

Schottky rectifier

SS12A~SS120A
20 to 200V
1A
DO-214AC(SMA)

Features

- ◆ Low profile package
- ◆ Ideal for automated placement
- ◆ Ultrafast reverse recovery time
- ◆ Low power losses, high efficiency
- ◆ Low forward voltage drop
- ◆ High surge capability
- ◆ High temperature soldering:
260°C/10 seconds at terminals
- ◆ Component in accordance to RoHS 2002/95/1 and WEEE 2002/96/EC


DO-214AC(SMA)

Mechanical Data

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

Major Ratings and Characteristics

$I_{F(AV)}$	1.0A
V_{RRM}	20 V to 200 V
I_{FSM}	40A
V_F	0.50V, 0.55V, 0.70V, 0.85V, 0.95V
$T_{j\ max.}$	125°C

Maximum Ratings & Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Items	Symbol	SS12A	SS13A	SS14A	SS15A	SS16A	SS18A	SS110A	SS115A	SS120A	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	1									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	40									A
Voltage rate of change (rated V_R)	dv/dt	10000									V/ μ s
Thermal resistance from junction to lead ⁽¹⁾	$R_{\theta JL}$	35									°C/ W
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +125									°C

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

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Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Items	Test conditions		Symbol	SS12A	SS13A~ SS14A	SS15A~ SS16A	SS18A~ SS110A	SS115A~ SS120A	Unit
Instantaneous forward voltage	I _F =1.0A ⁽²⁾		V _F	0.50	0.55	0.70	0.85	0.95	V
Reverse current	V _R =V _{DC}	T _J =25°C	I _R	0.5					mA
		T _J =100°C		5.0					

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

Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig1. Forward Current Derating Curve

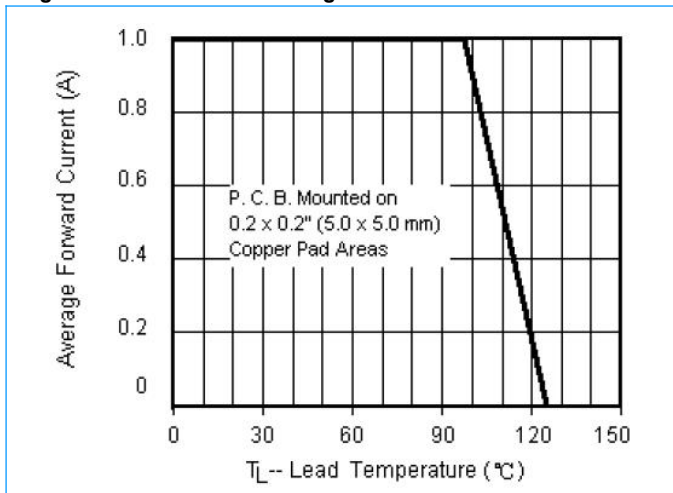


Fig2. Maximum Non-Repetitive Peak Forward Surge Current

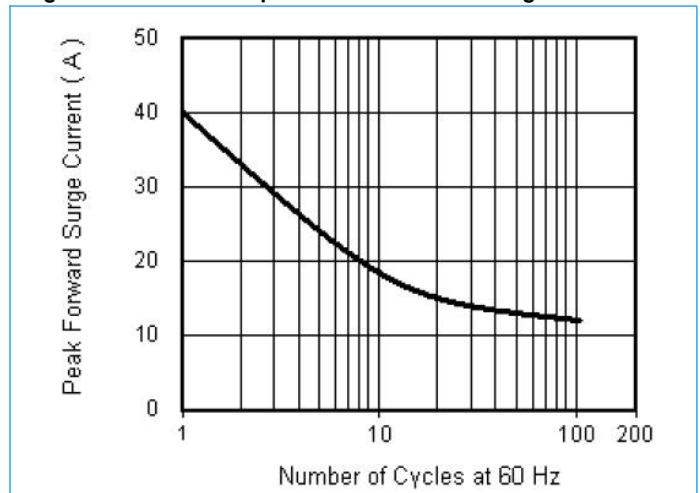


Fig3. Typical Instantaneous Forward Characteristics

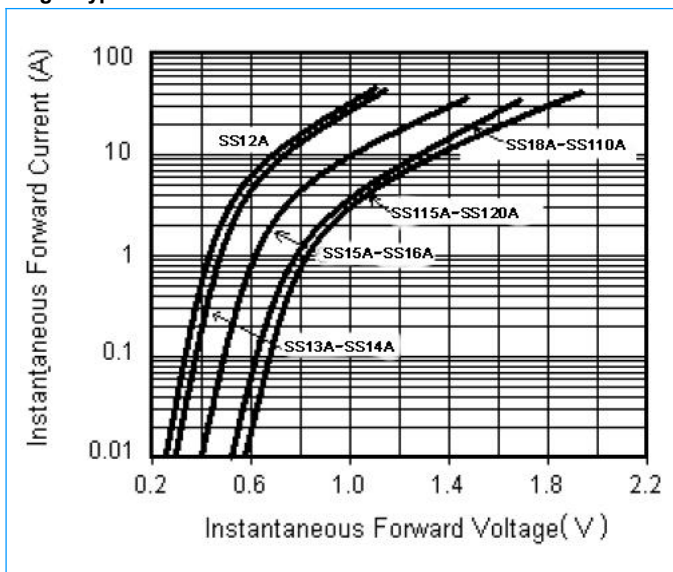
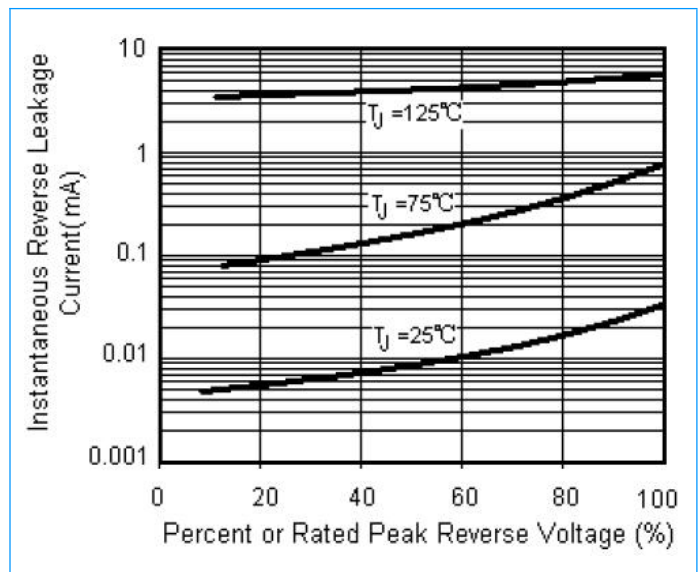


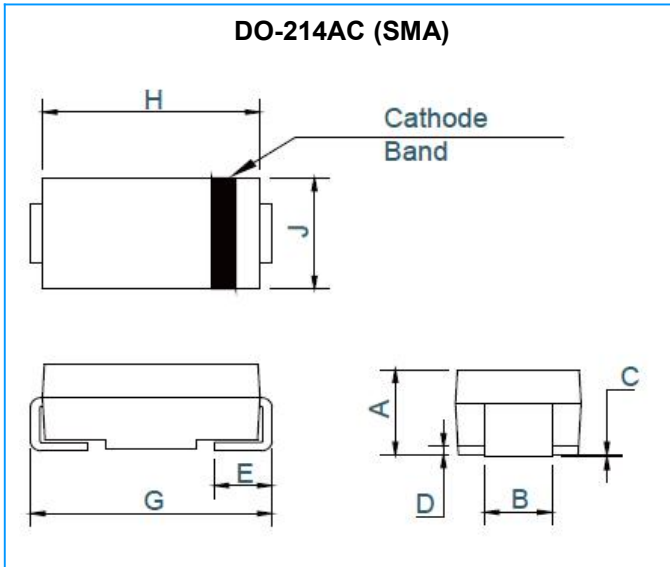
Fig4. Typical Reverse Leakage Characteristics



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Dimensions



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Dim	Inches		Millimeters	
	Min	Max	Min	Max
A	0.067	0.093	1.7	2.36
B	0.049	0.067	1.25	1.7
C	0.002	0.008	0.05	0.2
D	--	0.02	--	0.51
E	0.03	0.06	0.76	1.52
G	0.185	0.209	4.7	5.31
H	0.157	0.185	4	4.7
J	0.086	0.11	2.18	2.8

Notice

- ◆ Product is intended for use in general electronics applications.
- ◆ 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 T_J of below 100°C.