

Reverse Voltage 20 to100V Forward Current 5.0A

FEATURES

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * Low power loss,high efficiency
- * For use in low voltage high frequency inverters, free wheeling,and polarity protection applications
- * Guardring for over voltage protection
- * High temperature soldering guaranteed: 260°C/10 seconds at terminals
- * IEC61000-4-2 ESD Air Contact $\geq\pm 15KV$

Mechanical Data

Case: JEDEC SMB-FL

molded plastic over glass die

Terminals: Plated leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.066 g

Handling precaution:None

Electrical Characteristic

1.Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

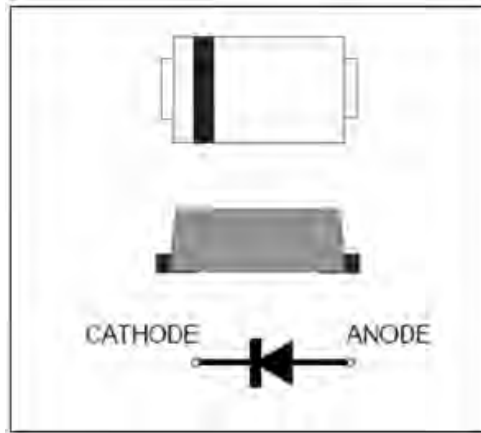
Parameter Symbol	symbol	SM520 BF-E	SM530 BF-E	SM540 BF-E	SM550 BF-E	SM560 BF-E	SM580 BF-E	SM5100 BF-E	Unit
device marking code		S52•	S53•	S54•	S55•	S56•	S58•	S510•	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RSM voltage	V_{RSM}	14	21	28	35	42	56	70	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum average forward rectified current lead length at TC = 75°C	IF(AV)	5.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100							A
Typical thermal resistance (Note1)	R θ JA R θ JC	135 25							°C/W
Operating junction and storage temperature range	TJ, TSTG	-40 to +150							°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SM520 BF-E	SM530 BF-E	SM540 BF-E	SM550 BF-E	SM560 BF-E	SM580 BF-E	SM5100 BF-E	Unit
Maximum instantaneous forward voltage at 5.0A	V_F	0.50			0.70		0.85		V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TJ = 100°C	IR	0.5 10.0					mA		
Typical junction capacitance at 4.0V, 1MHz	CJ	110							PF

NOTES:

1. 8.0mm2 (.013mm thick) land areas



we declare that the material of product is halogen free (green epoxy compound).

2.Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

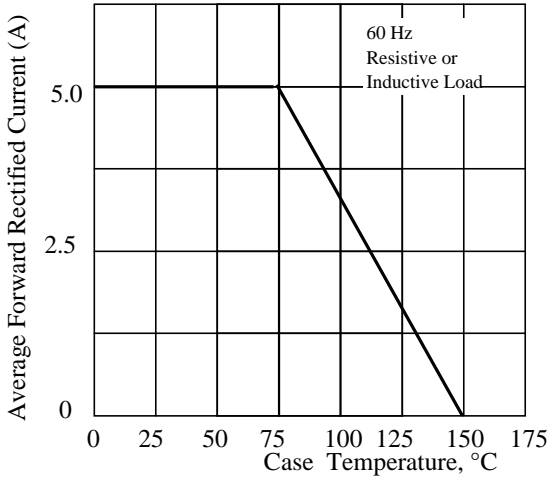


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

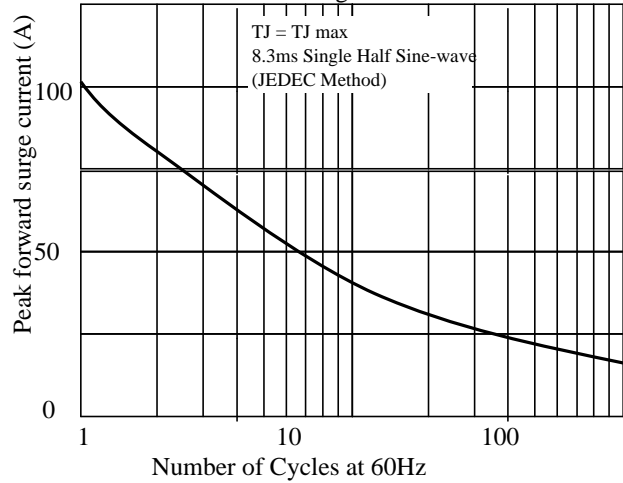


Fig 3. - Typical Instantaneous Forward Characteristics

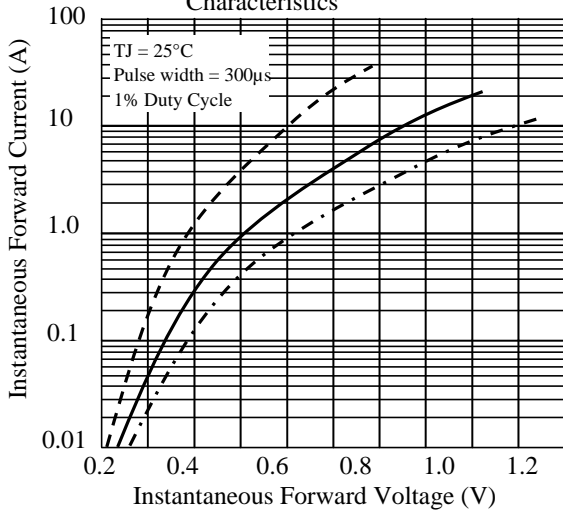


Fig 4. - Typical Reverse Characteristics

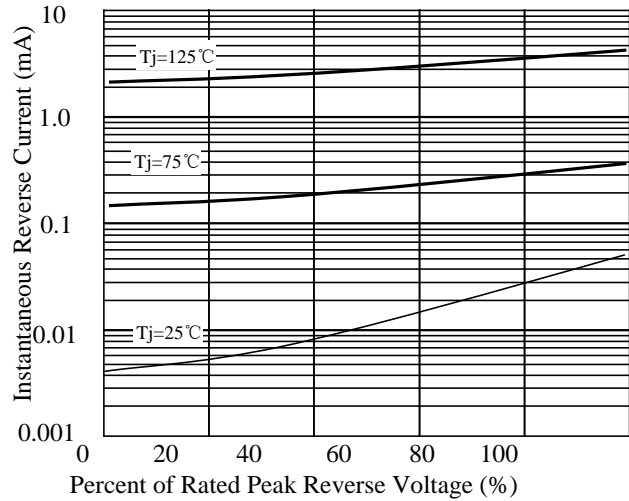


Fig 5. - typical transient thermal impedance

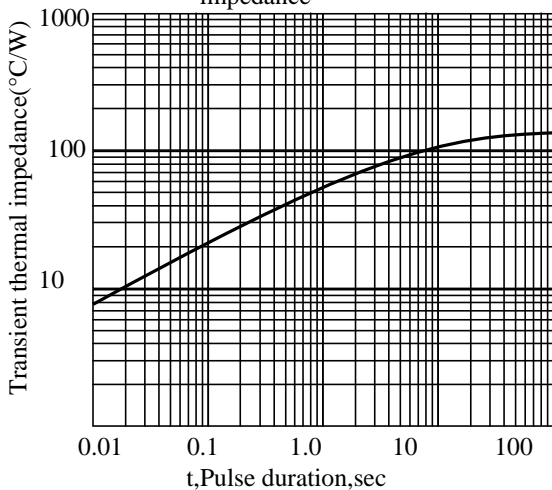
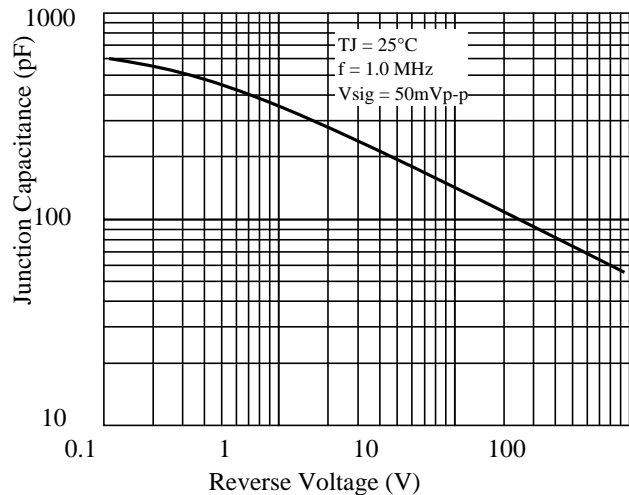
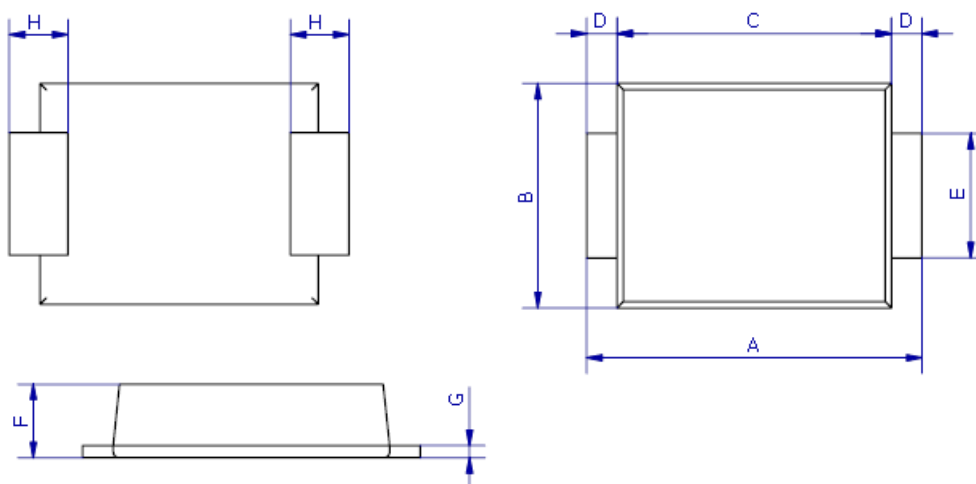


Fig 6. - Typical Junction Capacitance



3. dimension:

SMB-FL



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.3	5.7	0.209	0.224
B	3.4	3.8	0.134	0.150
C	4.3	4.7	0.169	0.185
D	0.45Typ		0.018Typ	
E	1.9	2.1	0.0748	0.08268
F	1.05	1.40	0.04134	0.05512
G	0.2	0.3	0.00591	0.00984
H	0.95Typ		0.037Typ	

Mounting Pad Layout

--- SMB-FL

