

### PLASTIC SILICON RECTIFIERS

**VOLTAGE RANGE: 50 --- 1000 V**  
**CURRENT: 10.0 A**

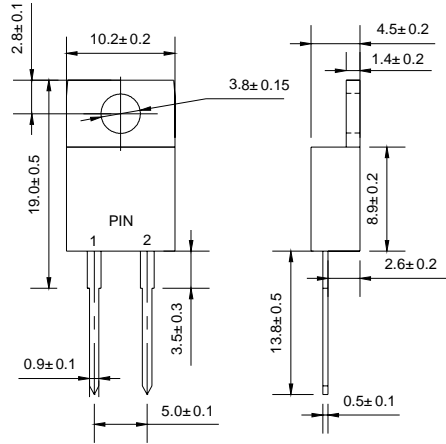
#### FEATURES

- ◇ 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 TO-220AC, molded plastic
- ◇ Terminals: Solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.064 ounces, 1.96 grams
- ◇ Mounting position: Any

#### TO-220AC



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%.

		10A05T	10A10T	10A20T	10A40T	10A60T	10A80T	10A100T	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 length, @ $T_C=50^\circ C$	$I_{F(AV)}$	10							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	$I_{FSM}$	400							A
Maximum instantaneous forward voltage @ 10 A	$V_F$	1.0							V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	$I_R$	10 100							$\mu A$
Typical junction capacitance (Note1)	$C_J$	120							pF
Typical thermal resistance (Note2)	$R_{\theta JC}$	10							$^\circ C/W$
Operating junction temperature range	$T_J$	- 55 ---- + 150							$^\circ C$
Storage temperature range	$T_{STG}$	- 55 ---- + 150							$^\circ C$

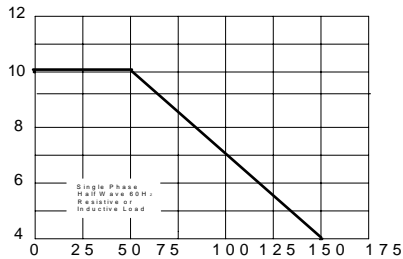
NOTE: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Thermal resistance from junction to case.

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**FIG.1 – FORWARD DERATING CURVE**

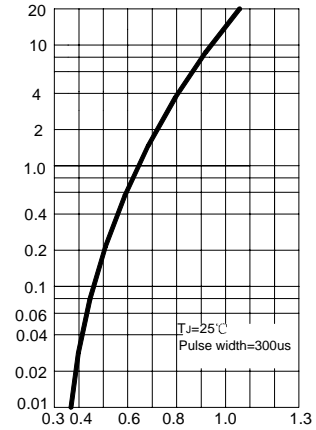
AVERAGE FORWARD RECTIFIED CURRENT  
AMPERES



CASE TEMPERATURE, °C

**FIG.2 – TYPICAL FORWARD CHARACTERISTICS**

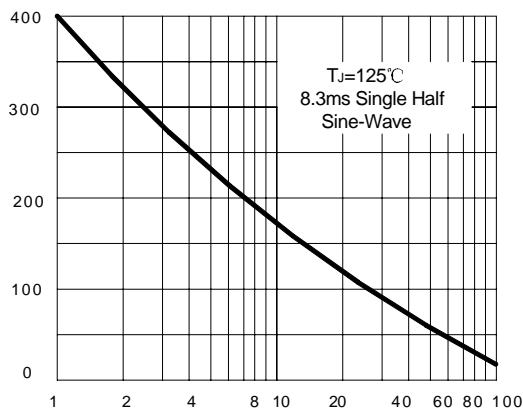
INSTANTANEOUS FORWARD CURRENT  
AMPERES



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

**FIG.3 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

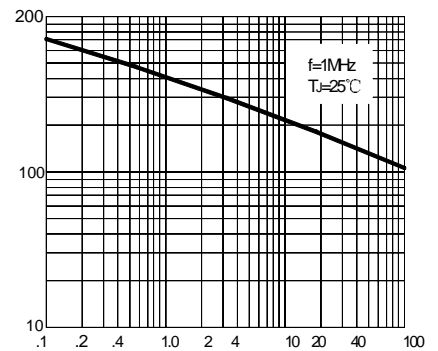
PEAK FORWARD SURGE CURRENT  
AMPERES



NUMBER OF CYCLES AT 60Hz

**FIG.4 – TYPICAL JUNCTION CAPACITANCE**

CAPACITANCE, pF



REVERSE VOLTAGE, VOLTS