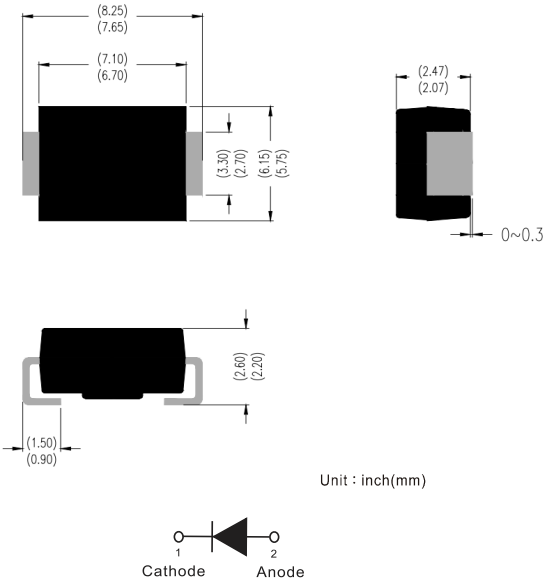
Surface Mount Schottky Barrier Diode

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

SMC/DO-214AB



Mechanical Data

- **Package:** SMC/DO-214AB
- **Terminals:** Tin plated leads, solderable per
- **Polarity:** Color band denotes the cathode end

Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Unit	SS52CQ	SS53CQ	SS54CQ	SS55CQ	SS56CQ	SS58CQ	SS510CQ	SS515CQ	SS520CQ
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, Ta=25℃	I_{FSM}	A	100								
Storage temperature	T_{stg}	℃	-55 ~+150								
Junction temperature	Tj	℃	-55 ~+150					-55 ~+175			

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	Unit	Test Conditions	SS52CQ	SS53CQ	SS54CQ	SS55CQ	SS56CQ	SS58CQ	SS510CQ	SS515CQ	SS520CQ
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℃	0.2					0.1			
			Ta=100℃	20					5			

Thermal Characteristics (T_A=25℃ unless otherwise noted)

Parameter		Symbol	Unit	SS52CQ	SS53CQ	SS54CQ	SS55CQ	SS56CQ	SS58CQ	SS510CQ	SS515CQ	SS520CQ
Thermal Resistance	Junction to ambient	$R_{\theta J-A}$	℃/W	47(1)								
	Junction to lead	$R_{\theta J-L}$		13(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-Ta Curve

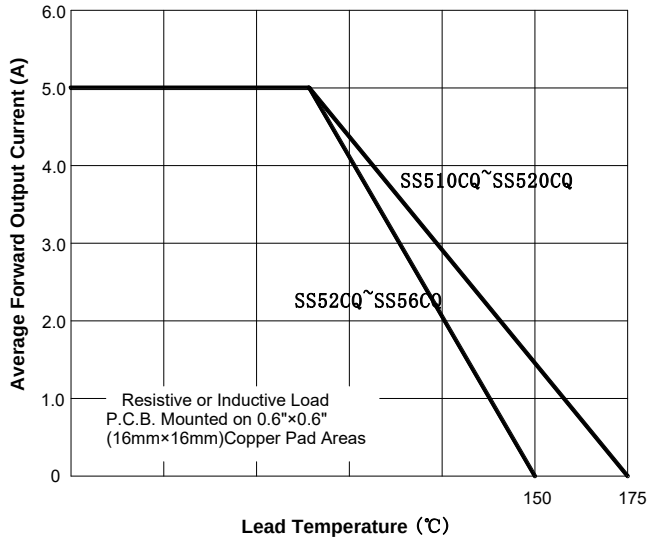


FIG.2: Forward Surge Currrent Capability

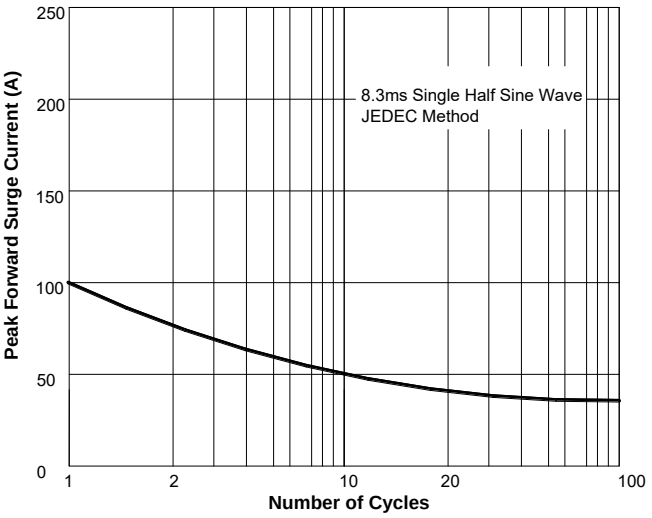


FIG.3: Forward Voltage

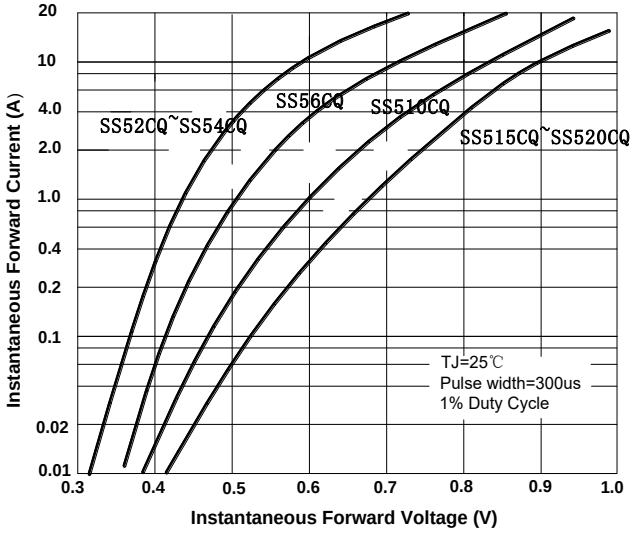


FIG.4: Typical Reverse Characteristics