

5 Ampere Surface Mount Schottky Barrier Rectifier



SS52-SS520

Features:

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- Fast switching for high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters

DO-214AC
(SMA)

1.Cathode 2. Anode

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

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	SS52	SS54	SS56	SS58	SS510	SS512	SS515	SS520	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}	120								A
Max Instantaneous Forward Voltage at 5A	V_F	0.55	0.70	0.85			0.95			V
Maximum DC Reverse Current at Rated DC Reverse Voltage $T_a = 25^{\circ}\text{C}$ $T_a = 100^{\circ}\text{C}$	I_R	0.3 10			0.2 5			0.1 2		mA
Typical Junction Capacitance ⁽¹⁾	C_j	500	300						pF	
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	50								$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T_j	-55 ~ +125				-55 ~ +150				$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ +150								$^{\circ}\text{C}$

(1) Measured at 1 MHz and applied reverse voltage of 4 VDC

(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

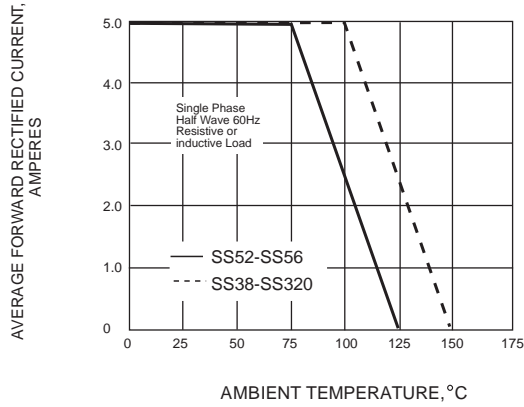


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

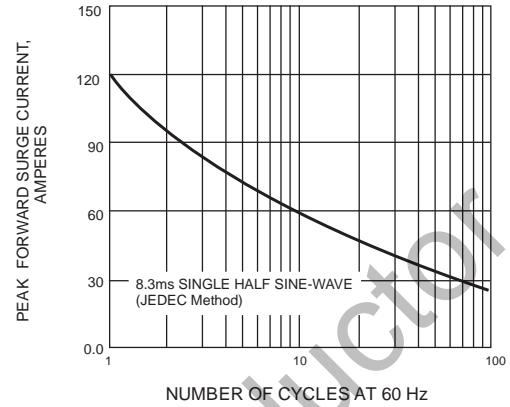


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

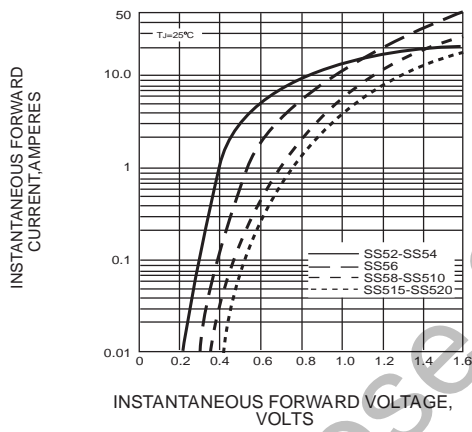


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

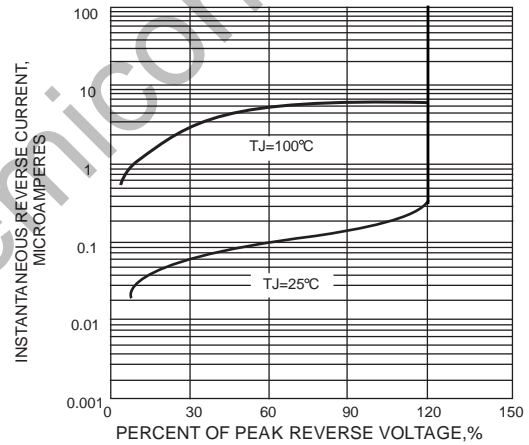
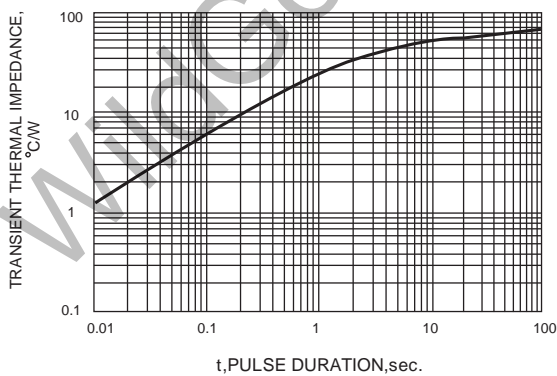
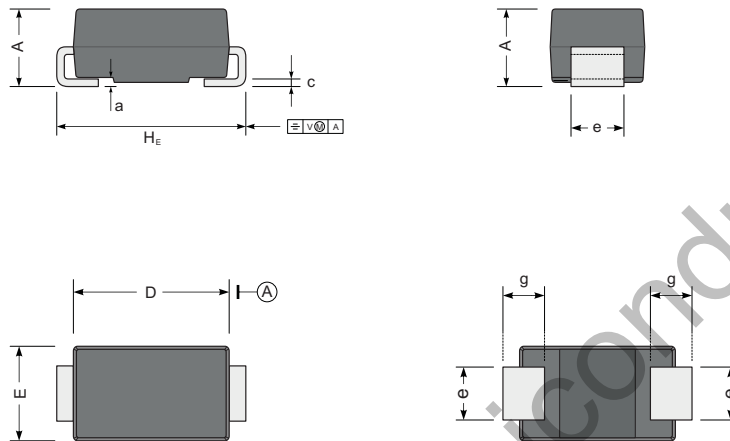


FIG. 5-TYPICAL TRANSIENT THERMAL IMPEDANCE

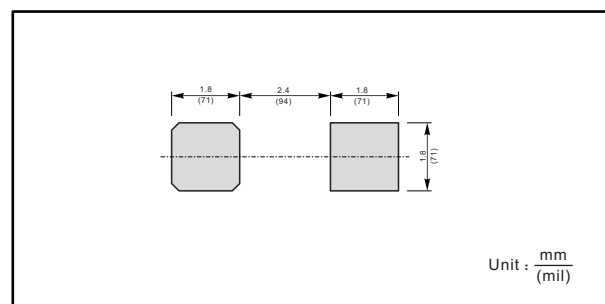


Package Dimension**SMA**

Unit: mm



UNIT		A	D	E	H _E	c	e	g	a
mm	max	2.2	4.5	2.7	5.2	0.31	1.6	1.5	0.3
	min	1.9	4.0	2.3	4.7	0.15	1.3	0.9	
mil	max	87	181	106	205	12	63	59	12
	min	75	157	91	185	6	51	35	

The recommended mounting pad size

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