

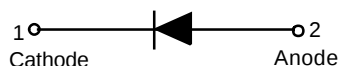
Features

- 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



SMA



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	SSA52	SSA54	SSA56	SSA58	SSA510	SSA512	SSA515	SSA520	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}	150								A
Max Instantaneous Forward Voltage at 5 A	V _F	0.55		0.70		0.85				V
Maximum DC Reverse Current T _a = 25°C at Rated DC Reverse Voltage T _a =100°C	I _R	1.0 50								mA
Typical Junction Capacitance ⁽¹⁾	C _j	500		300						pF
Typical Thermal Resistance ⁽²⁾	R _{θJA}	60								°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

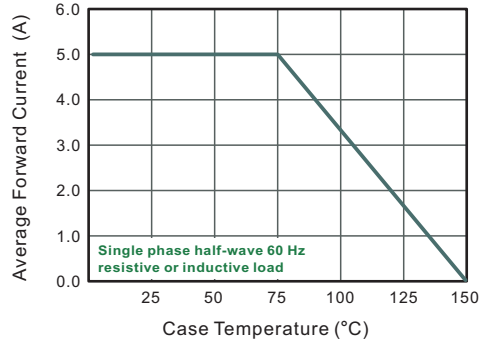


Fig.2 Typical Reverse Characteristics

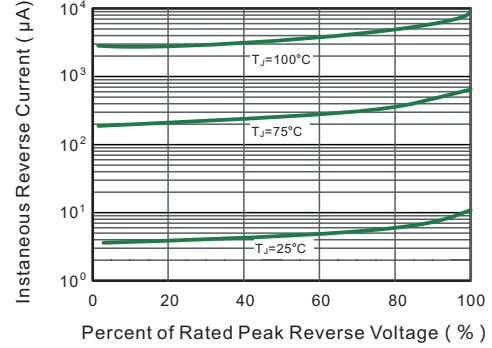


Fig.3 Typical Forward Characteristic

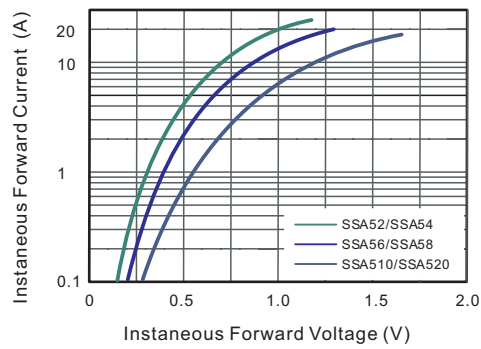


Fig.4 Typical Junction Capacitance

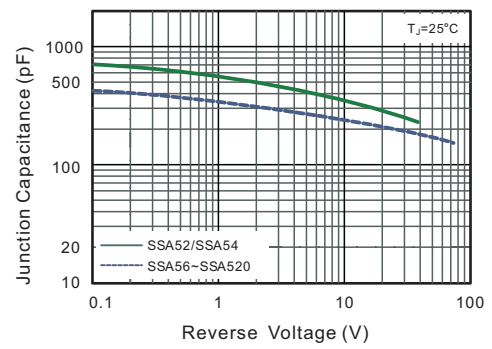


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

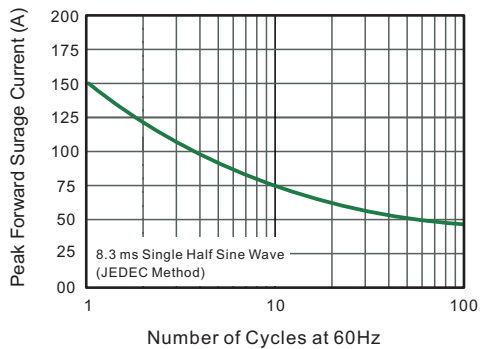
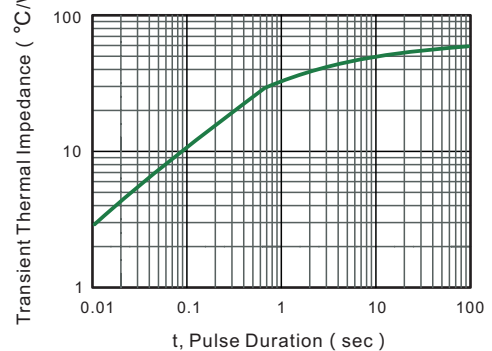


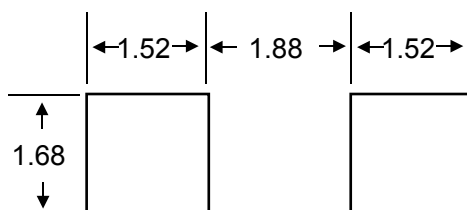
Fig.6- Typical Transient Thermal Impedance



Outline Drawing – SMA(DO-214AC)

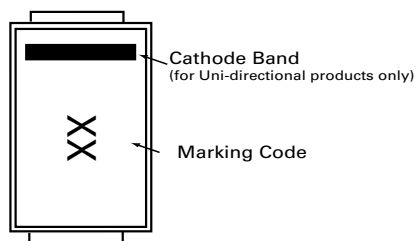
Dim	Millimeters		Inches	
	Min	Max	Min	Max
L	3.99	4.50	0.157	0.177
D	2.54	2.79	0.100	0.110
D1	1.25	1.65	0.049	0.065
T	4.93	5.28	0.194	0.208
T1	0.76	1.52	0.030	0.060
d	-	0.203	-	0.008
H1	1.98	2.29	0.078	0.090

Recommended Solder Pad Layout



Dimensions in mm

Part Marking System



Marking

Type number	Marking code
SSA52	SS52
SSA54	SS54
SSA56	SS56
SSA58	SS58
SSA510	SS510
SSA512	SS512
SSA515	SS515
SSA520	SS520

Package Information

Package Type	Description	Quantity (pcs)	Standard
DO-214AC	Tape & Reel -12mm/13" tape	5000	EIA-481-D