S2A~S2M

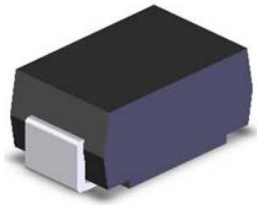
Surface Mount Standard Rectifiers

Features

- Low profile space
- Ideal for automated placement
- Glass passivated chip junctions
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering:
  260℃/10 seconds at terminals
- Component in accordance to
  RoHS 2002/95/1 and WEEE 2002/96/EC

Mechanical Date

- Case: JEDEC DO-214AC molded plastic body over glass passivated chip
- Terminals: Solder plated, solderable per J-STD-002B and JESD22-B102D
- Polarity: Laser band denotes cathode end



SMA（DO-214AC）

Major Ratings and Characteristics

$I_{F(AV)}$	2.0 A
V_{RRM}	50V to 1000V
I_{FSM}	50 A
I_R	5 μA
V_F	1.1 V
T_j (max.)	150 ℃

■ Maximum Ratings & Thermal Characteristics (T_A=25℃, unless otherwise noted)

Items	Symbol	S2A	S2B	S2D	S2G	S2J	S2K	S2M	UNIT
Maximum repetitive 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	
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	
Maximum average forward rectified current	$I_{F(AV)}$	2.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	20							
Thermal resistance from junction to ambient (1)	$R_{\theta JA}$	35							℃/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							℃

Note 1 : Mounted on P.C.B. with 0.2 × 0.2" (5.0 × 5.0mm) copper pad areas.

■ Electrical Characteristics (T_A=25℃, unless otherwise noted)

Items	Test conditions		Symbol	Min.	Typ.	Max.	UNIT
Instantaneous forward It	I_F=2.0A (2)		V_F	--	0.98	1.10	V
Reverse current	V_R=V_{DC}	T_A=25℃	I_R	--		5	μA
		T_A=125℃		--		50	
Typical junction capacitance	4.0V, 1MHz		C_J	--	30.0	--	pF

Note 2 : Pulse test: 300μs pulse width, 1% duty cycle.

Characteristic Curves (T_A=25℃ unless otherwise noted)

Fig.1 Forward Current Derating Curve

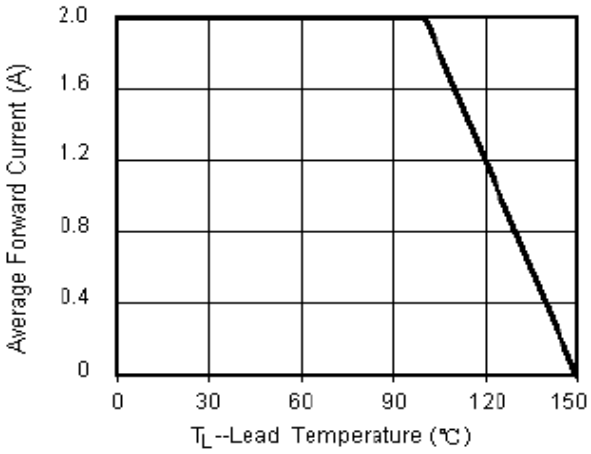


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

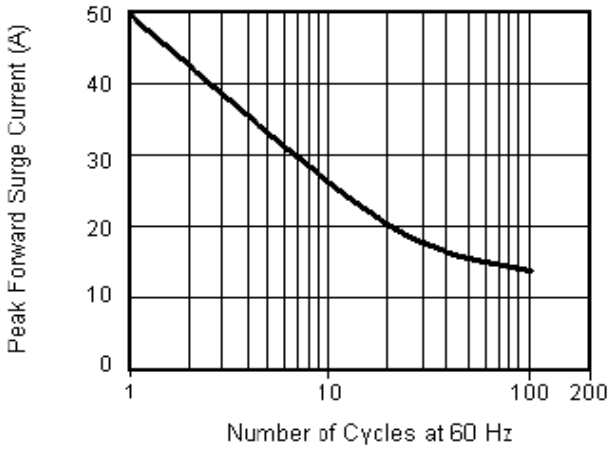


Fig.3 Typical Instantaneous Forward Characteristics

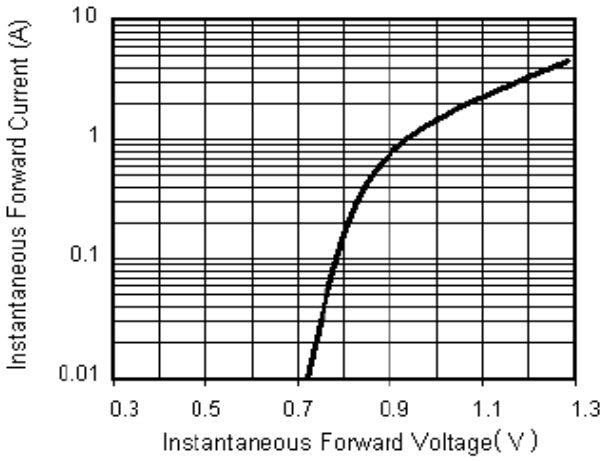
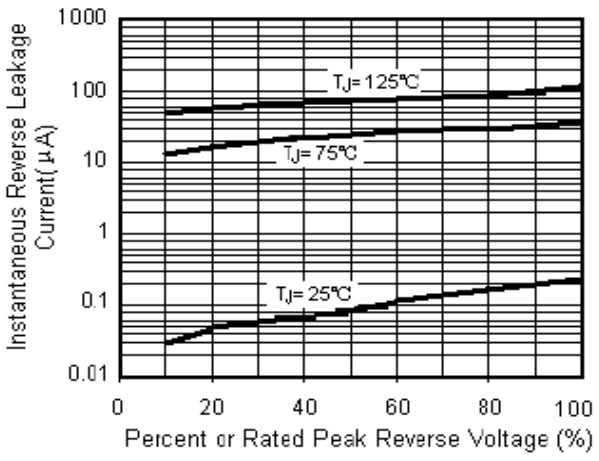
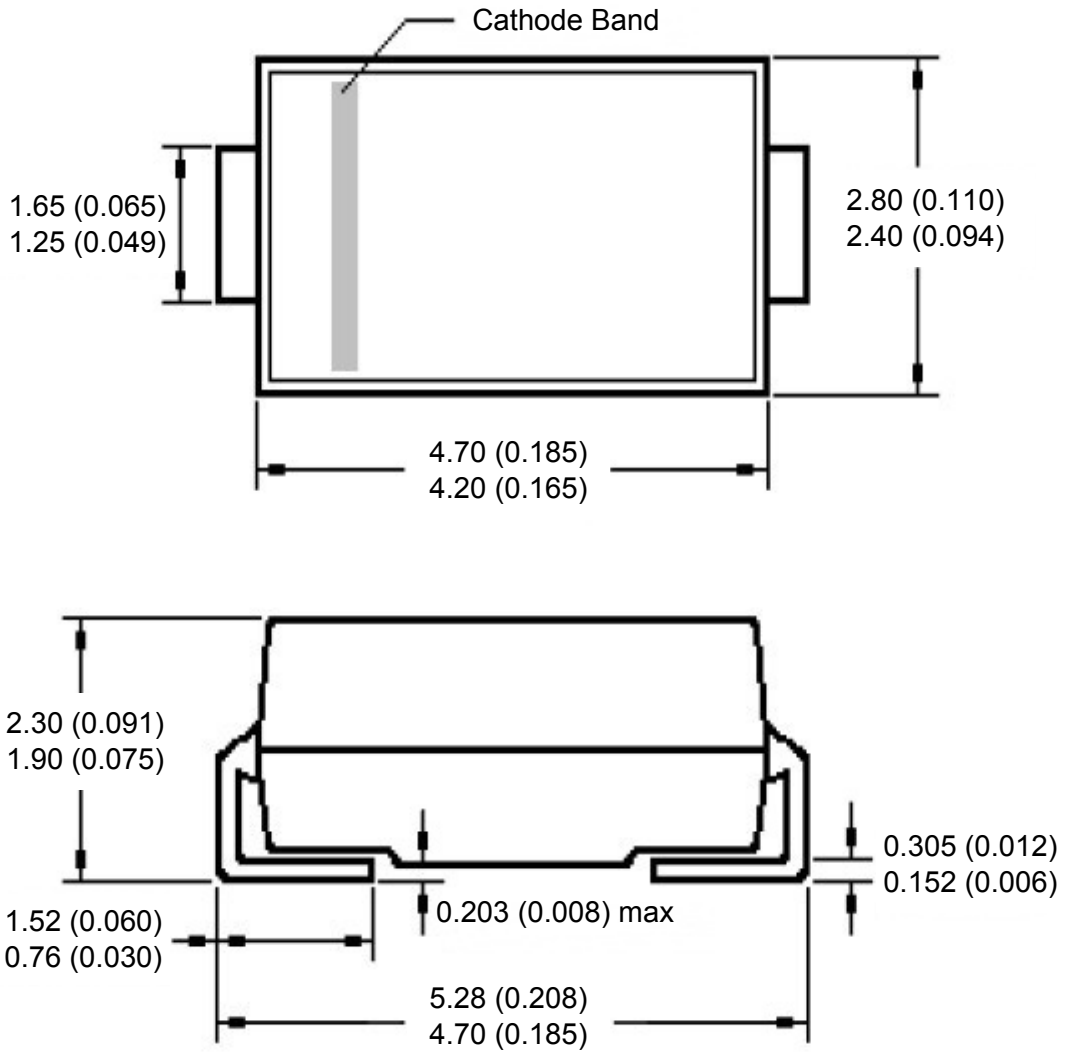


Fig.4 Typical Reverse Leakage Characteristics



Package Outline

SMA
DO-214AC



Dimensions in millimeters and (inches)

Notice

- Product is intended for use in general electronics applications, especially applicable to energy conservation electronic ballast of fluorescent lamp.
- Product should be worked less than the ratings; if exceeded, may cause permanent damage.or introduce latent failure mechanisms.
- The absolute maximum ratings are rated values and must not be exceeded during operation. The following are the general derating methods you design a circuit with a device.

  $I_{F(AV)}$: We recommend that the worst case current be no greater than 80%.

  I_{FSM}: This rating specifies the non-repetitive peak current. This is only applied for an abnormal operation, which the general during the lifespan of the device.

  T_J: Derate this rating when using a device in order to ensure high reliability. We recommend that the device be used at a TJ of below 125 ℃.

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