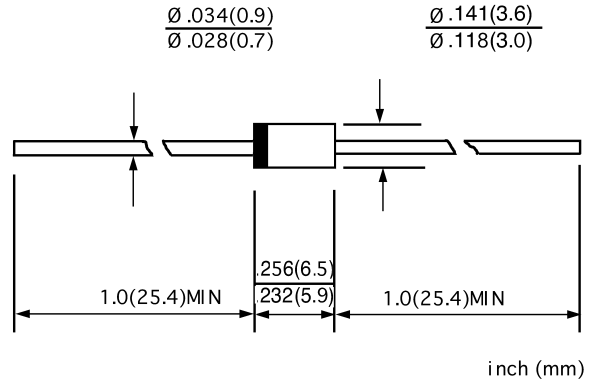
**VOLTAGE RANGE: 100 --- 600 V**

**CURRENT: 0.5 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

### DO - 15



### MECHANICAL DATA

- ◇ Case: JEDEC DO--15, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL- STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.014 ounces, 0.39 grams
- ◇ Mounting position: Any

### 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%.

		1S 1941	1S 1942	1S 1943	1S 1944	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	100	200	400	600	V
Maximum RMS voltage	$V_{RMS}$	70	140	280	420	V
Maximum DC blocking voltage	$V_{DC}$	100	200	400	600	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	0.5				A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	$I_{FSM}$	35.0				A
Maximum instantaneous forward voltage @ 0.5 A	$V_F$	1.2				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				$\mu\text{A}$
Typical junction capacitance (Note1)	$C_J$	20				pF
Typical thermal resistance (Note2)	$R_{\theta JA}$	40				$^\circ\text{C/W}$
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.



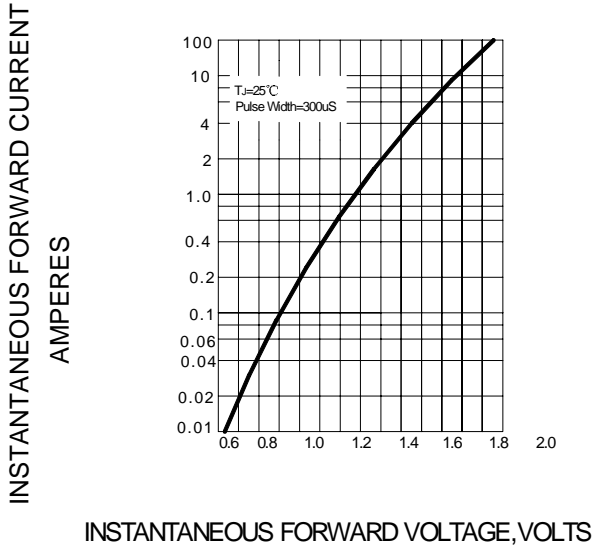
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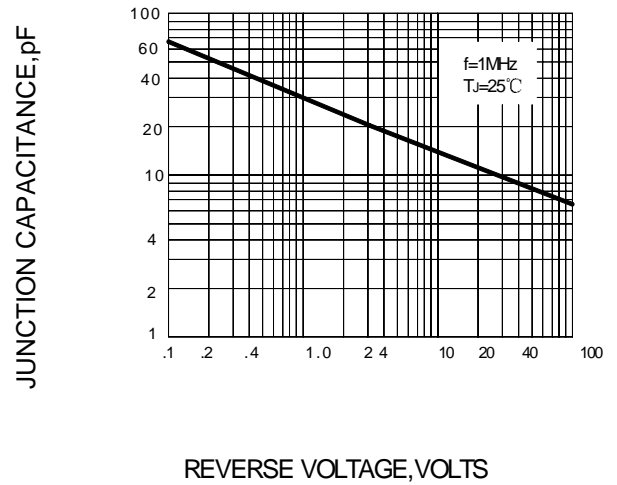
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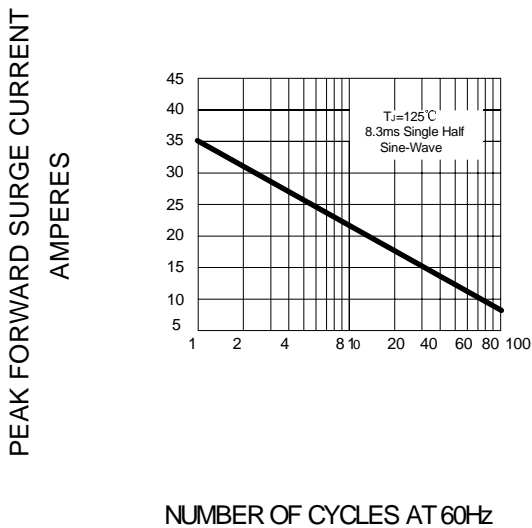
**FIG.1 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.2 – TYPICAL JUNCTION CAPACITANCE**



**FIG.3 – PEAK FORWARD SURGE CURRENT**



**FIG.4 – FORWARD DERATING CURVE**

