



## SS12E~SS16E

### SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

**VOLTAGE** 20 to 60 Volts **CURRENT** 1.0 Amperes

SMA / DO-214AC

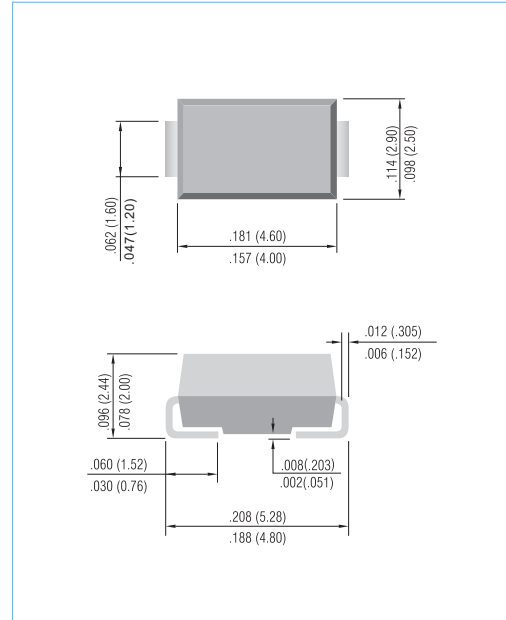
Unit: inch ( mm )

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier. majority carrier conduction
- Low power loss,high efficiency
- High surge capacity
- High current capacity ,low  $V_F$
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications.
- In compliance with EU RoHS 2002/95/EC directives
- ESD Passed devices : Air mode 15KV ,human body mode 8KV

#### MECHANICAL DATA

- Case: JEDEC DO-214AC molded plastic
- Terminals:Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes positive end (cathode)
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.0023 ounce, 0.0679 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
Resistive or inductive load.

PARAMETER	SYMBOL	SS12E	SS13E	SS14E	SS15E	SS16E	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	V
Maximum Average Forward Current at $T_L=75^{\circ}C$	$I_{F(AV)}$	1.0					A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	30					A
Maximum Forward Voltage at 1.0A ( Note 1)	$V_F$		0.5		0.7		V
Maximum DC Reverse Current at $T_j=25^{\circ}C$ Rated DC Blocking Voltage $T_j=100^{\circ}C$	$I_R$		0.2 50		0.1 20		mA
Typical Thermal Resistance ( Note 2)	$R_{\theta JL}$ $R_{\theta JA}$			28 88			$^{\circ}C / W$
Operating Junction Temperature Range	$T_J$	-55 to +125		-55 to +150			$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-55 to +150					$^{\circ}C$

#### NOTES:

- 1.Pulse Test with PW =300μsec, 1% Duty Cycle.
- 2.Mounted on P.C. Board with 5.0mm<sup>2</sup> (.013mm thick) copper pad areas.



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## RATING AND CHARACTERISTIC CURVES

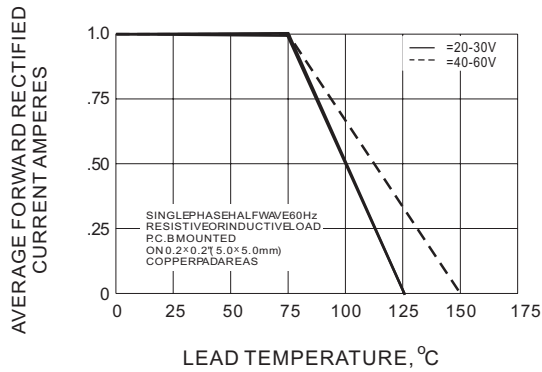


Fig.1-FORWARD CURRENT DERATING CURVE

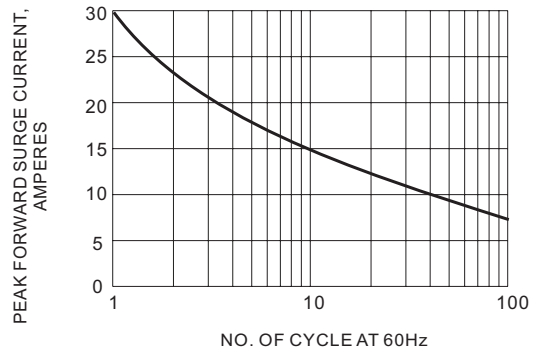


Fig.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

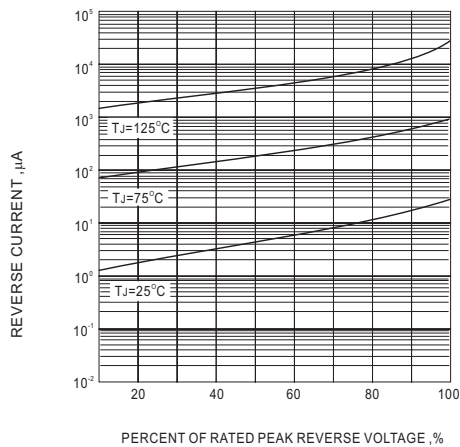


Fig.3-TYPICAL REVERSE CHARACTERISTIC

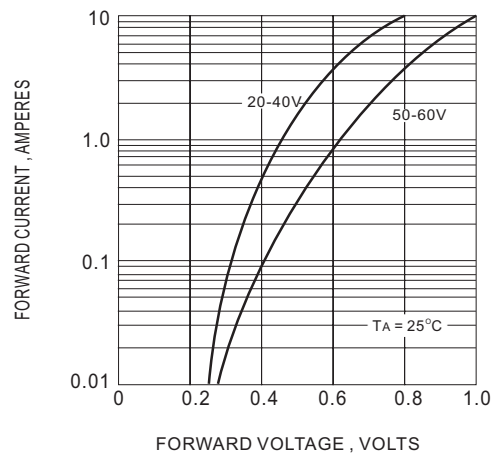
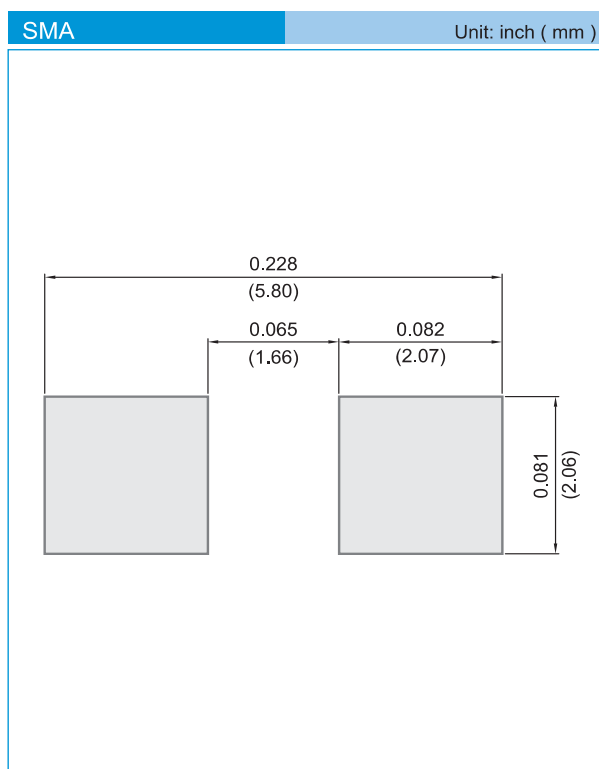


Fig.4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC



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### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information
  - T/R - 7.5K per 13" plastic Reel
  - T/R - 1.8Kper 7" plastic Reel

### LEGAL STATEMENT

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