

Surface Mount Schottky Barrier Diode

Features

- Guardring for overvoltage protection
- Low power loss
- Extremely fast switching
- High forward surge capability
- High frequency operation
- AEC-Q101 qualified
- Solder dip 260 °C max. 10 s, per JESD 22-B106

Mechanical Data

- Package: SMB/DO-214AA
- Terminals: Tin plated leads, solderable per J-STD-002
- Polarity: Cathode line denotes the cathode end

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

Parameter	Symbol	Unit	SS102 BQ	SS103 BQ	SS104 BQ	SS105 BQ	SS106 BQ	SS108 BQ	SS1010 BQ	SS1015 BQ	SS1020 BQ
Repetitive Peak Reverse Voltage	V_{RRM}	V	20	30	40	50	60	80	100	150	200
Average Rectified Output Current @60Hz sine wave, Resistance load, TL (FIG.1)	I_O	A	10.0								
Surge(Non-repetitive)Forward Current @60Hz Half-sine wave,1 cycle, $T_A=25^{\circ}\text{C}$	I_{FSM}	A	180								
Storage Temperature	T_{stg}	$^{\circ}\text{C}$	-55 ~+150								
Junction Temperature	T_j	$^{\circ}\text{C}$	-55 ~+150					-55 ~+175			

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

Parameter	Symbol	Unit	Test Conditions	SS102 BQ	SS103 BQ	SS104 BQ	SS105 BQ	SS106 BQ	SS108 BQ	SS1010 BQ	SS1015 BQ	SS1020 BQ
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =10.0A	0.55			0.70		0.85		0.95	
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	mA	Ta=25℃	0.2					0.1			
			Ta=100℃	20					5.0			



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

Parameter		Symbol	Unit	SS102 BQ	SS103 BQ	SS104 BQ	SS105 BQ	SS106 BQ	SS108 BQ	SS1010 BQ	SS1015 BQ	SS1020 BQ
Thermal Resistance	Between junction and ambient	$R_{\theta J-A}$	$^{\circ}\text{C}/\text{W}$	65 ⁽¹⁾								
	Between junction and lead	$R_{\theta J-L}$		8 ⁽¹⁾								

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)

FIG.1: Io-TL Curve

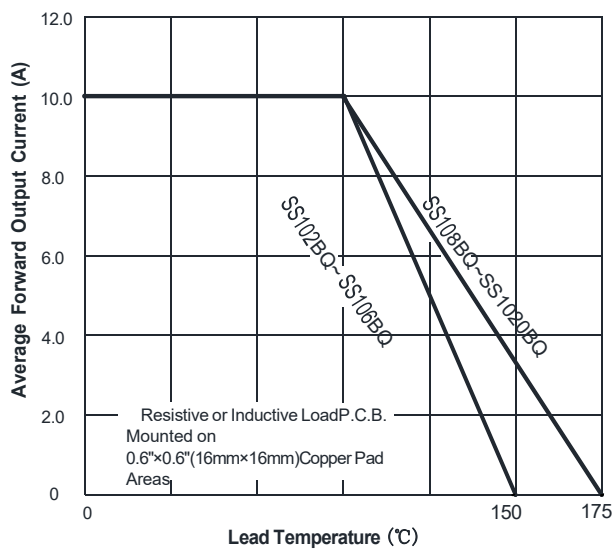


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

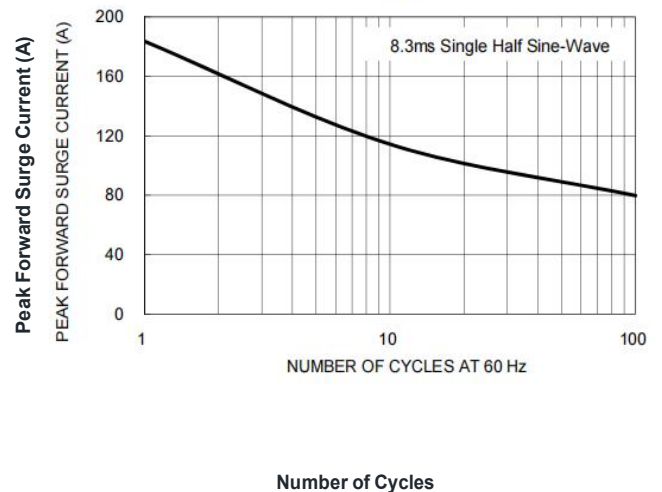


FIG.3: Forward Voltage

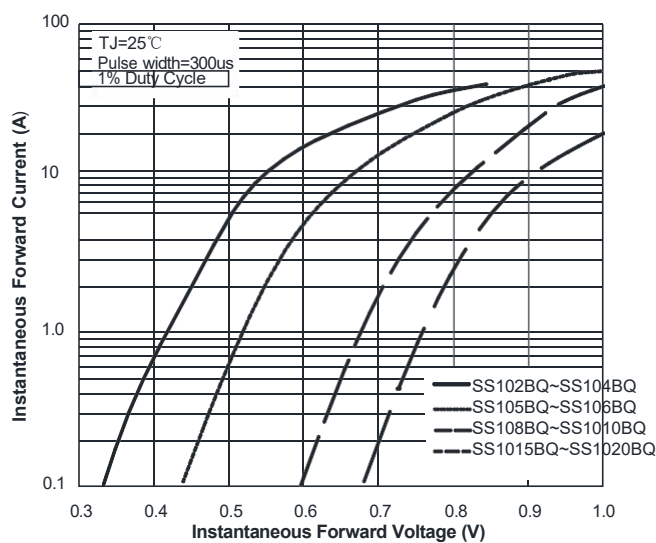
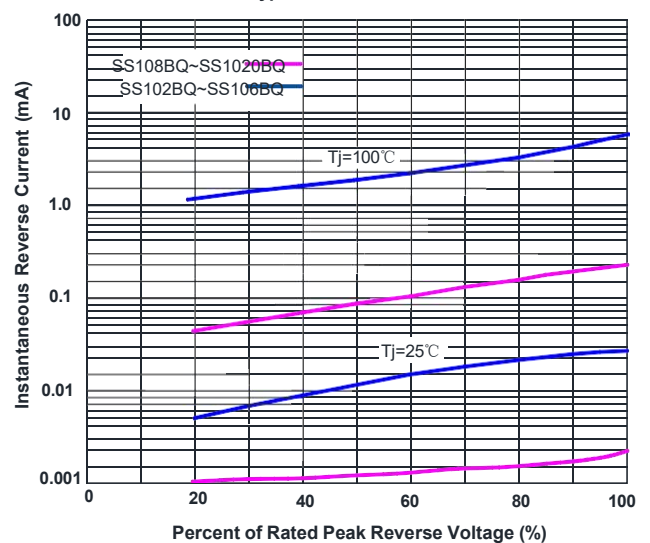
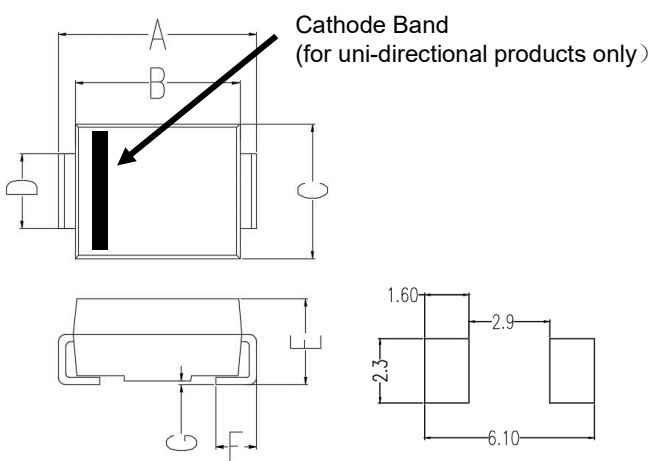


FIG.4: Typical Reverse Characteristics



Dimensions (SMB/DO-214AA)

 Cathode Band (for uni-directional products only) Dimensions in inches and millimeters Soldering footprint	Dim	Inches		Millimeters	
		Min	Max	Min	Max
A	0.205	0.217	5.21	5.51	
B	0.167	0.187	4.25	4.75	
C	0.137	0.147	3.48	3.73	
D	0.076	0.083	1.93	2.10	
E	0.078	0.103	1.99	2.61	
F	0.035	0.055	0.90	1.40	
G	0.000	0.008	0.00	0.20	