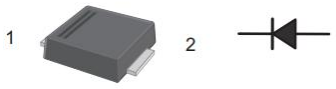
ES3ABF THRU ES3JBF

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Superfast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives



Simplified outline SMBF and symbol

Mechanical Data

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

Pinning

PIN	DESCRIPTION
1	Cathode
2	Anode

Absolute Maximum Ratings And Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

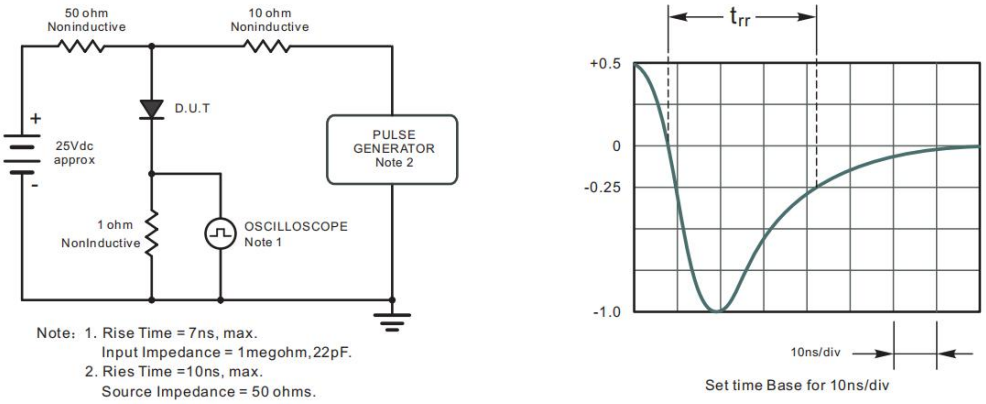
Parameter	Symbols	ES3ABF	ES3BBF	ES3CBF	ES3DBF	ES3EBF	ES3GBF	ES3JBF	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	3							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	80							A
Maximum Forward Voltage at 1 A	V_F	1.0				1.25		1.68	V
Maximum DC Reverse Current Ta = 25° C at Rated DC Blocking Voltage Ta =125° C	I_R	5 100							μA
Typical Junction Capacitance at VR=4V, f=1MHz	Cj	35							pF
Maximum Reverse Recovery Time (1)	t_{rr}	35							ns
Typical Thermal Resistance(2)	$R_{\theta JA}$ $R_{\theta JC}$	45 15							℃/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							℃

（1）Measured with IF = 0.5 A, IR = 1 A, Irr = 0.25 A

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

Rating And Characteristic Curves

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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

Fig.2 Maximum Average Forward Current Rating

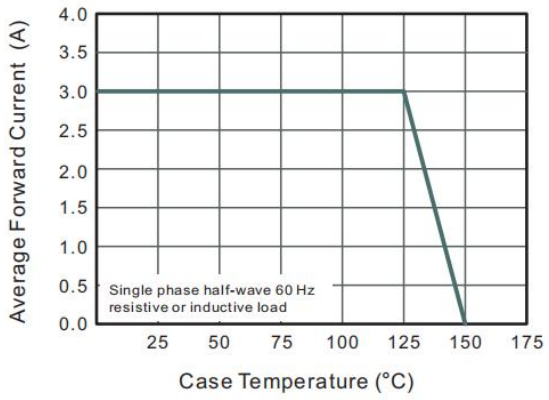


Fig.3 Typical Reverse Characteristics

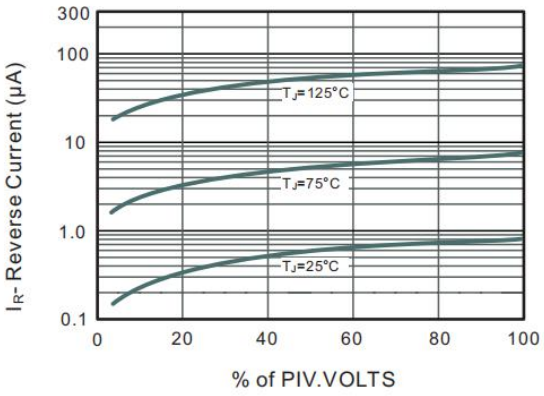


Fig.4 Typical Forward Characteristics

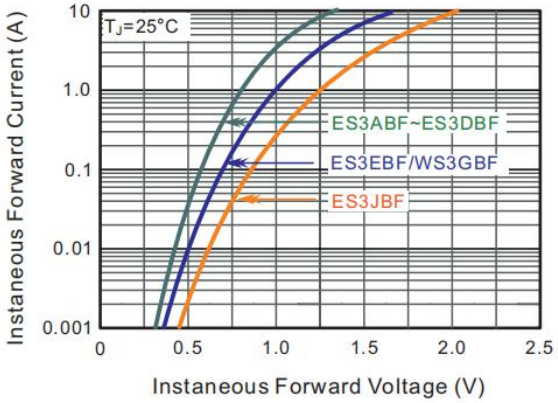


Fig.5 Typical Junction Capacitance

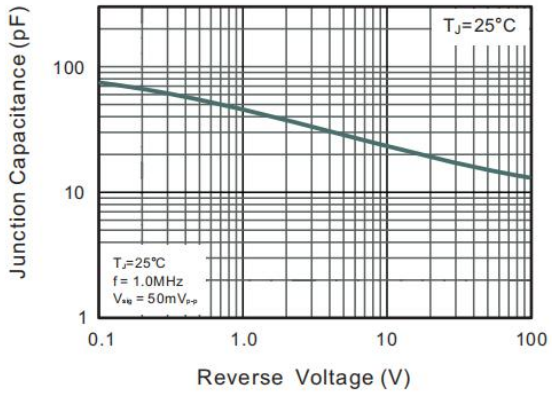
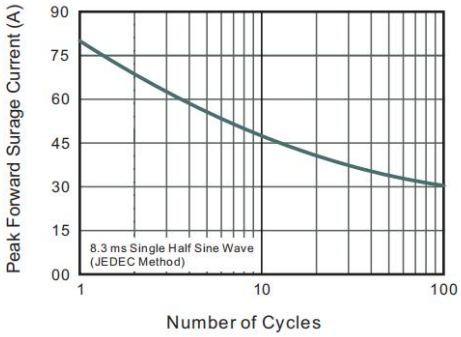
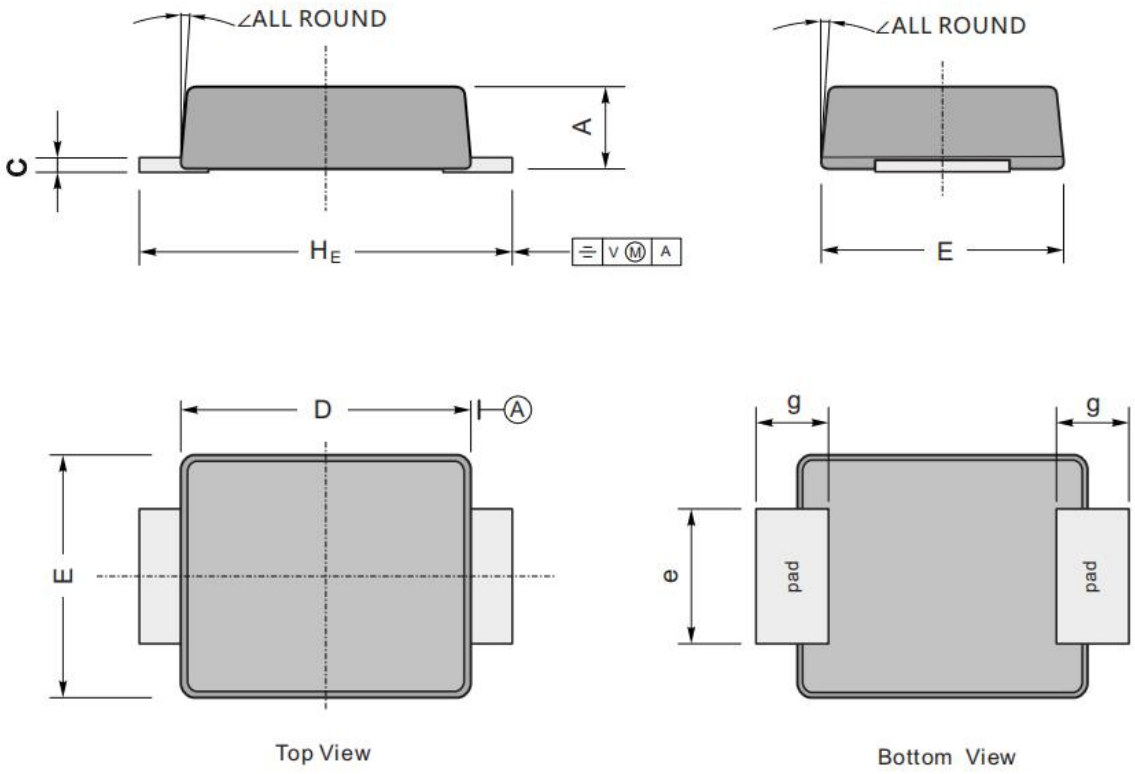


Fig.6 Maximum Non-Repetitive Peak
Forward Surage Current



Package Outline

Plastic surface mounted package; 2 leads SMBF



UNIT		A	C	D	E	HE	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