

1.0A Surface Mount Rectifier

Features

- Low profile surface mounted package
- Ideal for automated placement
- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering: 250 °C / 10 seconds at terminals
- RoHS compliant



DO-214AC
(SMA)



Mechanical Data

Case:	JEDEC DO-214AC(SMA) molded plastic
Epoxy:	Plastic package has UL flammability classification 94V-0
Terminals:	Solder plated, solderable per MIL-STD-750, Method 2026
Polarity:	Color band denotes cathode end
Weight:	0.002 ounce, 0.064 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted)

Symbol	Description	S1A	S1B	S1D	S1G	S1J	S1K	S1M	Unit	Conditions
VRRM	Maximum Repetitive Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
VRMS	Maximum RMS Voltage	35	70	140	280	420	560	700	V	
VDC	Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V	
IF(AV)	Maximum Average Forward Rectified Current	1.0							A	
IFSM	Peak Forward Surge Current	40					30		A	8.3ms single half sine-wave superimposed on rated load (JEDEC Method) TL=110°C
TJ, TSTG	Operating Junction and Storage Temperature Range	-55 to 150							°C	

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S1A - S1M

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted)

Symbol	Description	S1A	S1B	S1D	S1G	S1J	S1K	S1M	Unit	Conditions
V_F	Maximum Instantaneous Forward Voltage	1.1							V	$I_F=1.0$ A
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	1.0					5.0		μA	$T_A=25^{\circ}C$
		50								$T_A=125^{\circ}C$
T_{rr}	Typical Reverse Recovery Time	1.8							μS	$I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
C_J	Typical Junction Capacitance	12							pF	$V_R=4V, f=1MHz$
$R_{\theta-JA}$	Typical Thermal Resistance	75					85		$^{\circ}C/W$	Note 1
$R_{\theta-JL}$		27					30			

- Note:** (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.
- (2) Single phase half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Typical Characteristics Curves

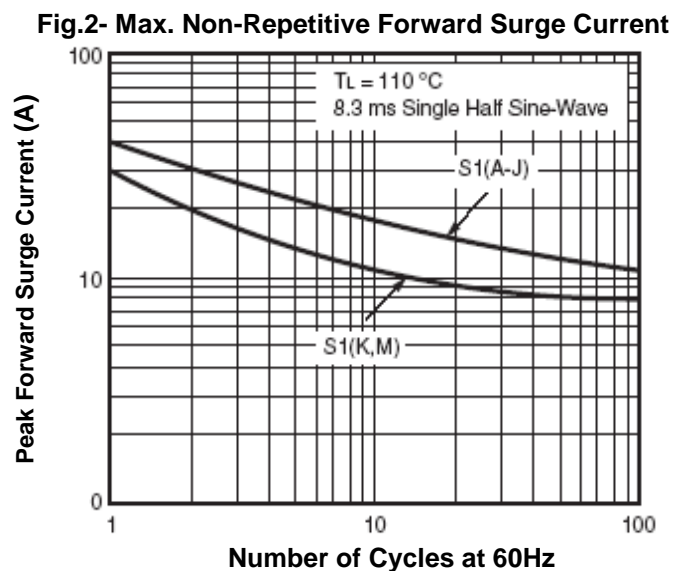
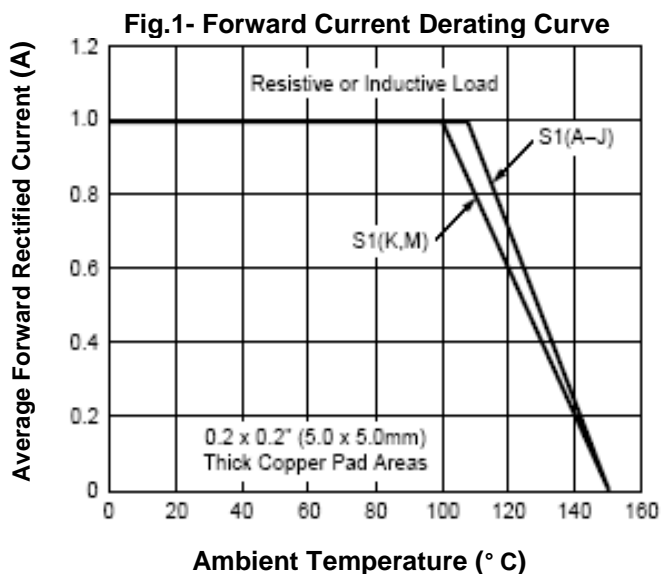


Fig.3- Typical Instantaneous Forward Characteristics

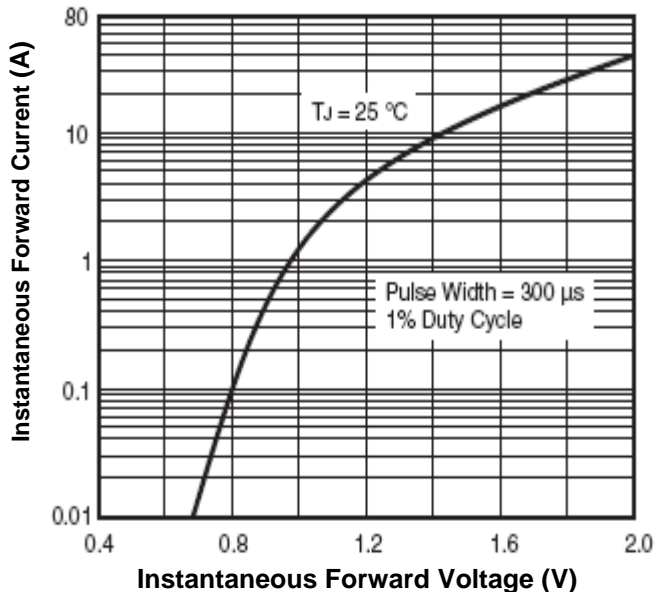


Fig.4- Typical Reverse Characteristics

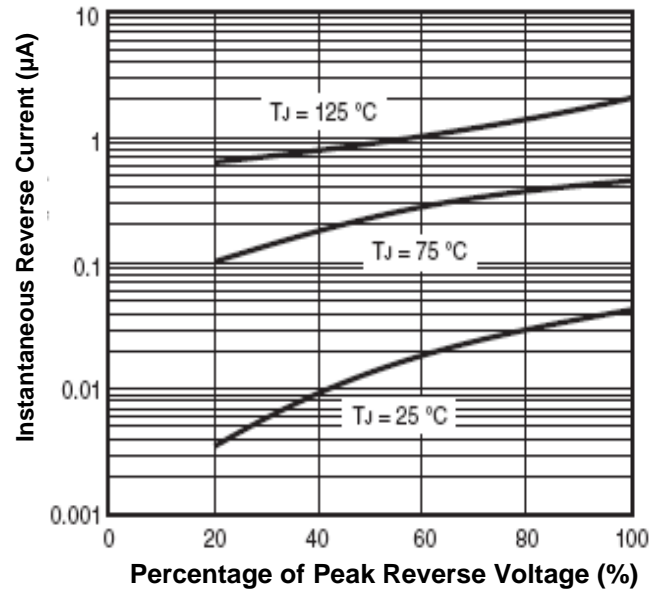
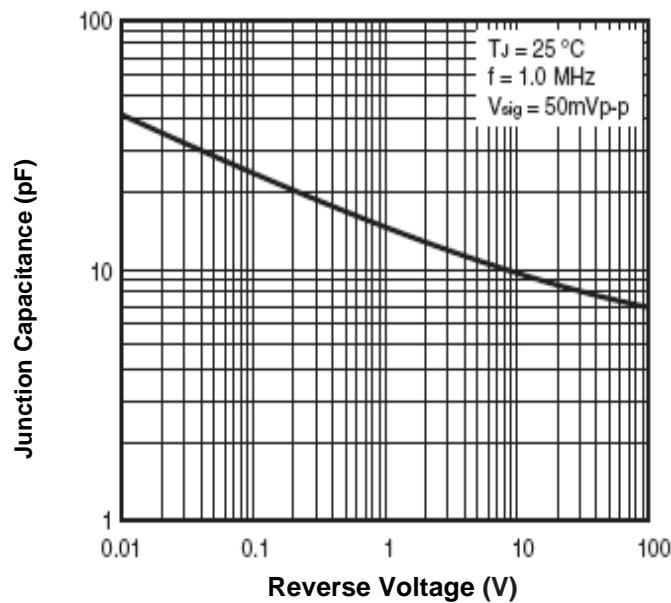
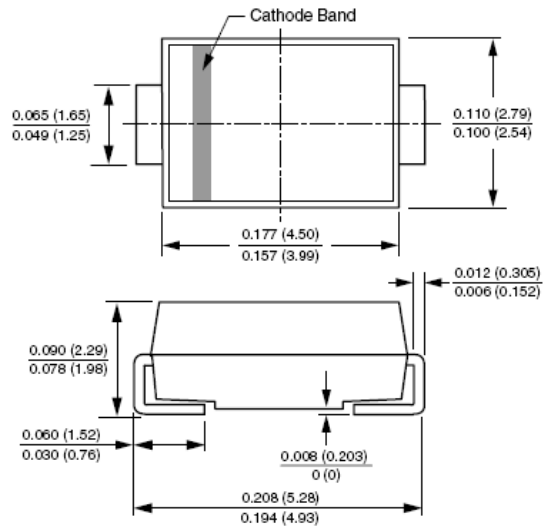


Fig.5- Junction Capacitance

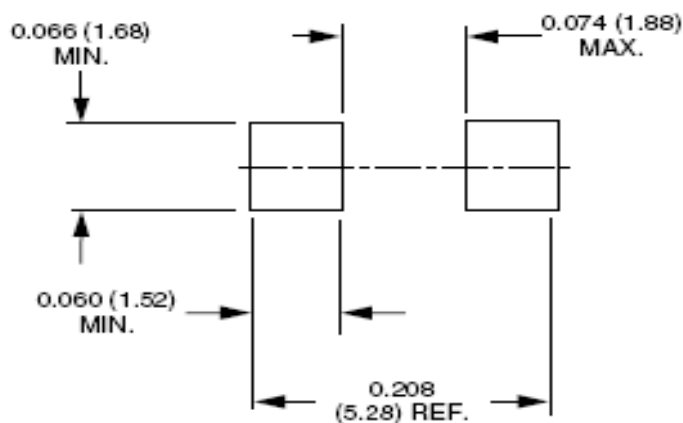


Dimensions in inch (mm)



**DO-214AC
(SMA)**

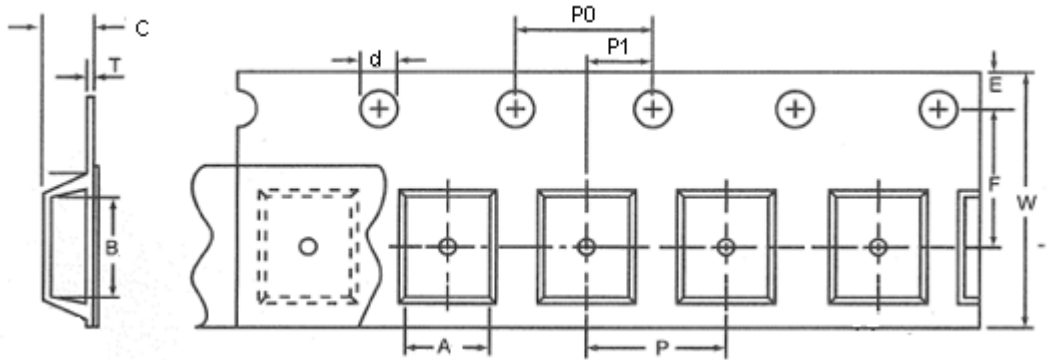
Mounting Pad Layout in inch (mm)



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S1A - S1M

Packing Information in mm



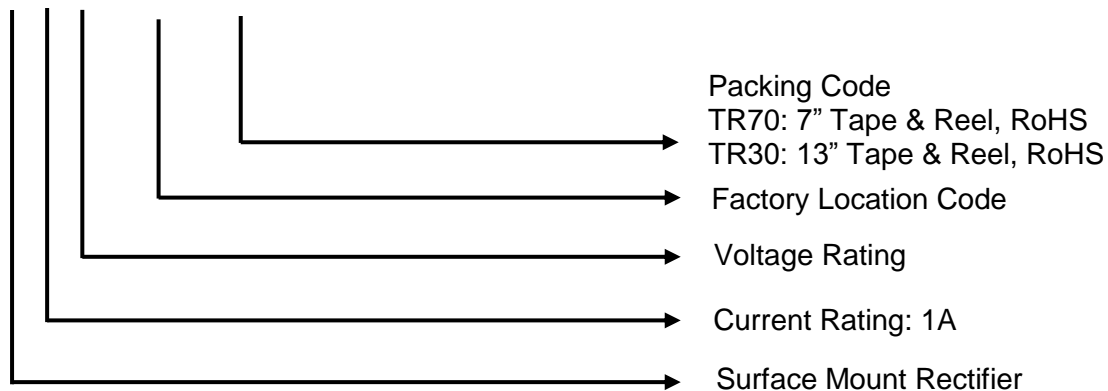
Product Type	A	B	C	d	E	F
	See Note 1			1.50±0.1	1.75±0.1	5.5±0.05
SMA	P	P0	P1	T	W	
	4.0±0.1	4.0±0.1	2.0±0.05	0.6max	12.0±0.3	

Note: Symbol A, B, C are determined by the maximum dimensions of the component size.

The clearance between the component and the cavity must be within 0.05 mm (0.002") min. to 0.50 mm (0.02") max. for 12 mm tape.

Ordering Information

S 1 X - XX - XX



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