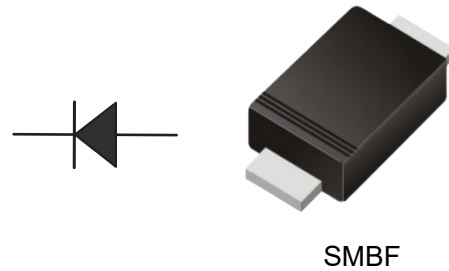


Surface Mount Super fast Recovery Rectifier

Parameter	Value	Unit
V_{RRM}	50~600	V
$I_{F(AV)}$	3.0	A
T_{RR}	35	ns



SMBF

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Super fast reverse recovery time

Applications

- For use in high-frequency rectification and free-wheeling applications in switching-mode converters and inverters for consumer electronics, computer systems, and telecommunications.

Absolute Maximum Ratings and Characteristics (Ta=25°C unless otherwise noted)

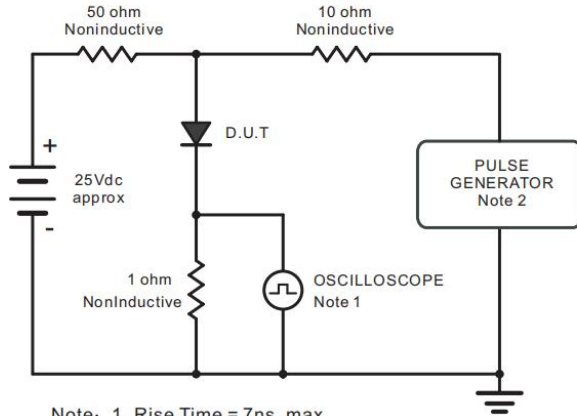
Parameter	Symbol	ES3ABF	ES3BBF	ES3CBF	ES3DBF	ES3EBF	ES3GBF	ES3JBF	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at $T_c = 125^\circ\text{C}$	$I_{F(AV)}$	3.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	80							A
Maximum Forward Voltage at 3A	V_F	1.0				1.25		1.68	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	5 100							μA
Typical Junction Capacitance at $V_R=4\text{V}$, $f=1\text{MHz}$	C_j	35							pF
Maximum Reverse Recovery Time (1)	t_{rr}	35							ns
Typical Thermal Resistance (2)	$R_{\theta JA}$ $R_{\theta JC}$	45 15							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							$^\circ\text{C}$

Notes:

- (1) Measured with $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = 0.25\text{A}$.
 (2) P.C.B. mounted with 2.0" X 2.0" (5 X 5cm) copper pad areas.

Typical characteristics

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm, 22pF.
2. Rise Time = 10ns, max.
Source Impedance = 50 ohms.

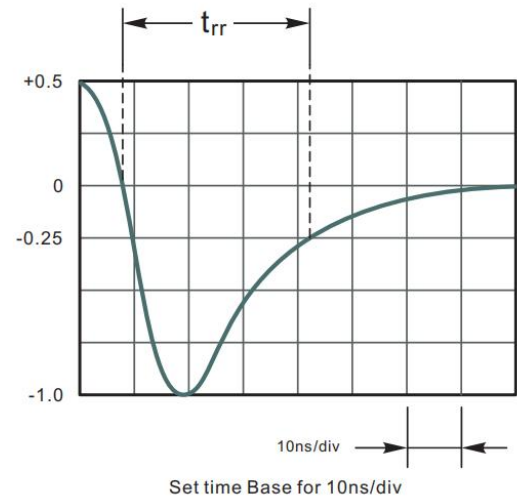


Fig.2 Maximum Average Forward Current Rating

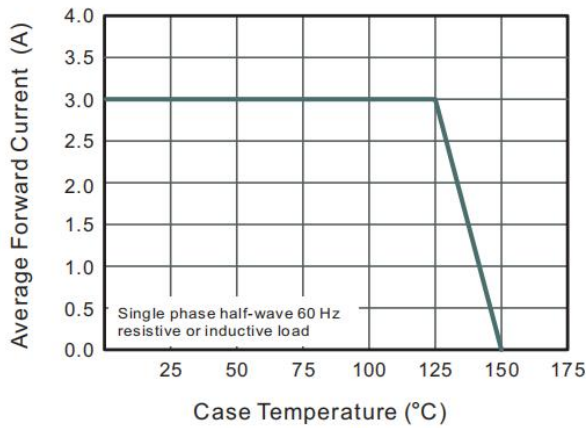


Fig.3 Typical Reverse Characteristics

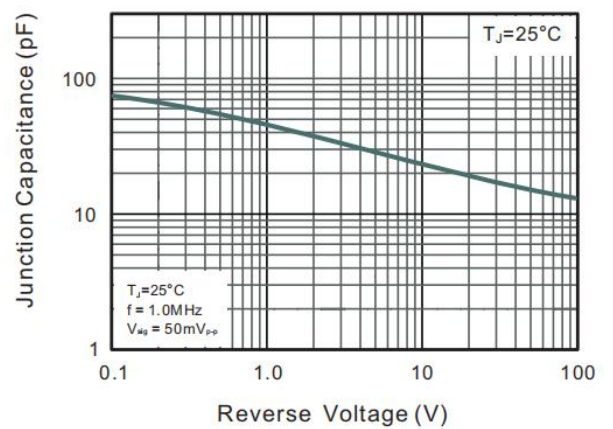
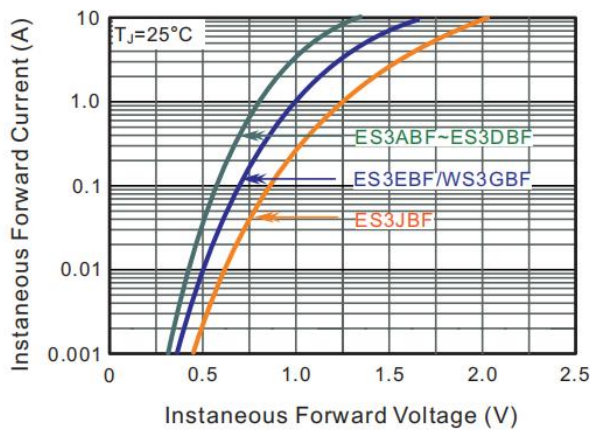
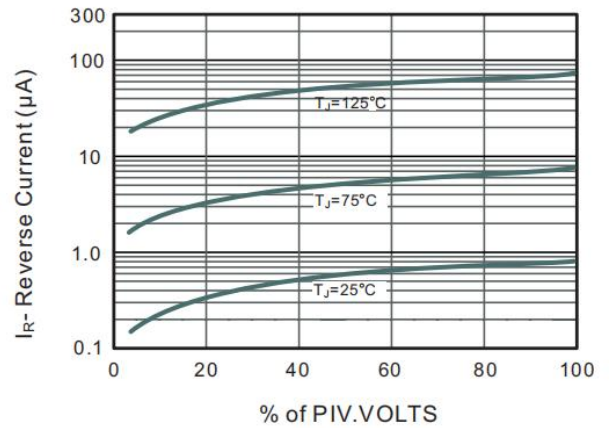
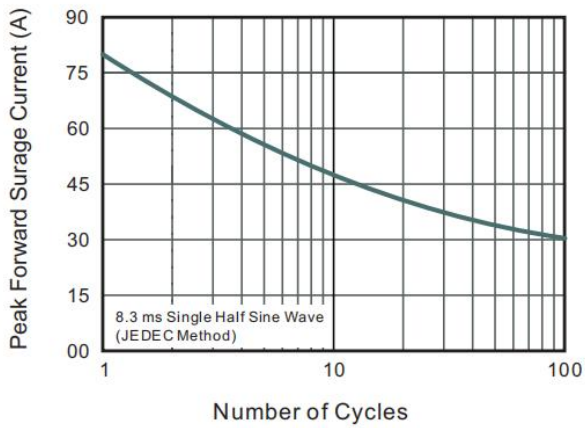


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current

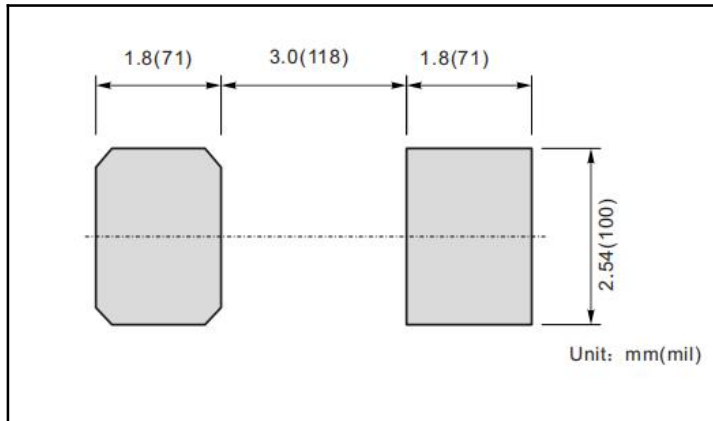


Package Outlines

Plastic surface mounted package; 2 leads

SMBF

UNIT		A	C	D	E	H _E	e	g	∠
mm	max	1.45	0.26	4.4	3.7	5.5	2.2	0.9	6°
	min	1.25	0.18	4.2	3.5	5.1	1.9		
mil	max	57	10	173	146	216	86	35	
	min	49	7	165	138	200	75		

The recommended mounting pad size**Marking**

Type number	Marking code
ES3ABF	E3AB
ES3BBF	E3BB
ES3CBF	E3CB
ES3DBF	E3DB
ES3EBF	E3EB
ES3GBF	E3GB
ES3JBF	E3JB

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