

## Surface Mount Schottky Rectifier

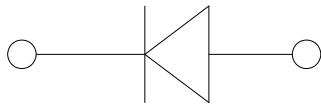


### Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Part no. with suffix "Q" means AEC-Q101 qualified

### Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, automotive and polarity protection applications.



### Mechanical Data

- **Package:** DO-214AC (SMA)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

### ■ Maximum Ratings ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS315AQ	SS320AQ
Device marking code			SS315A	SS320A
Repetitive peak reverse voltage	$V_{RRM}$	V	150	200
Maximum RMS voltage	$V_{RMS}$	V	105	140
Maximum DC blocking voltage	$V_{DC}$	V	150	200
Maximum average forward rectified current at $T_L$ (Fig.1)	$I_o$	A	3.0	
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, $T_J=25^\circ\text{C}$	$I_{FSM}$	A	80	
Voltage rate of change (rated $V_R$ )	$dV/dt$	V/ $\mu\text{s}$	10000	
Storage temperature	$T_{stg}$	$^\circ\text{C}$	-55 ~+175	
Junction temperature and storage temperature	$T_J$	$^\circ\text{C}$	-55 ~+175	

### ■ Electrical Characteristics( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	TYP	MAX	UNIT	
Instantaneous forward voltage	$V_F$	$I_F=3\text{A}$	$T_J=25^\circ\text{C}$	0.82	0.9	V
			$T_J=125^\circ\text{C}$	0.68	0.75	
Reverse current	$I_R$	Rated $V_R$	$T_J=25^\circ\text{C}$	-	1	$\mu\text{A}$
			$T_J=125^\circ\text{C}$	-	150	
Typical junction capacitance	$C_J$	$V_R=4\text{V}, f=1\text{MHz}$	60	-	pF	



# SS315AQ THRU SS320AQ

## ■ Thermal Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS315AQ	SS320AQ
Thermal Resistance	$R_{\theta\text{J-A}}$	$^\circ\text{C/W}$	55 <sup>(1)</sup>	
	$R_{\theta\text{J-L}}$		17 <sup>(1)</sup>	

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 mm x 5.0 mm) copper pad areas

## ■ Characteristics (Typical)

Fig.1: Forward Current Derating Curve

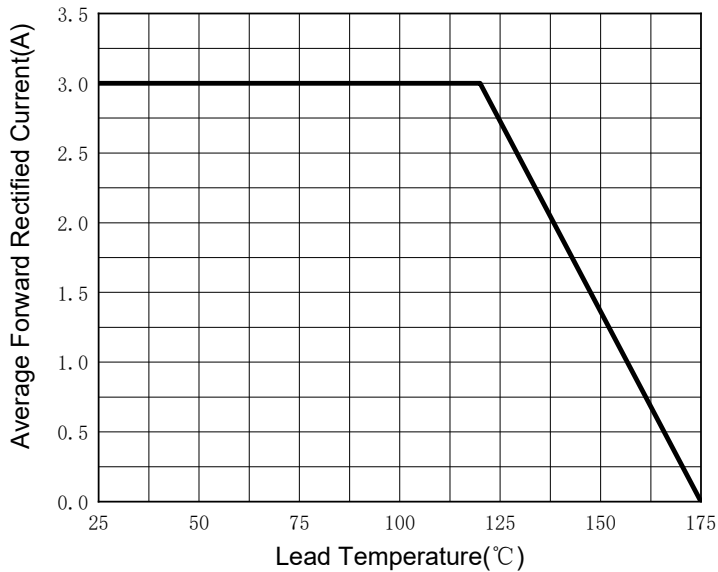


Fig.2: Maximum Non-Repetitive Peak Forward Surge Current

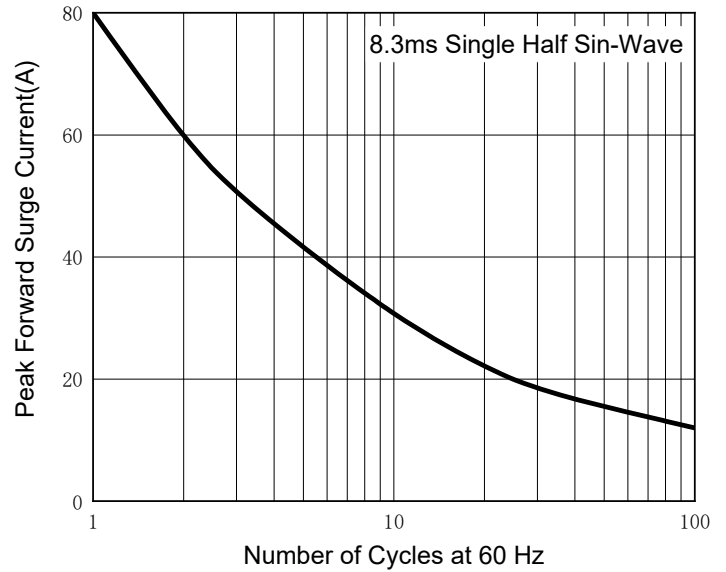


Fig.3: Typical Instantaneous Forward Characteristics

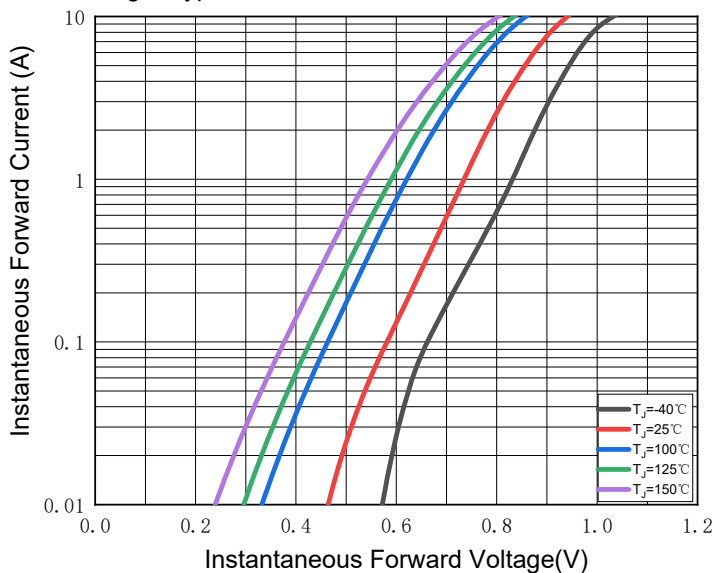
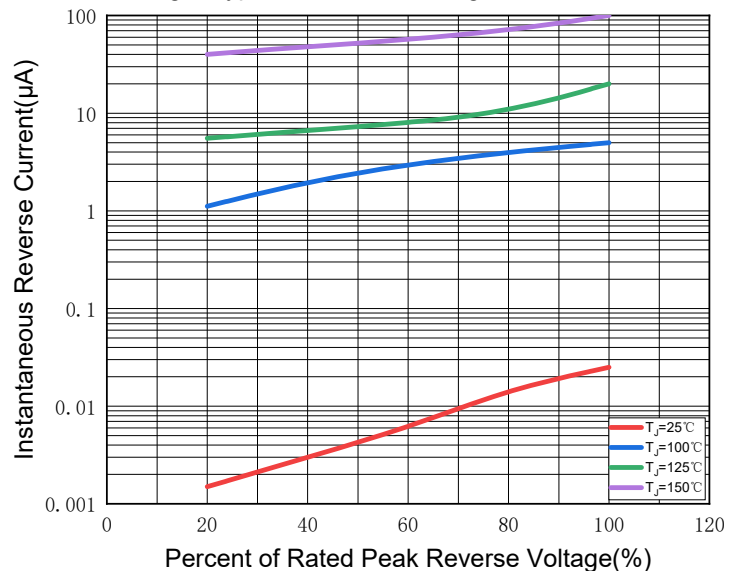


Fig.4: Typical Reverse Leakage Characteristics



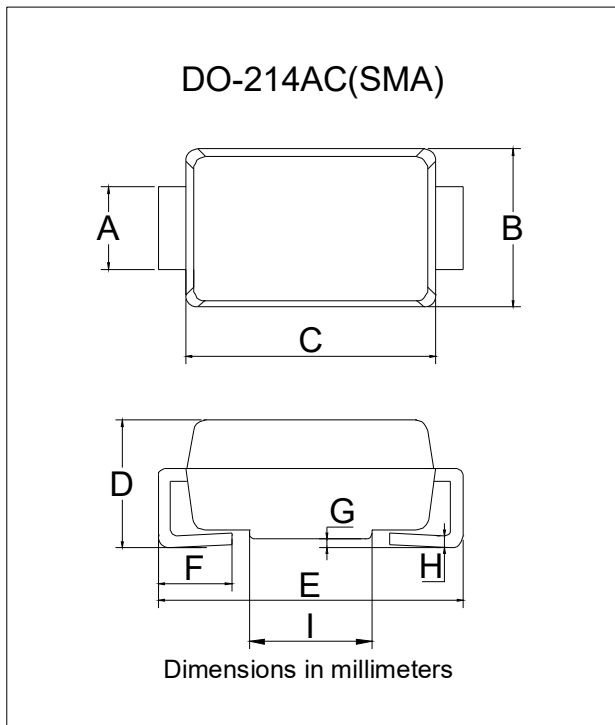
## ■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SS315AQ-SS320AQ	F2	Approximate 0.067	7500	120000	13" reel



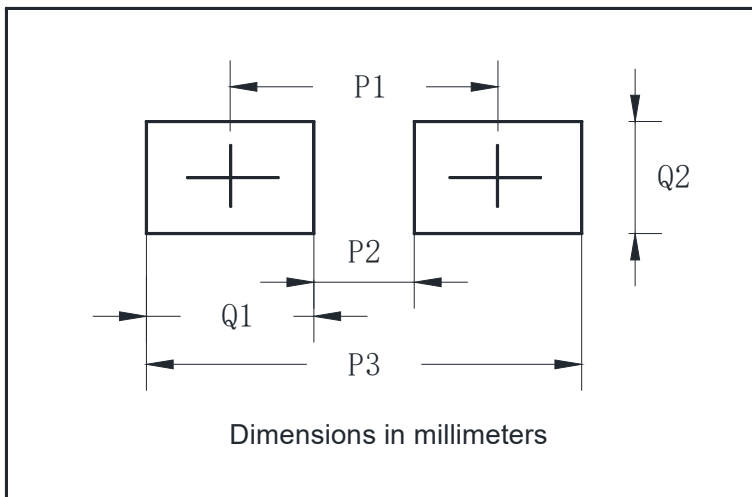
## SS315AQ THRU SS320AQ

### ■ Outline Dimensions



DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.00	4.75
D	1.90	2.30
E	4.93	5.28
F	0.76	1.41
G	0.05	0.20
H	0.15	0.31
I	1.7	2.1

### ■ Suggested Pad Layout



DO-214AC(SMA)	
Dim	Millimeters
P1	4.00
P2	1.50
P3	6.50
Q1	2.50
Q2	1.70



## SS315AQ THRU SS320AQ

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