

Surface Mount Fast Recovery Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 2 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

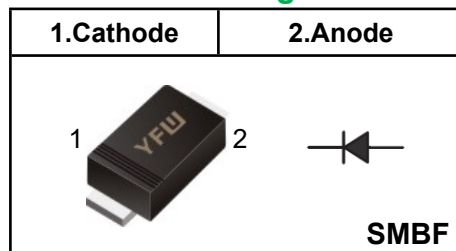
- ◆Case: SMBF
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 57mg /0.002oz

Absolute Maximum Ratings and 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 %.

Pinning



Marking Code

RS2ABF	YFW R2AB
RS2BBF	YFW R2BB
RS2DBF	YFW R2DB
RS2GBF	YFW R2GB
RS2JBF	YFW R2JB
RS2KBF	YFW R2KB
RS2MBF	YFW R2MB

Parameter	Symbols	RS2ABF	RS2BBF	RS2DBF	RS2GBF	RS2JBF	RS2KBF	RS2MBF	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 T _c = 125 °C	I_{F(AV)}	2							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	50							A
Maximum Instantaneous Forward Voltage at 2 A	V_F	1.3							V
Maximum DC Reverse Current T _a = 25 °C at Rated DC Blocking Voltage T _a =125 °C	I_R	5 100							μA
Typical Junction Capacitance at V _R =4V,f=1MHZ	C_J	28							pF
Maximum Reverse Recovery Time ⁽¹⁾	T_{rr}	150				250	500		nS
Typical Thermal Resistance ⁽²⁾	R_{θJA}/ R_{θJC}	60/18							°C/W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 ~ +150							°C

(1) Measured with $I_F=0.5\text{A}, I_R=1\text{A}, I_n=0.25\text{A}$

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Fig.1 Forward Current Derating Curve

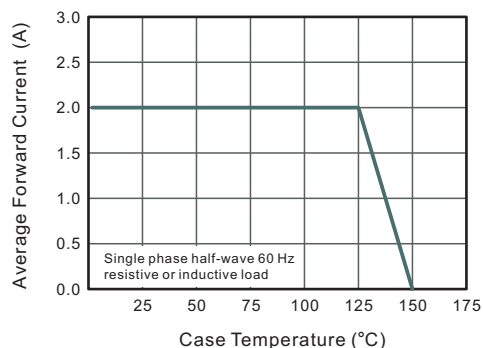


Fig.2 Typical Reverse Characteristics

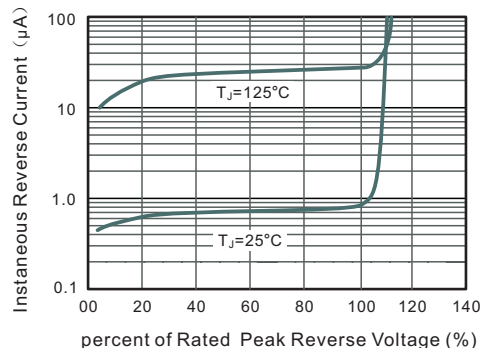


Fig.3 Typical Instantaneous Forward Characteristics

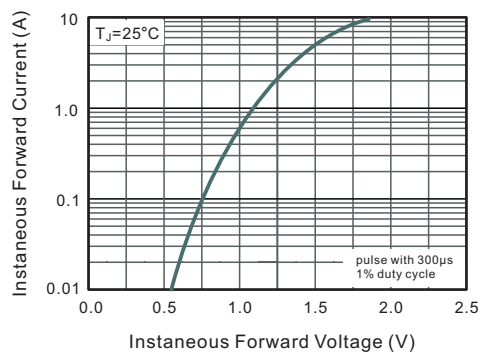


Fig.4 Typical Junction Capacitance

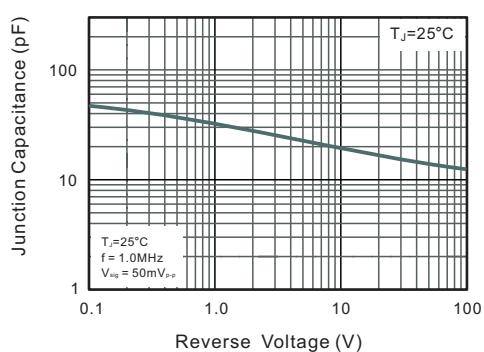
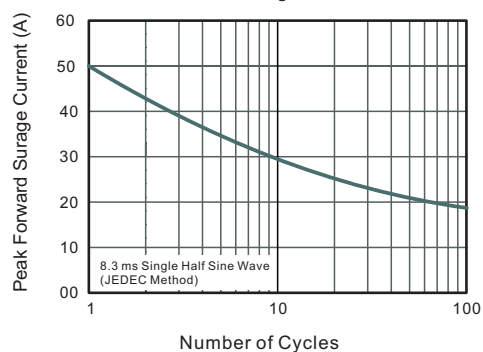
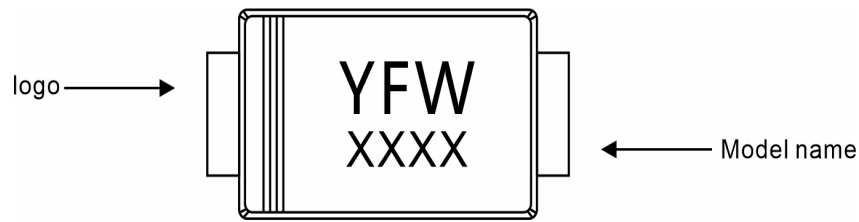


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Marking Diagram

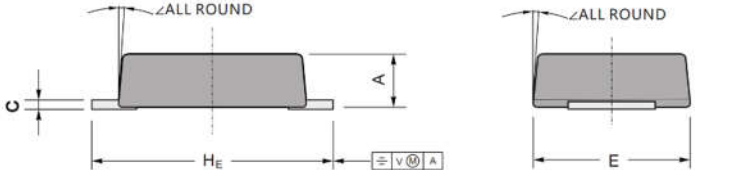


Ordering information

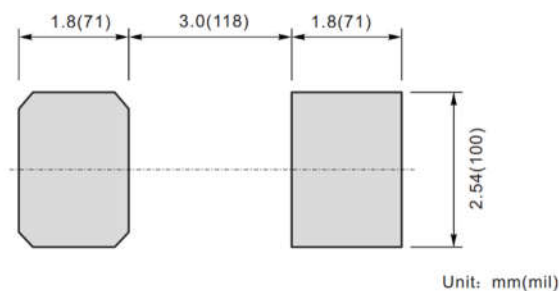
Package	Packing Description	Packing Quantity
SMBF	Tape/Reel, 13" reel	5000PCS/Reel 50000PCS/Carton

Package Dimensions

SMBF

	<table><tr><th rowspan="2">Dim.</th><th colspan="2">Millimeter(mm)</th><th colspan="2">mil</th></tr><tr><th>Min.</th><th>Max.</th><th>Min.</th><th>Max.</th></tr><tr><td>A</td><td>1.1</td><td>1.3</td><td>43</td><td>51</td></tr><tr><td>C</td><td>0.18</td><td>0.26</td><td>7</td><td>10</td></tr><tr><td>D</td><td>4.2</td><td>4.4</td><td>165</td><td>173</td></tr><tr><td>E</td><td>3.5</td><td>3.7</td><td>138</td><td>146</td></tr><tr><td>H_E</td><td>5.1</td><td>5.5</td><td>200</td><td>216</td></tr><tr><td>e</td><td>2.2</td><td>1.9</td><td>75</td><td>86</td></tr><tr><td>g</td><td colspan="2">1.0</td><td colspan="2">40</td></tr><tr><td>∠</td><td colspan="4">9°</td></tr></table>	Dim.	Millimeter(mm)		mil		Min.	Max.	Min.	Max.	A	1.1	1.3	43	51	C	0.18	0.26	7	10	D	4.2	4.4	165	173	E	3.5	3.7	138	146	H _E	5.1	5.5	200	216	e	2.2	1.9	75	86	g	1.0		40		∠	9°			
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The recommended mounting pad size



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