RS1ABF THRU RS1MBF

Surface Mount Fast Recovery Rectifiers

Reverse Voltage - 50 to 1000 V

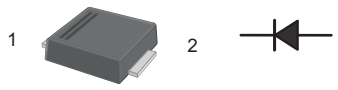
Forward Current - 1 A

FEATURES
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA
- Case: SMBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 57mg / 0.002oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Marking Code: R1AB-R1MB
Simplified outline SMBF symbol

Maximum Ratings and Electrical characteristics

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

Parameter	Symbols	RS1ABF	RS1BBF	RS1DBF	RS1GBF	RS1JBF	RS1KBF	RS1MBF	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at Ta = 65 °C	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.3							V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta =125 °C	I_R	5 50							μA
Maximum Reverse Recovery Time [1]	t_{rr}	150				250	500		ns
Typical Junction Capacitance [2]	C_j	15							pF
Typical Thermal Resistance [3]	$R_{\theta JA}$	85							°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°C

1) Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A
2) Measured at 1MHz and applied reverse voltage of 4V D.C
3) P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm²) copper pad areas.

Fig.1 Forward Current Derating Curve

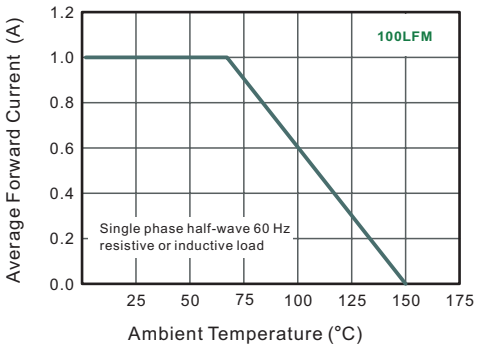


Fig.2 Typical Reverse Characteristics

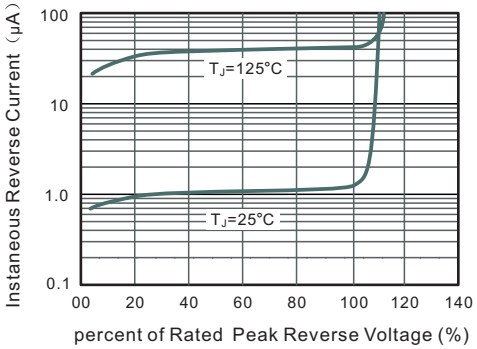


Fig.3 Typical Instaneous Forward Characteristics

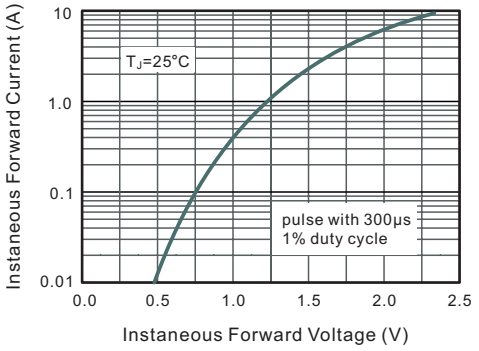


Fig.4 Typical Junction Capacitance

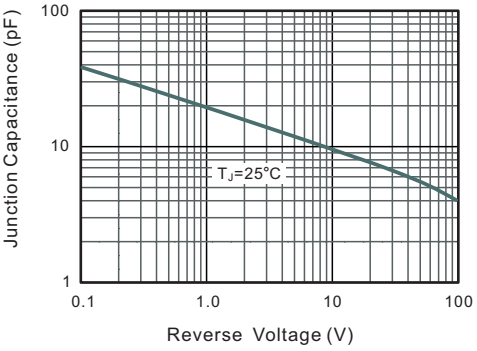
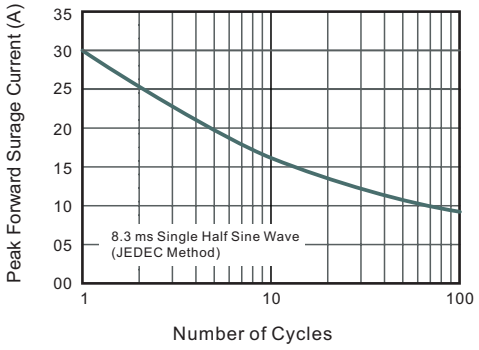
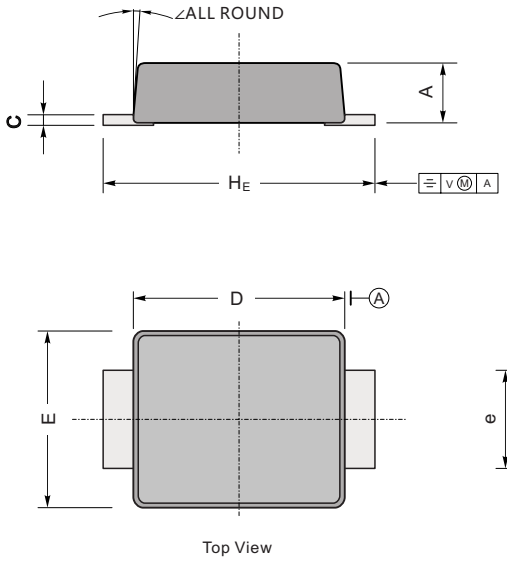


Fig.6 Maximum Non-Repetitive Peak Forward Surage Current



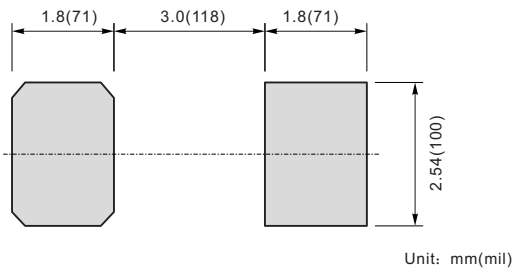
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads SMBF



UNIT		A	C	D	E	H_E	e	g	∠
mm	max	1.3	0.26	4.4	3.7	5.5	2.2	1.0	9°
	min	1.1	0.18	4.2	3.5	5.1	1.9		
mil	max	51	10	173	146	216	86	40	
	min	43	7	165	138	200	75		

The recommended mounting pad size



Marking

Type number	Marking code
RS1ABF	R1AB
RS1BBF	R1BB
RS1DBF	R1DB
RS1GBF	R1GB
RS1JBF	R1JB
RS1KBF	R1KB
RS1MBF	R1MB