

SURFACE MOUNT Silicon RECTIFIER

Reverse Voltage - 2000 Volts Forward Current - 1.5 Ampere

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Ultra fast switching for high efficiency
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Glass passivated chip junction

Mechanical Data

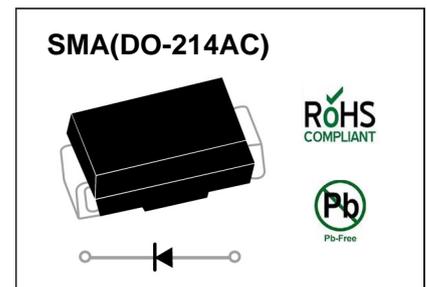
- Case: DO-214AC molded plastic body over passivated chip
- Terminals: leads solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.002 ounce, 0.07 grams

Specification

Maximum Rating 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%.



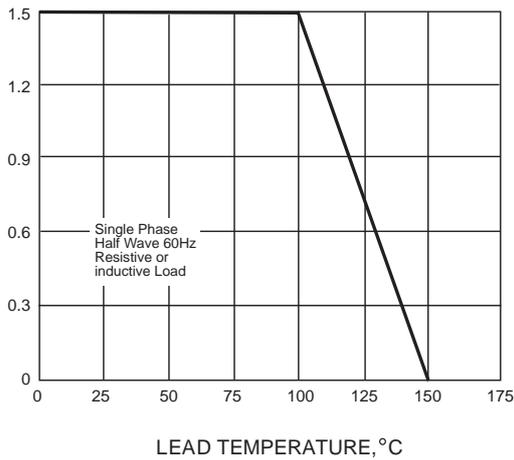
	SYMBOLS	SM520	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	2000	VOLTS
Maximum RMS voltage	V_{RMS}	1400	VOLTS
Maximum DC blocking voltage	V_{DC}	2000	VOLTS
Maximum average forward rectified current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	1.5	Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	40.0	Amps
Maximum instantaneous forward voltage at 1.5A	V_F	1.15	Volts
Maximum DC 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	μA
Typical thermal resistance (NOTE 1)	$R_{\theta JA}$	75.0	$^\circ\text{C/W}$
	$R_{\theta JL}$	25.0	
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Note: 1.P.C.B. mounted with 0.2x0.2”(5.0x5.0mm) copper pad areas

Ratings and characteristic curves SM520

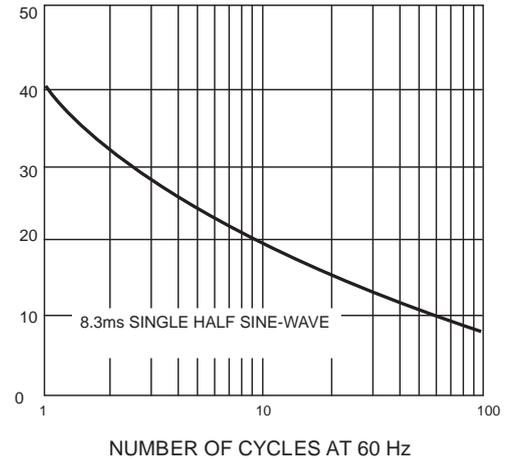
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



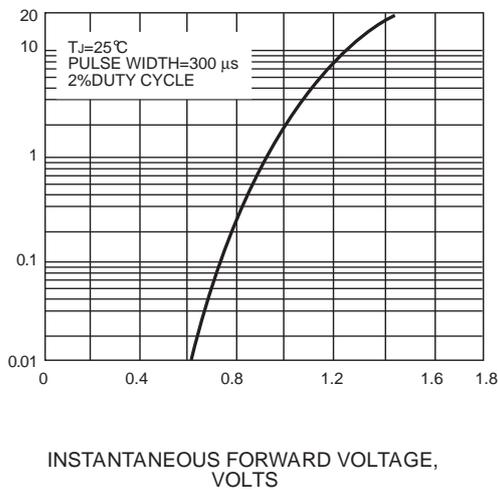
PEAK FORWARD SURGE CURRENT, AMPERES

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



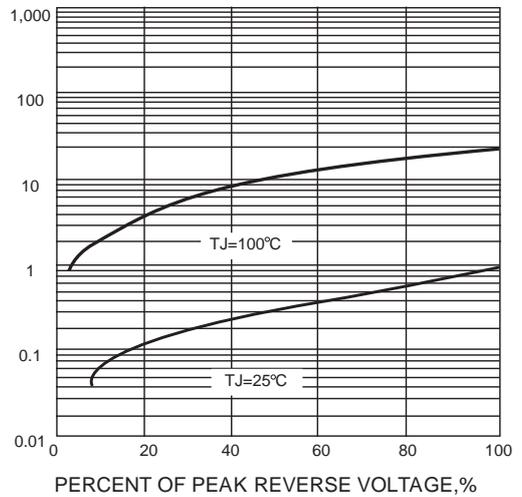
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



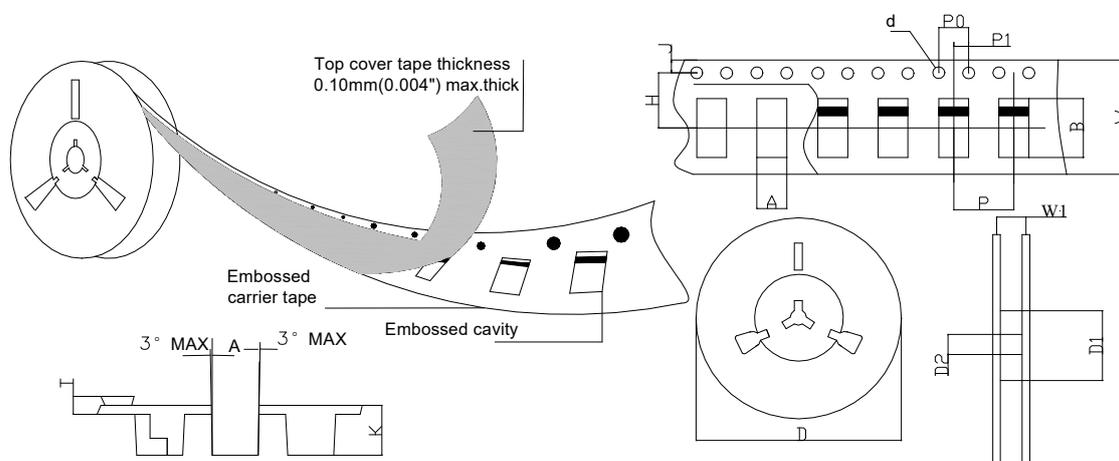
Marking and packging illustration

1、Marking



SYMBOL	Explanation
A	Product Name

2、Packaging

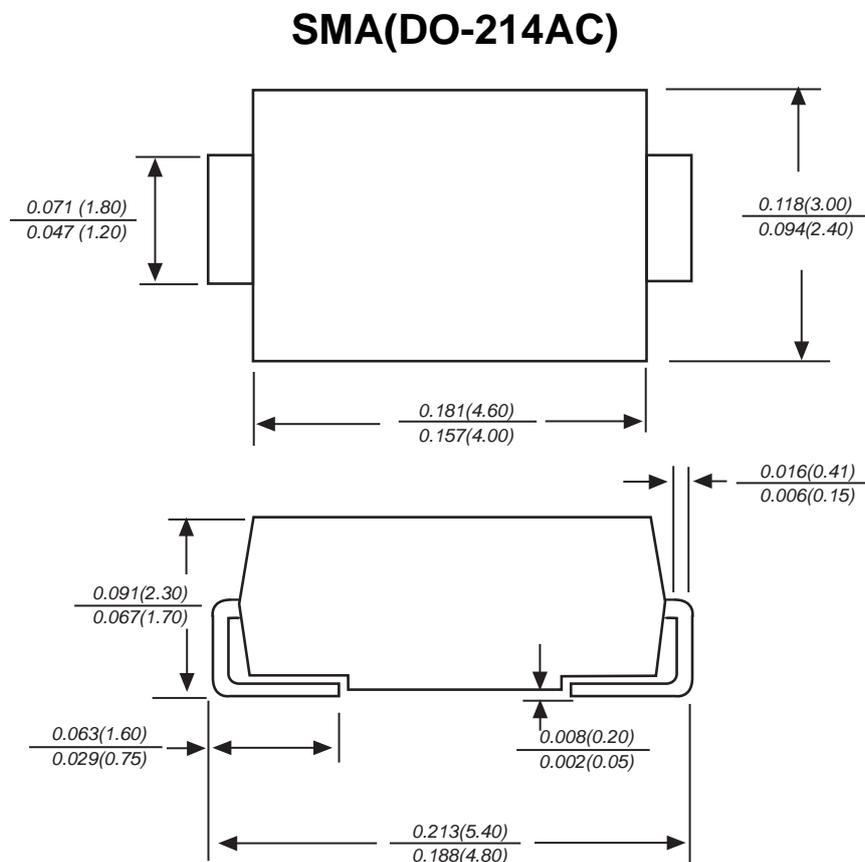


SPECIFICATIONS mm(inch)		PACKAGE	SPECIFICATIONS mm(inch)		PACKAGE
ITEM	SYM BOL	SMA (DO-214AC)	ITEM	SYM BOL	SMA (DO-214AC)
Carrier width	A	3.17(0.125)Max	Carrier depth	K	2.42(0.095)Typ
Carrier length	B	5.81(0.229)Max	Punch hole pitch	P	4.00(0.157)Typ
Sprocket hole	d	ø1.55(0.061)Typ	Sprocket hole pitch	P0	4.00(0.157)Typ
Reel outer diameter	D	178.0(7)Typ	Embossment center	P1	2.00(0.079)Typ
Reel inner diameter	D1	50.0(1.969)Min	Overall tape thickness	T	0.30(0.012)Typ
Feed hole diameter	D2	13.0(0.512)Typ	Tape width	W	12.0(0.472)Typ
Sprocket hole position	J	1.75(0.069)Typ	Reel width	W1	12.4(0.488)Min
Punch hole position	H	5.55(0.219)Typ			

3、Ordering Information

Part Number	Compliance	Case	Packaging
SSXX	Standard	SMA	2000/Tape & Reel

Dimension



Dimensions in inches and (millimeters)

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