

## 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
- AEC-Q101 qualified
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

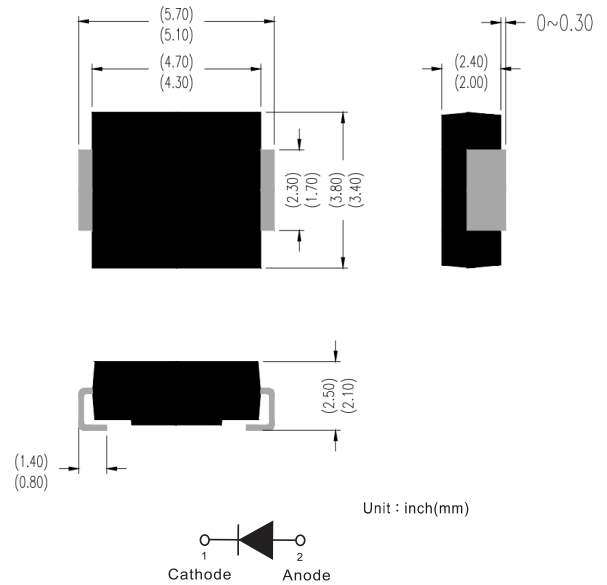
### Typical Applications

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

### Mechanical Data

- **Package:** DO-214AA (SMB)  
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

### DO-214AA (SMB)



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

PARAMETER	SYMBOL	UNIT	SS52-Q	SS53-Q	SS54-Q	SS55-Q	SS56-Q	SS58-Q	SS510-Q	SS515-Q	SS520-Q
Repetitive peak reverse voltage	V <sub>RRM</sub>	V	20	30	40	50	60	80	100	150	200
Average rectified output current @60Hz sine wave, resistance load, TL (FIG.1)	I <sub>O</sub>	A	5.0								
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T <sub>a</sub> =25°C	I <sub>FSM</sub>	A	100								
Storage temperature	T <sub>stg</sub>	°C	-55 ~+150								
Junction temperature	T <sub>J</sub>	°C	-55 ~+150				-55 ~+175				

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SS52-Q	SS53-Q	SS54-Q	SS55-Q	SS56-Q	SS58-Q	SS510-Q	SS515-Q	SS520-Q
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =5.0A	0.55		0.70		0.85		0.95		
Maximum DC reverse current at rated DC blocking voltage per diode @ V <sub>RM</sub> =V <sub>RRM</sub>	I <sub>RRM</sub>	mA	T <sub>a</sub> =25°C	0.5				0.1				
			T <sub>a</sub> =100°C	10				5				

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

PARAMETER	SYMBOL	UNIT	SS52-Q	SS53-Q	SS54-Q	SS55-Q	SS56-Q	SS58-Q	SS510-Q	SS515-Q	SS520-Q
Thermal resistance	R <sub>θJ-A</sub>	°C/W	58 <sup>1)</sup>								
	R <sub>θJ-L</sub>		20 <sup>1)</sup>								

Note:  
 (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas



■ Characteristics(Typical)

FIG1: I<sub>o</sub>-T<sub>L</sub> Curve

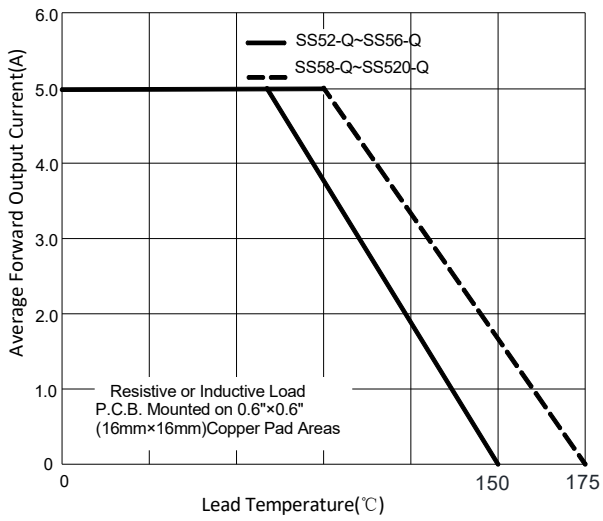


FIG2: Surge Forward Current Capability

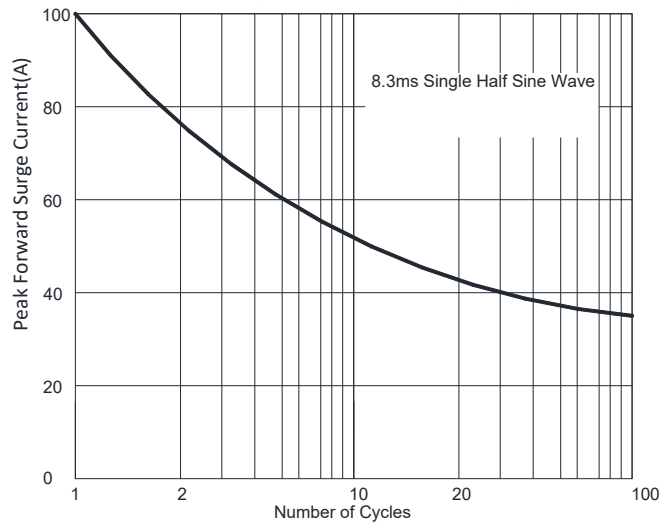


FIG3: Forward Voltage

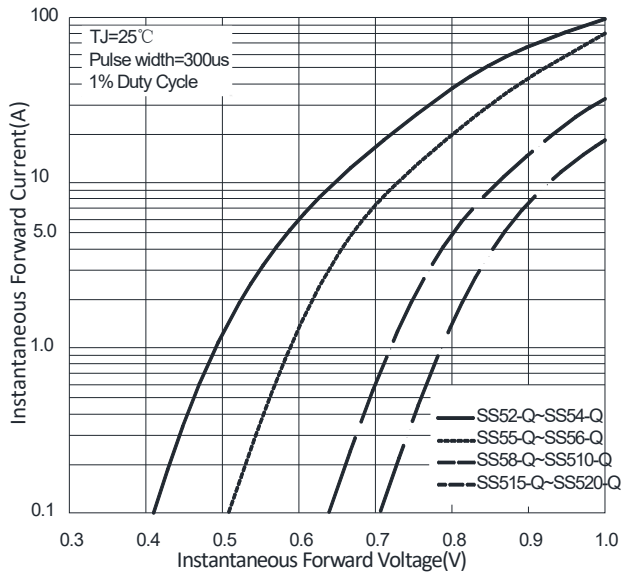


FIG4: Typical Reverse Characteristics

