

US2ABF THRU US2MBF

Surface Mount Fast Recovery Rectifier

Reverse Voltage - 50 to 1000 V

Forward Current - 2 A

Features

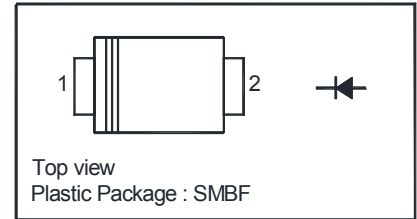
- Glass passivated chip junction
- For surface mounted applications
- Low profile package
- Fast reverse recovery time

Mechanical Data

- **Case:** SMBF
- **Terminals:** Solderable per MIL-STD-750, Method 2026

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



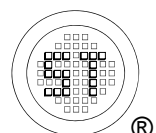
Absolute Maximum Ratings and Characteristics

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%.

Parameter	Symbols	US2ABF	US2BBF	US2DBF	US2GBF	US2JBF	US2KBF	US2MBF	Units
	Marking	U2AB	U2BB	U2DB	U2GB	U2JB	U2KB	U2MB	-
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 $T_C = 125^\circ\text{C}$	$I_{F(AV)}$	2							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	55				50			A
Maximum Forward Voltage at 2 A	V_F	1		1.3		1.6			V
Maximum Reverse Current at Rated DC Blocking Voltage $T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$	I_R	5				100			μA
Typical Junction Capacitance at $V_R = 4\text{ V}$, $f = 1\text{ MHz}$	C_j	50		40		30			pF
Maximum Reverse Recovery Time at $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$	t_{rr}	50				75			ns
Typical Thermal Resistance ¹⁾	$R_{\theta JA}$ $R_{\theta JC}$	60				20			$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150							$^\circ\text{C}$

¹⁾ P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.



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Electrical Characteristics Curves

Fig.1 Forward Current Derating Curve

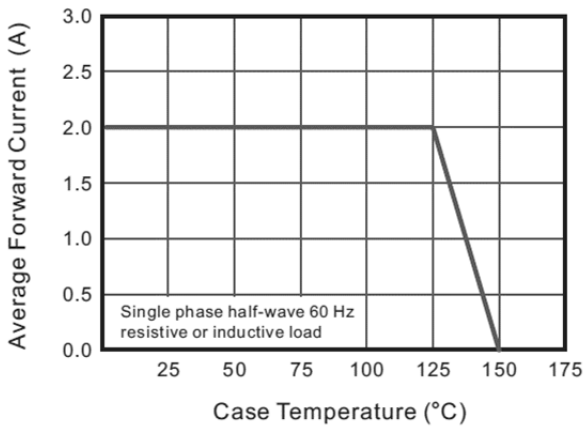


Fig. 2 Typical Reverse Characteristics

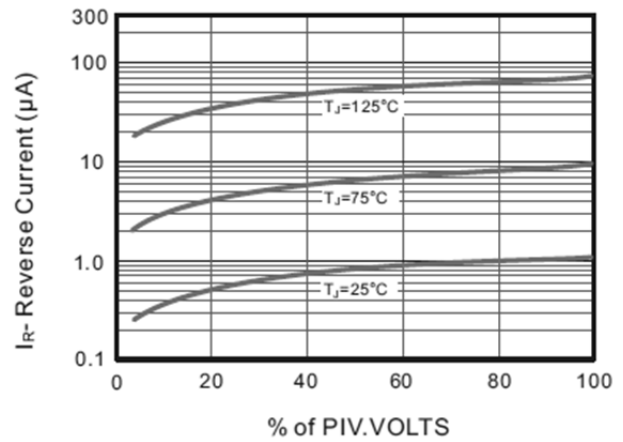


Fig.3 Typical Forward Characteristics

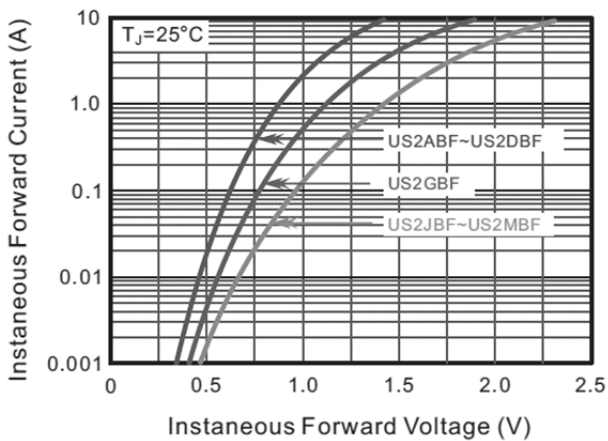


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

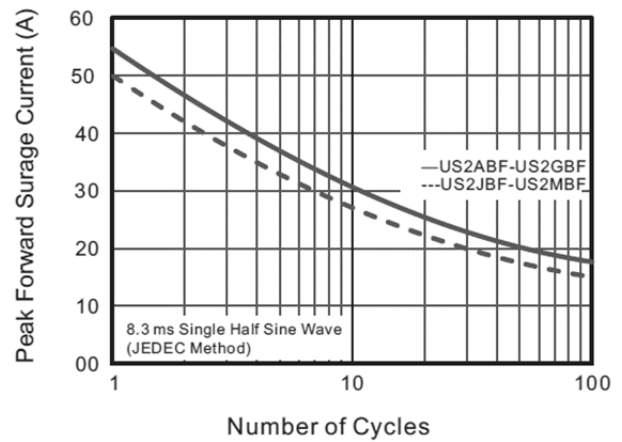


Fig.5 Typical Junction Capacitance

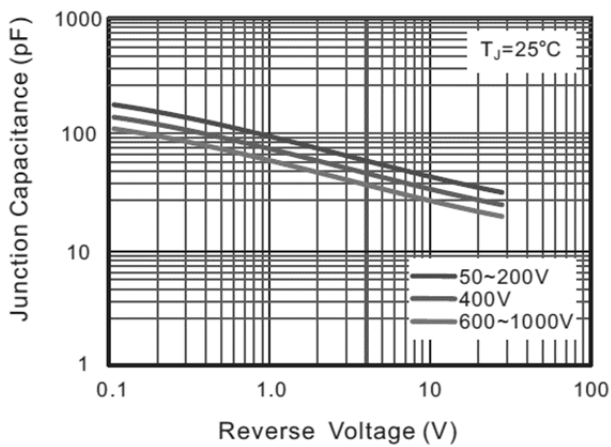
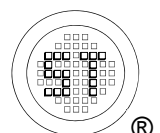
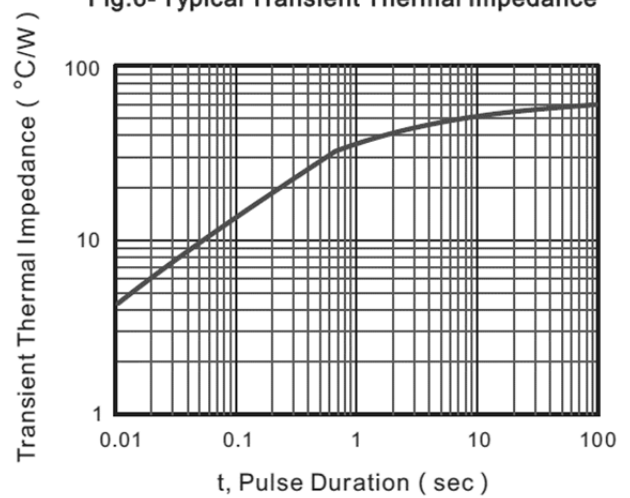


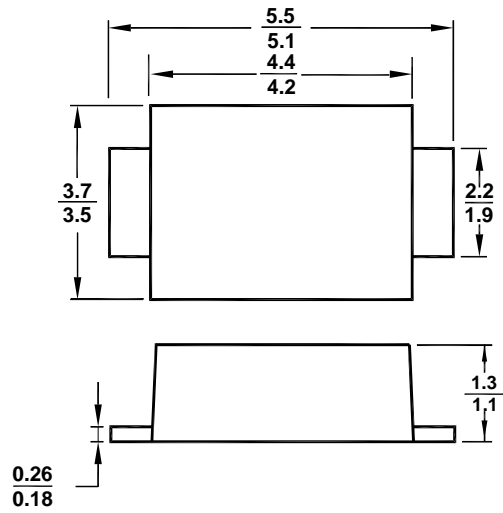
Fig.6- Typical Transient Thermal Impedance



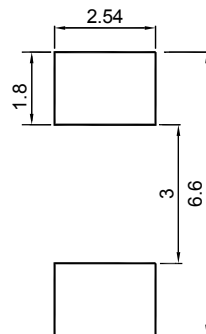
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Package Outline Dimensions (Units: mm)

SMBF



Recommended Soldering Footprint



Marking information

" **** " = Part No.

" III " = Cathode line

Font type: Arial

