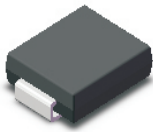


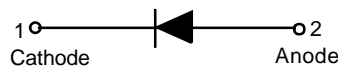
Features

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

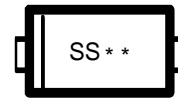
Schematic & PIN Configuration



SMC



Circuit



Marking

Absolute Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	SSC52	SSC54	SSC56	SSC58	SSC510	SSC512	SSC515	SSC520	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	60	80	100	120	150	200	V
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	84	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	80	100	120	150	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5.0								A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	175				150				A
Max Instantaneous Forward Voltage at 5 A	V_F	0.45	0.55	0.70		0.85				V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 100^\circ\text{C}$	I_R					1.0 50				mA
Typical Junction Capacitance ⁽¹⁾	C_j	600		400						pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	35								°C/W
Operating Junction Temperature Range	T_j	-55 ~ +150								°C
Storage Temperature Range	T_{stg}	-55 ~ +150								°C

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Typical Characteristics

Fig.1 Forward Current Derating Curve

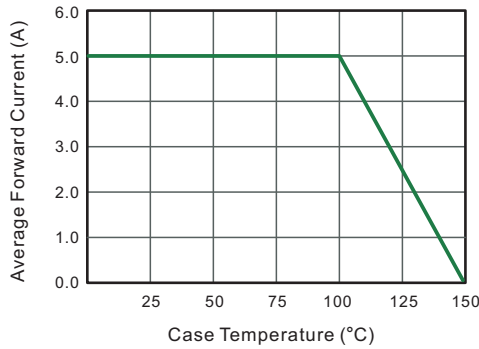


Fig.2 Typical Reverse Characteristics

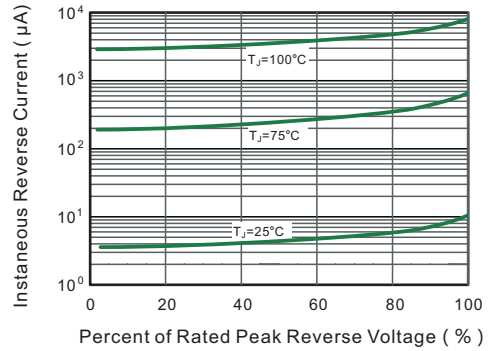


Fig.3 Typical Forward Characteristic

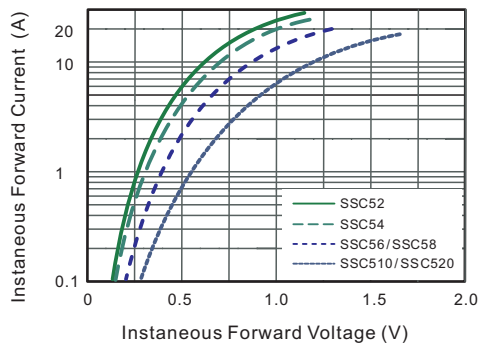


Fig.4 Typical Junction Capacitance

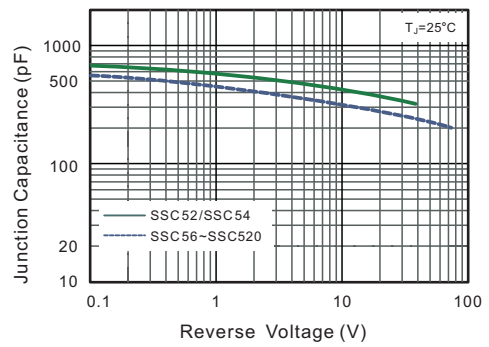


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

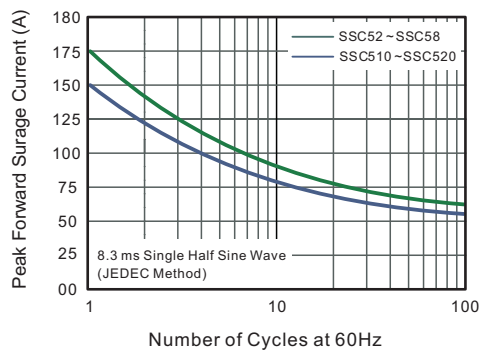
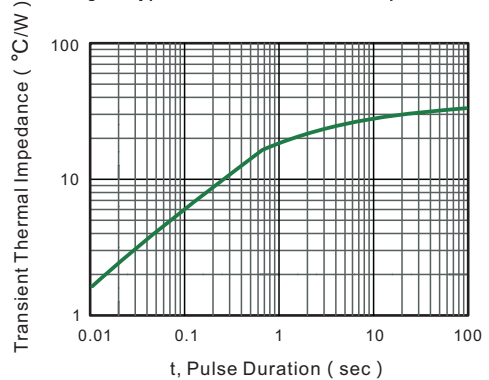
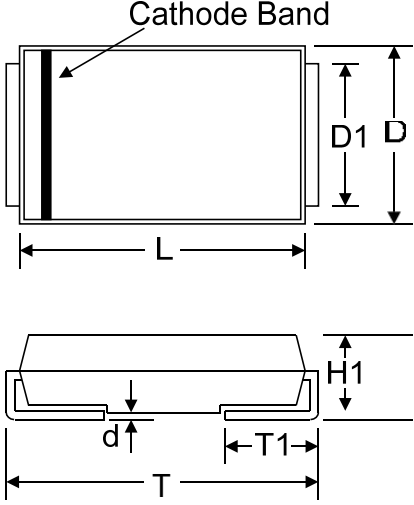


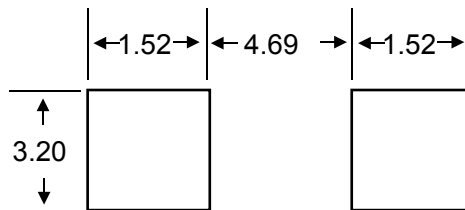
Fig.6- Typical Transient Thermal Impedance



Outline Drawing – SMC (DO-214AB)

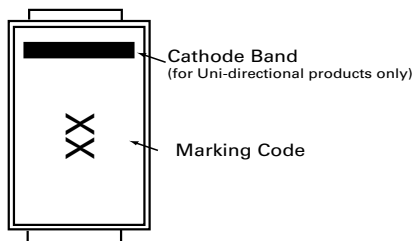
	Dim	Millimeters		Inches	
		Min	Max	Min	Max
L	6.60	7.11	0.260	0.280	
D	5.59	6.22	0.220	0.245	
D1	2.90	3.20	0.114	0.126	
T	7.75	8.13	0.305	0.320	
T1	0.76	1.52	0.030	0.060	
d	-	0.203	-	0.008	
H1	2.06	2.62	0.079	0.103	

Recommended Solder Pad Layout



Dimensions in mm

Part Marking System



Marking

Type number	Marking code
SSC52	SS52
SSC54	SS54
SSC56	SS56
SSC58	SS58
SSC510	SS510
SSC512	SS512
SSC515	SS515
SSC520	SS520

Package Information

Package Type	Description	Quantity (pcs)	Standard
DO-214AB	Tape & Reel - 16mm/13" tape	3000	EIA-481-D