

## SURFACE MOUNT GENERAL RECTIFIER

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass passivated Junction chip
- ◆ Easy to pick and place
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

### Mechanical Data

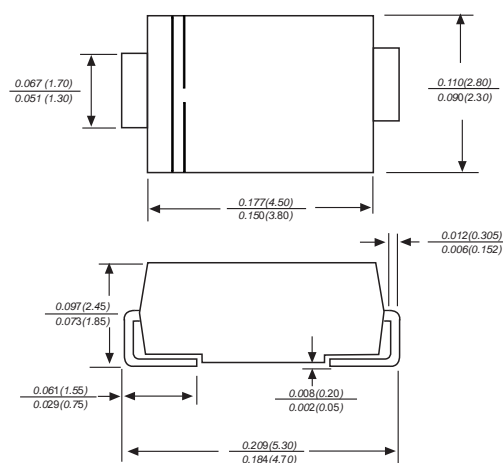
**Case** : Molded plastic body

**Terminals** : Solderable per MIL-STD-750, Method 2026

**Polarity** : Polarity symbol marking on body

**Mounting Position** : Any

**Weight** : 0.002 ounce, 0.055 grams

**DO-214AC/SMA**


Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

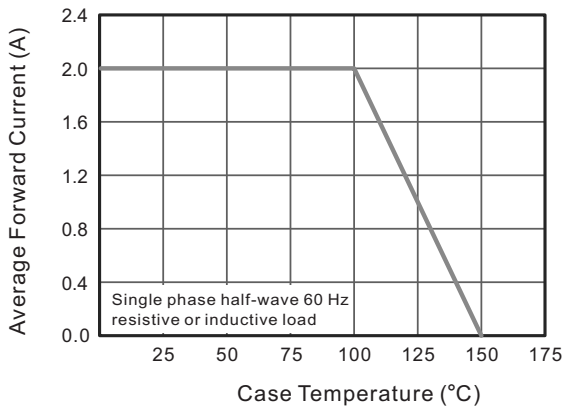
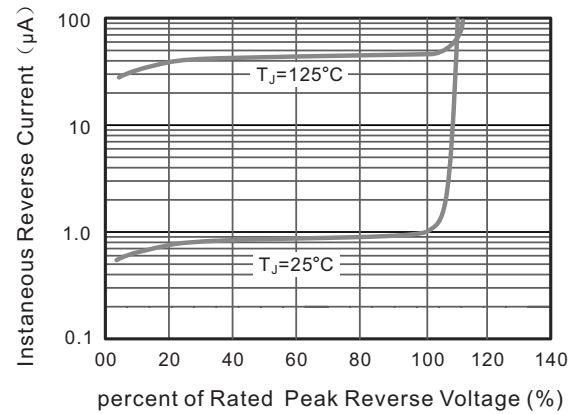
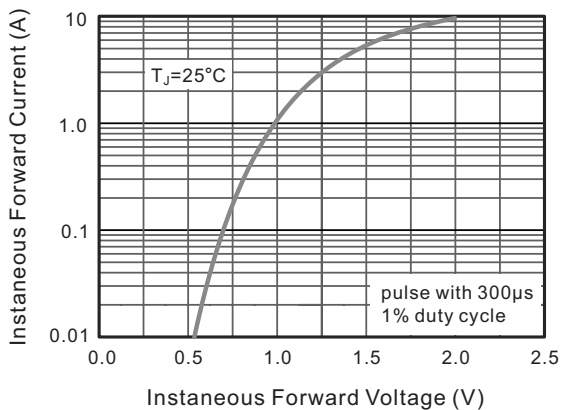
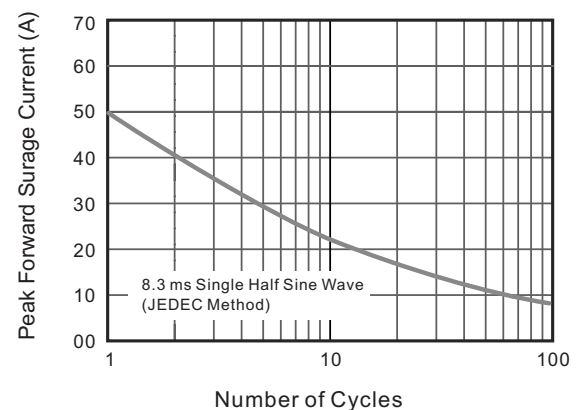
Parameter	SYMBOLS	EMA520	UNITS
		MDD EMA520	
Maximum repetitive peak reverse voltage	$V_{RMM}$	2000	V
Maximum RMS voltage	$V_{RMS}$	1400	V
Maximum DC blocking voltage	$V_{DC}$	2000	V
Maximum average forward rectified current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	2.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	50	A
Maximum instantaneous forward voltage at 2.0A	$V_F$	1.15	V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	$I_R$	5 50	$\mu\text{A}$
Typical junction capacitance (NOTE 1)	$C_J$	20	pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	70	$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

**Note:** 1. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.

2. P.C.B. Mounted with 0.2 X 0.2" (5 X 5 mm) copper pad area

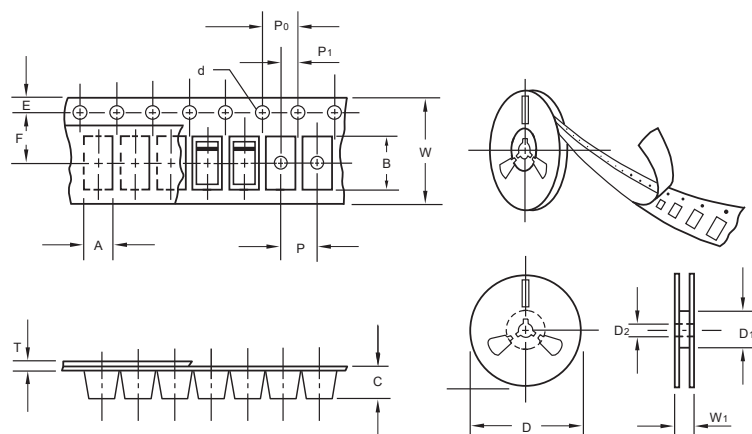
3. The typical data above is for reference only.

## Ratings And Characteristic Curves

**Fig.1 Forward Current Derating Curve**

**Fig.2 Typical Reverse Characteristics**

**Fig.3 Typical Instaneous Forward Characteristics**

**Fig.4 Maximum Non-Repetitive Peak Forward Surge Current**


The curve above is for reference only.

## Packing information

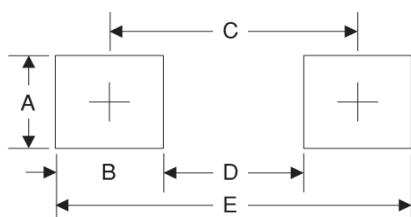


unit:mm

Item	Symbol	Tolerance	SMA
Carrier width	A	0.1	2.80
Carrier length	B	0.1	5.33
Carrier depth	C	0.1	2.36
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D <sub>1</sub>	min	50.00
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D <sub>1</sub>	min	62.00
Feed hole diameter	D <sub>2</sub>	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P <sub>0</sub>	0.1	4.00
Embossment center	P <sub>1</sub>	0.1	2.00
Overall tape thickness	T	0.1	0.28
Tape width	W	0.3	12.00
Reel width	W <sub>1</sub>	1.0	18.00

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.68	0.066
B	1.80	0.071
C	4.2	0.157
D	2.40	0.094
E	6	0.220

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