

RS5ABF~RS5MBF

Rev.A Jan.-2024



DATA SHEET

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating							Unit
		RS5ABF	RS5BBF	RS5DBF	RS5GBF	RS5JBF	RS5KBF	RS5MBF	
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 @ Fig.1	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
Peak Forward Surge Current,1.0ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	300							A
I ² t Rating for fusing (3ms t 8.3ms)	I ² t	93.3							A ² s
Typical Junction Capacitance ⁽¹⁾	C _j	38					70		pF
Typical Thermal Resistance ⁽²⁾	R _{JA}	42							/W
	R _{JC}	10							
	R _{JL}	15							
Operating and Storage Temperature Range	T _J , T _{stg}	-55~+150							

Note:

- 1 Measured at 1 MHz and applied reverse voltage of 4V D.C
- 2 P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Rating							Unit
			RS5ABF	RS5BBF	RS5DBF	RS5GBF	RS5JBF	RS5KBF	RS5MBF	
Maximum Forward Voltage	V_F	$I_F=5A$	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_a=25$	10							A
		$T_a=125$	150							A
Maximum Reverse Recovery Time	t_{rr}	$I_F=0.5A$ $I_R=1A$ $I_{rr}=0.25A$	150				250	500		ns

/ Electrical Characteristic Curve

Fig.1 Maximum Average Forward Current Rating

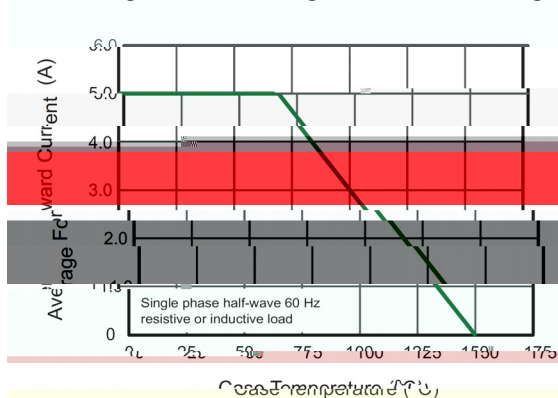


Fig.2 Typical Reverse Characteristics

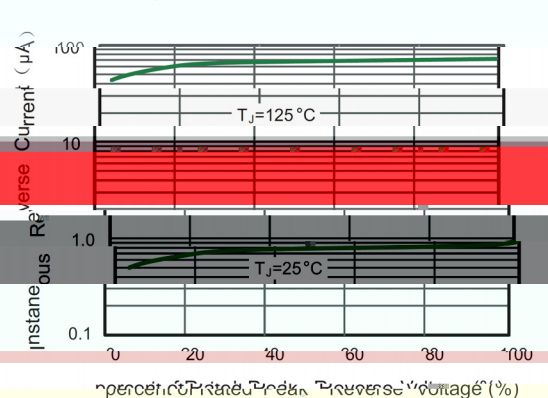


Fig.3 Typical Instantaneous Forward Characteristics

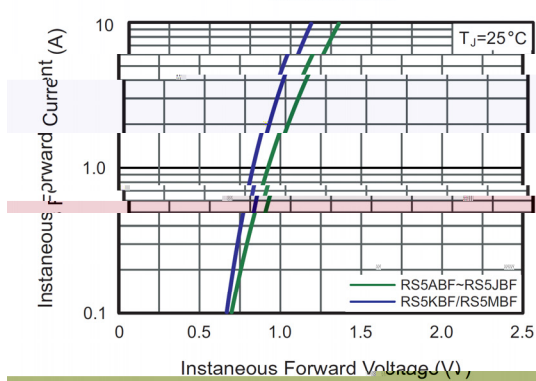


Fig.4 Typical Junction Capacitance

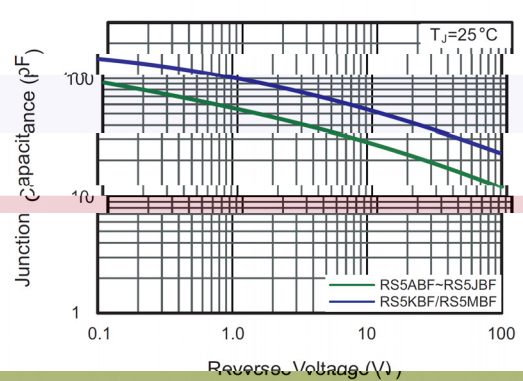
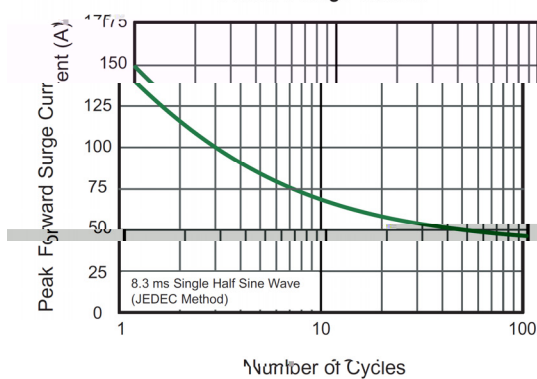
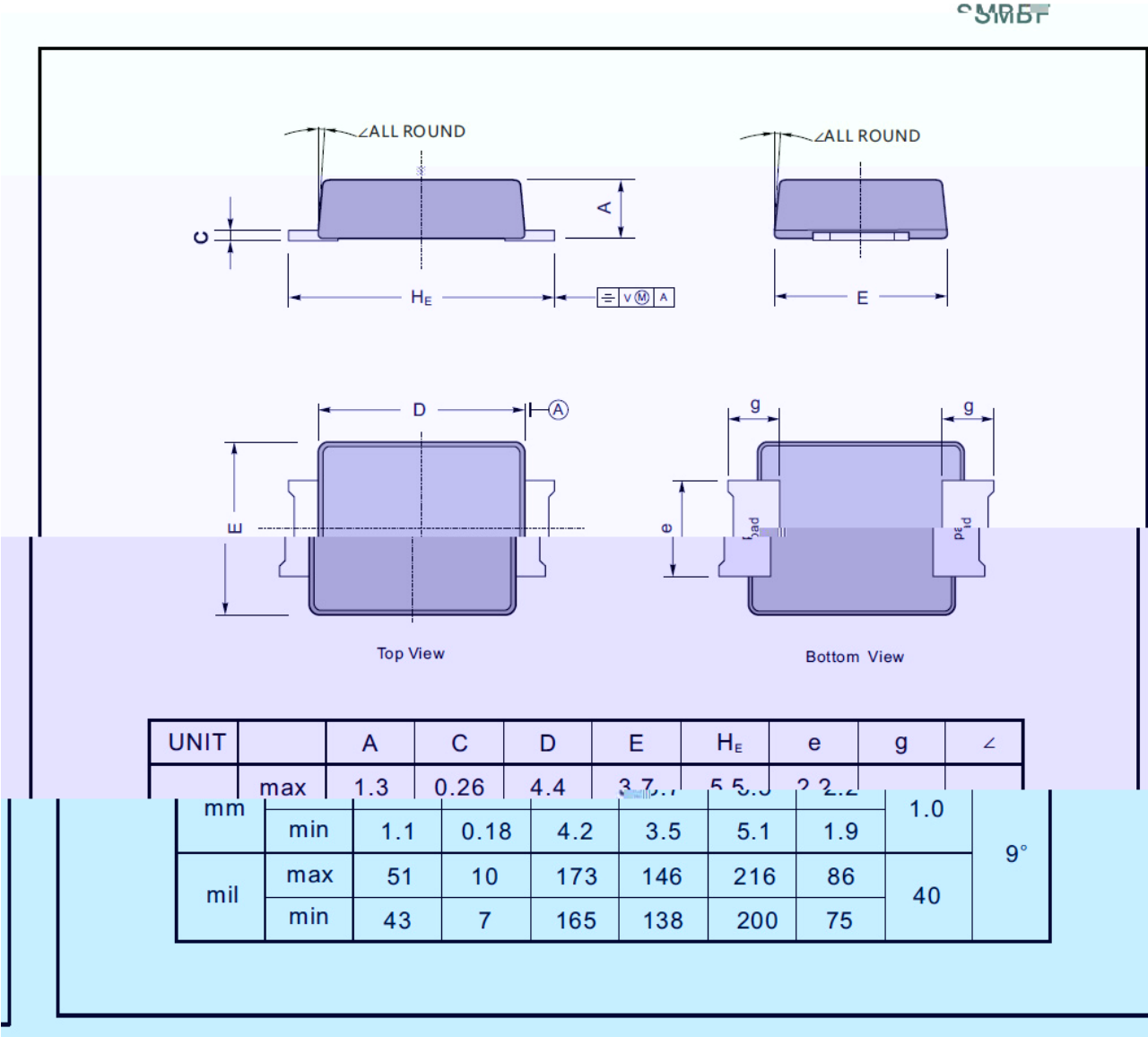


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



/ Package Dimensions



/ Marking Instructions



R5AB

Note:

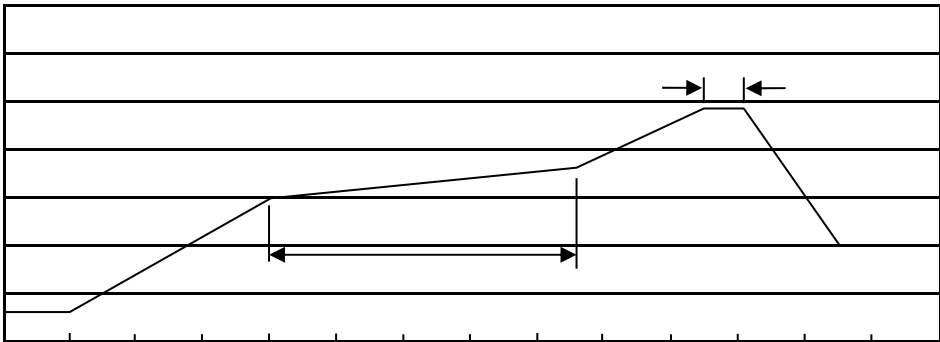
R5AB Product Type Code

**** Lot No. Code, code change with Lot No

Marking

Type number	Marking code
RS5ABF	R5AB
RS5BBF	R5BB
RS5DBF	R5DB
RS5GBF	R5GB
RS5JBF	R5JB
RS5KBF	R5KB
RS5MBF	R5MB

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 180

60 90sec;
- 2

245 5

5 0.5sec;
- 3

2 10

/sec.
- 1.Preheating:150~180

, Time:60~90sec.
- 2.Peak Temp.:245 5

, Duration:5 0.5sec.
3. Cooling Speed: 2~10

/sec.

/ Resistance to Soldering Heat Test Conditions

260 5 10 1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SMBF	5,000	2	10,000	7	70,000	13 ×12	336X336X40	380X335X366

/ Notices