

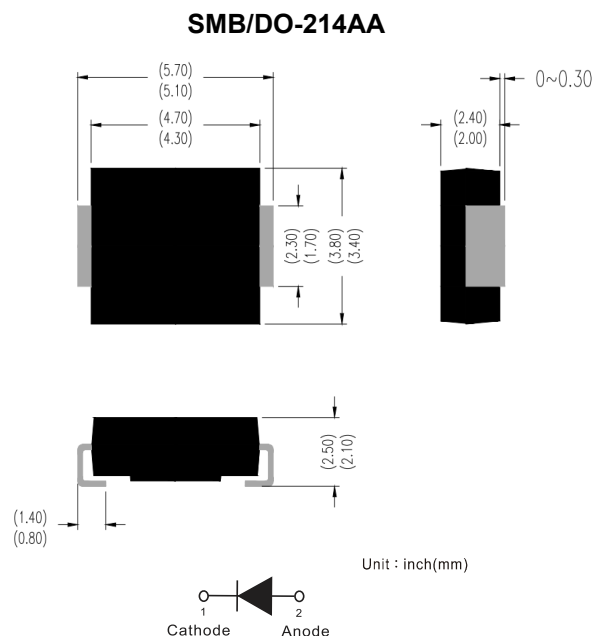
Surface Mount Schottky Barrier Diode

Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- AEC-Q101 qualified
- Compliant with RoHS standards, halogen-free

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	SS52 BQ	SS53 BQ	SS54 BQ	SS55 BQ	SS56 BQ	SS58 BQ	SS510 BQ	SS515 BQ	SS520 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	5.0								
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, $T_A=25^\circ\text{C}$	I_{FSM}	A	100								
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	SS52 BQ	SS53 BQ	SS54 BQ	SS55 BQ	SS56 BQ	SS58 BQ	SS510 BQ	SS515 BQ	SS520 BQ
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =5.0A	0.55			0.70		0.85		0.95	
Maximum DC reverse current at rated DC blocking voltage per diode @ V _{RM} =V _{RRM}	I _{RRM}	mA	Ta=25°C	0.5					0.1			
			Ta=100°C	10					5			

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

Parameter	Symbol	Unit	SS52 BQ	SS53 BQ	SS54 BQ	SS55 BQ	SS56 BQ	SS58 BQ	SS510 BQ	SS515 BQ	SS520 BQ
Thermal resistance	$R_{\theta J-A}$	$^\circ\text{C/W}$	58 ⁽¹⁾								
	$R_{\theta J-L}$		20 ⁽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)

FIG1: Io-TL Curve

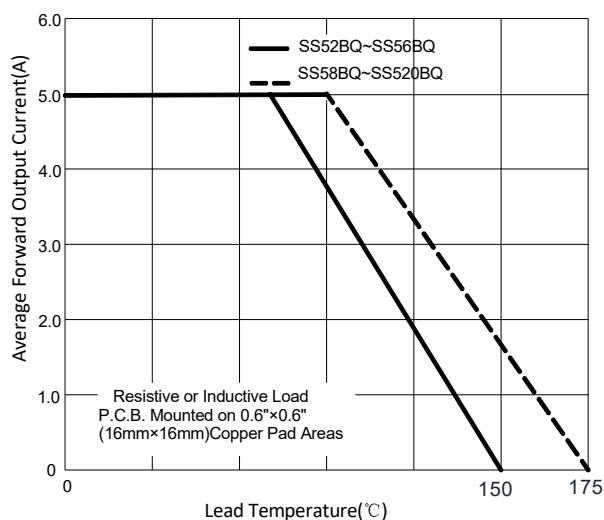


FIG2: Surge Forward Current Capability

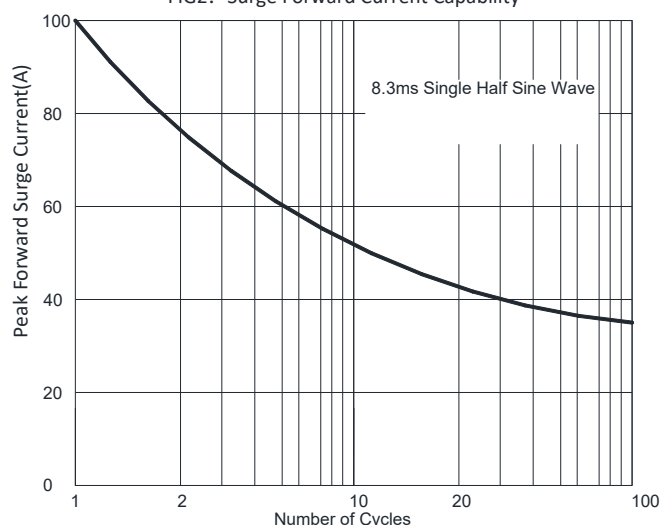


FIG3: Forward Voltage

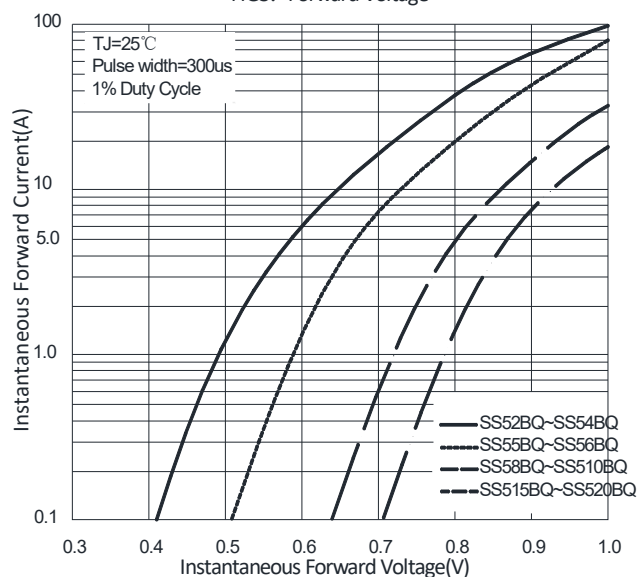


FIG4: Typical Reverse Characteristics

