

## Surface Mount Schottky Rectifier

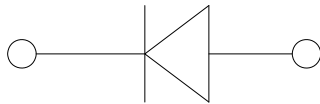


### Features

- 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<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS58AQ	SS510AQ
Device marking code			SS58A	SS510A
Repetitive peak reverse voltage	V <sub>RRM</sub>	V	80	100
Maximum RMS voltage	V <sub>RMS</sub>	V	56	70
Maximum DC blocking voltage	V <sub>DC</sub>	V	80	100
Maximum average forward rectified current at T <sub>L</sub> (Fig.1)	I <sub>O</sub>	A	5.0	
Surge(non-repetitive)forward current @60Hz half-sine wave, 1 cycle, T <sub>J</sub> =25°C	I <sub>FSM</sub>	A	120	
Voltage rate of change (rated V <sub>R</sub> )	dV/dt	V/μs	10000	
Storage temperature	T <sub>stg</sub>	°C	-55 ~ +175	
Junction temperature	T <sub>J</sub>	°C	-55 ~ +175	

### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	TYP	MAX	UNIT	
Instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> =5A	T <sub>J</sub> =25°C	0.77	0.8	V
			T <sub>J</sub> =125°C	0.63	0.75	
Reverse current	I <sub>R</sub>	Rated V <sub>R</sub>	T <sub>J</sub> =25°C	0.2	10	μA
			T <sub>J</sub> =125°C	-	200	
Typical junction capacitance	C <sub>J</sub>	V <sub>R</sub> =4V, f=1MHz	150	-	pF	



# SS58AQ THRU SS510AQ

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SS58AQ	SS510AQ
Thermal resistance	R <sub>θJA</sub> (1)	°C/W	60 <sup>1)</sup>	
	R <sub>θJL</sub> (1)		22 <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

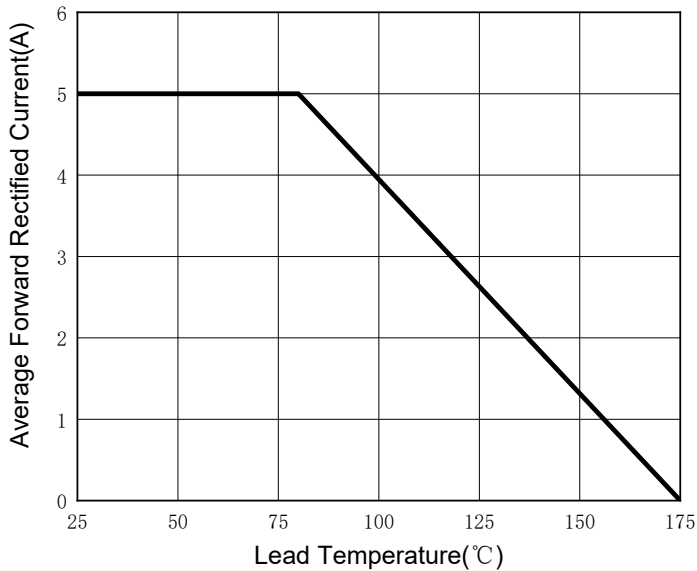


Fig.2: Maximum Non-Repetitive Peak Forward Surge Current

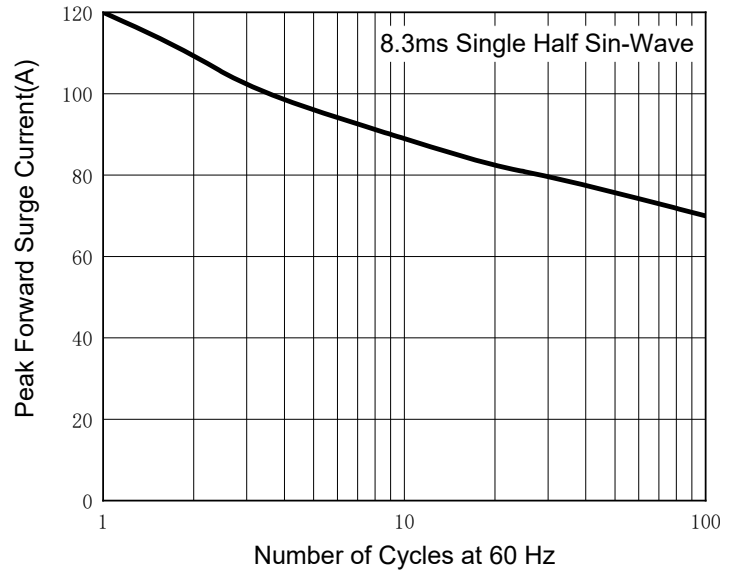


Fig.3: Typical Instantaneous Forward Characteristics

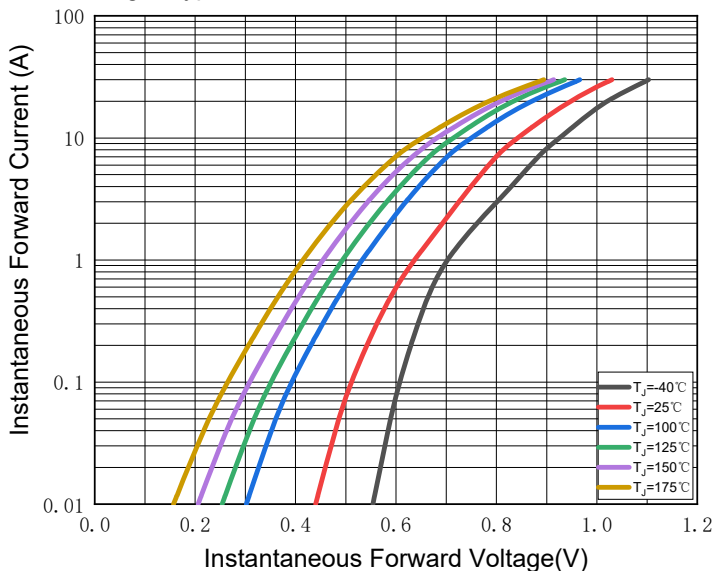
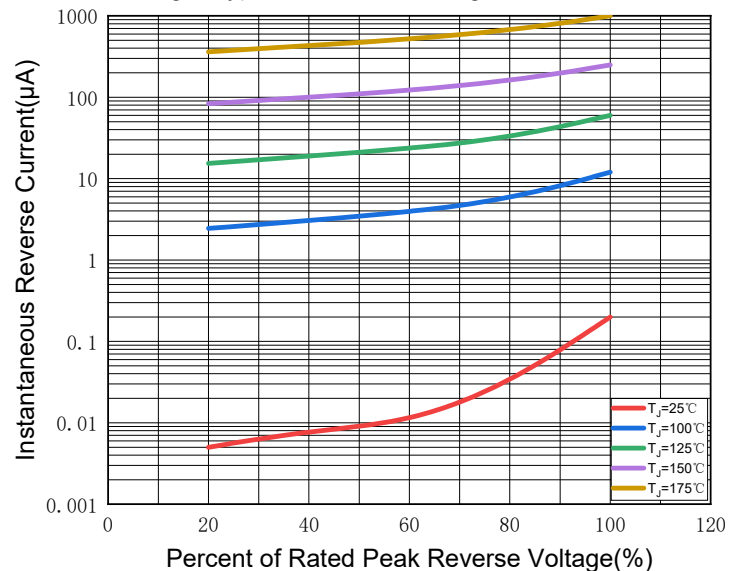


Fig.4: Typical Reverse Leakage Characteristics



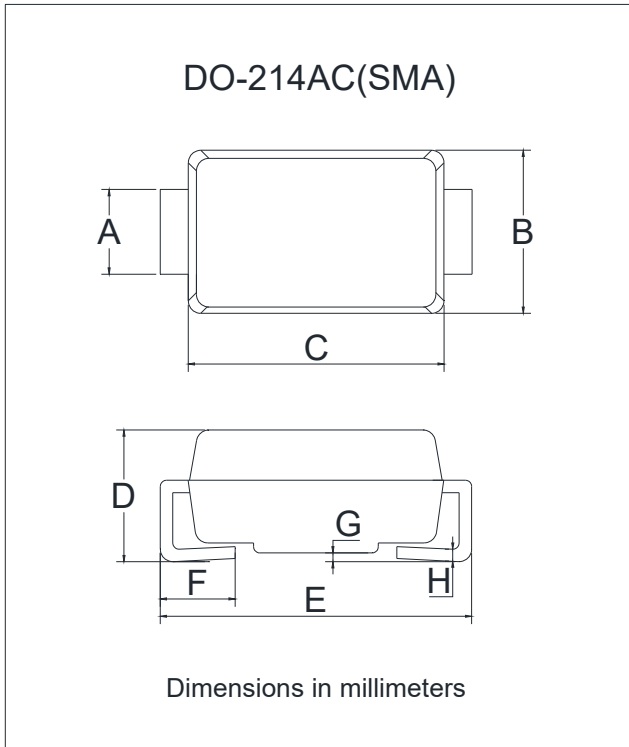
## ■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SS58AQ-SS510AQ	F2	Approximate 0.059	7500	120000	13" reel



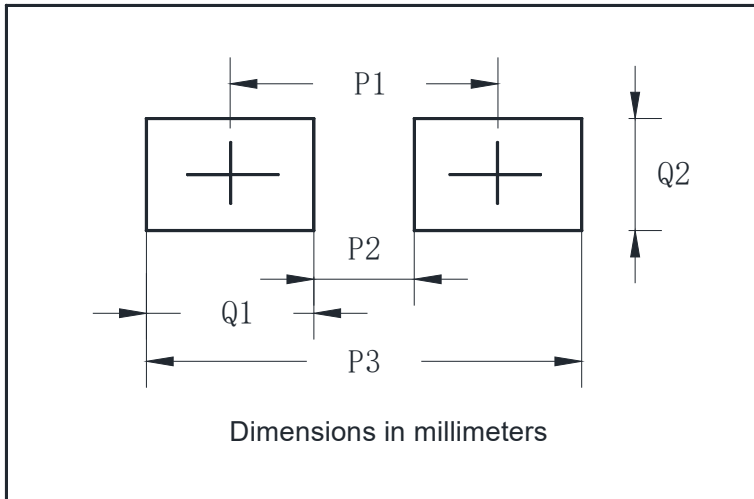
# SS58AQ THRU SS510AQ

## ■ Outline Dimensions



DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.06	4.75
D	1.90	2.30
E	4.93	5.28
F	0.76	1.41
G	0.08	0.20
H	0.15	0.31

## ■ Suggested Pad Layout



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



## SS58AQ THRU SS510AQ

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