DESCRIPTION

The SS52B~SS520B are available in SMB package.

MECHANICAL DATA

- Case: JEDEC DO-214AA/SMB molded plastic body
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.003 ounce, 0.095 grams

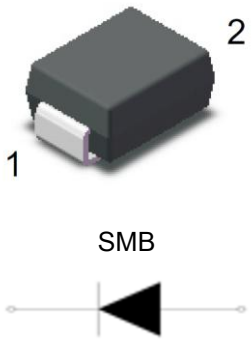
ORDERING INFORMATION

Package Type	Part Number
SMB	SS52B
	SS53B
	SS54B
	SS55B
	SS56B
	SS58B
	SS510B
	SS515B
	SS520B
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

FEATURE

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 250 °C/10 seconds at terminal

PIN DESCRIPTION



SMB

PIN#	DESCRIPTION
1	CATHODE
2	ANODE

ABSOLUTE MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Parameter	Symbol	SS52B	SS53B	SS54B	SS55B	SS56B	SS58B	SS510B	SS515B	SS520B	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	150	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5									A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	150									A
Maximum Instantaneous Forward Voltage at 2A	V_F	0.55	0.55	0.55	0.70	0.70	0.70	0.85	0.85	0.85	V
Maximum Instantaneous Reverse Current at Rated DC Reverse Voltage T_A= 25 ℃	I_R	1	1	1	0.30	0.30	0.30	0.30	0.30	0.30	mA
Maximum Instantaneous Reverse Current at Rated DC Reverse Voltage T_A= 100 ℃	I_R	50	50	50	25	25	25	25	25	25	mA
Typical Junction Capacitance (1)	C_J	500	500	500	300	300	300	300	300	300	pF
Typical Thermal Resistance (2)	$R_{\theta JA}$	50									℃/W
Operating Junction Temperature Range	T_J	-55 ~ + 150									℃
Storage Temperature Range	T_{STG}	-55 ~ + 150									℃

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

(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 PERFORMANCE CHARACTERISTICS

Fig 1. Forward Current Derating Curve

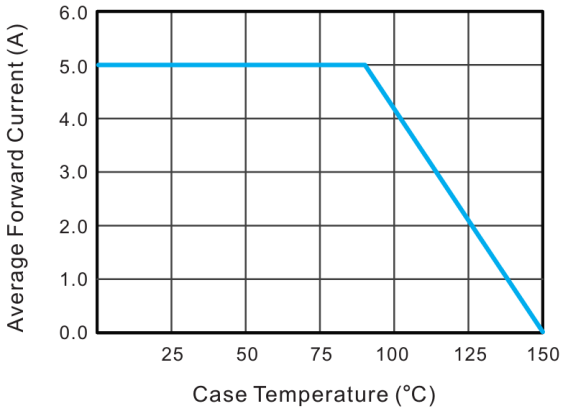


Fig 2. Typical Reverse Characteristics

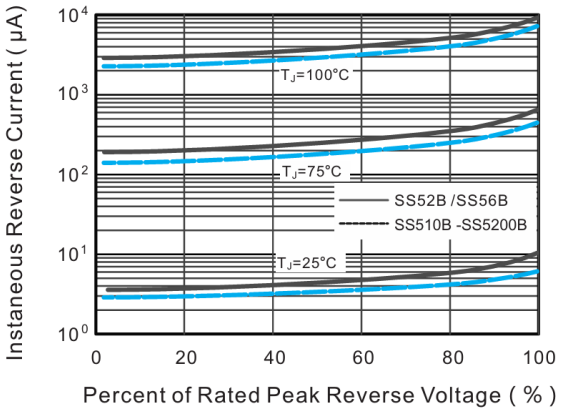


Fig 3. Typical Forward Characteristics

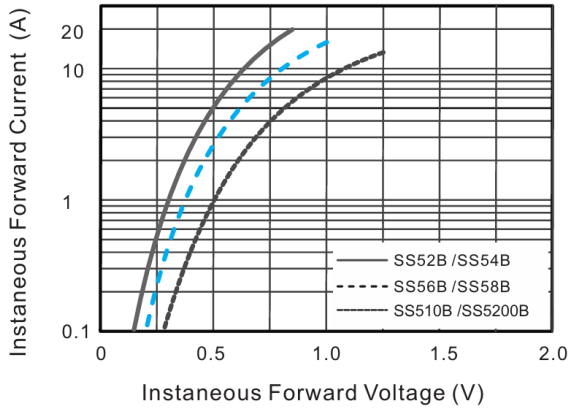


Fig 4. Typical Junction Capacitance

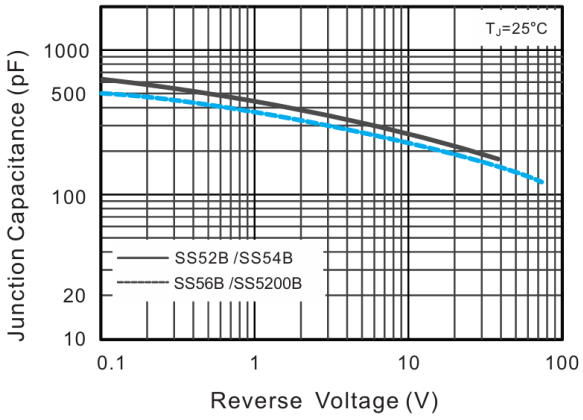


Fig 5. Maximum Non-Repetitive Peak Forward Surge Current

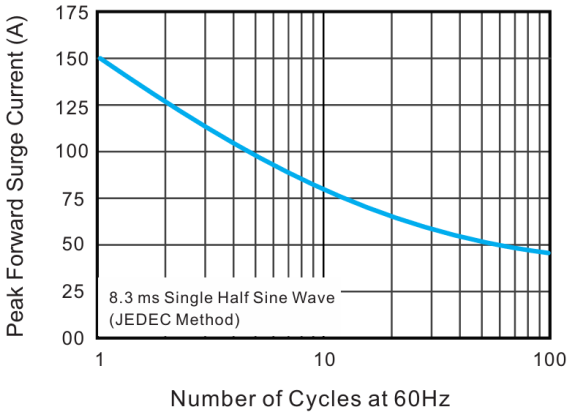
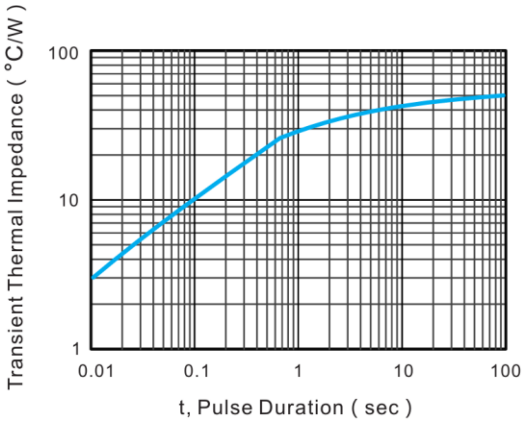
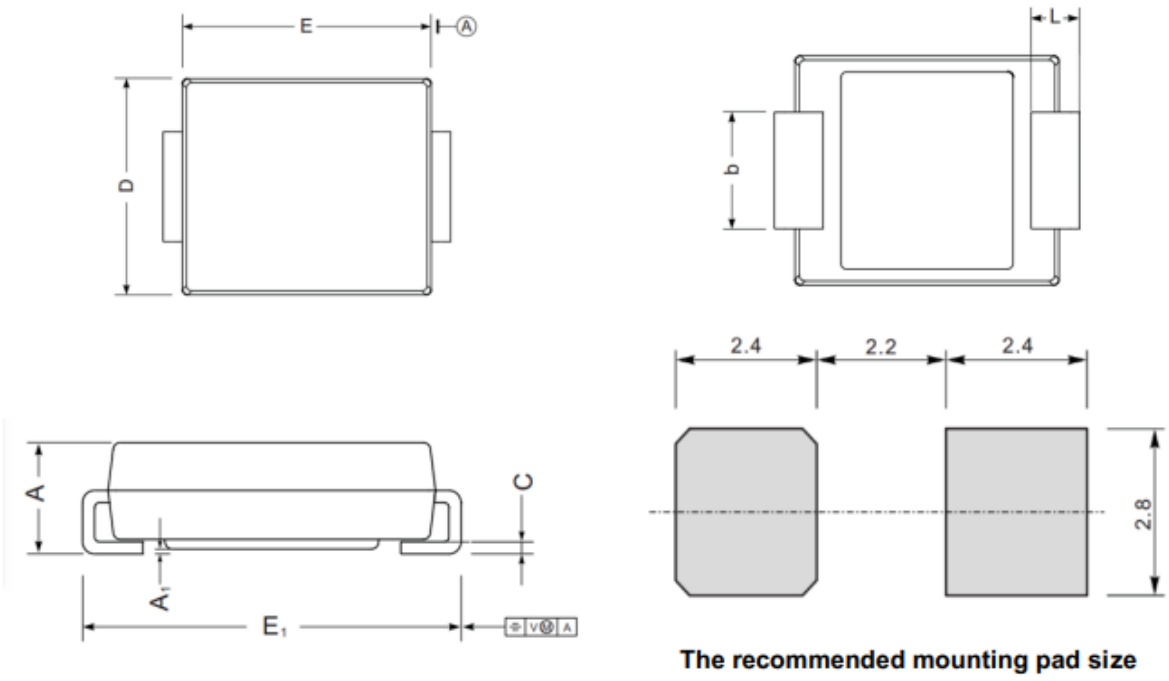


Fig 6. Typical Transient Thermal Impedance



PACKAGE INFORMATION

Dimension in SMB Package (Unit: mm)



The recommended mounting pad size

SYMBOL	MIN.	MAX.
A	2.130	2.440
A1	0.050	0.200
b	1.900	2.200
C	0.152	0.305
D	3.300	3.940
E	4.060	4.700
E1	5.080	5.590
L	0.800	1.500

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