



ES3ABF THRU ES3JBF

Surface Mount Superfast Rectifiers

Reverse Voltage – 50 to 600 V

Forward Current – 3 A

FEATURES

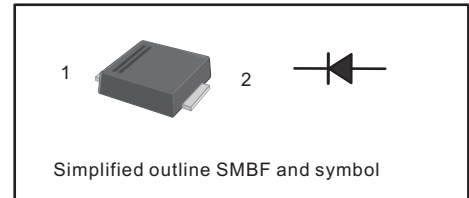
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Superfast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- Case: SMBF
- Terminals: Solderable per MIL-STD-750, Method 202 6
- Approx. Weight: 57mg / 0.002oz

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, derate current by 20%.

| Parameter | Symbols | ES3ABF | ES3BF | 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 $T_L = 100\text{ }^\circ\text{C}$ | $I_{F(AV)}$ | 3 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 100 | | | | | | | A |
| Maximum Forward Voltage at 3A | V_F | 1.0 | | | | 1.25 | | 1.65 | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25\text{ }^\circ\text{C}$ $T_a = 125\text{ }^\circ\text{C}$ | I_R | 5 100 | | | | | | | μA |
| Typical Junction Capacitance | C_j | 35 | | | | | | | 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} | 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 | | | | | | | $^\circ\text{C}$ |

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

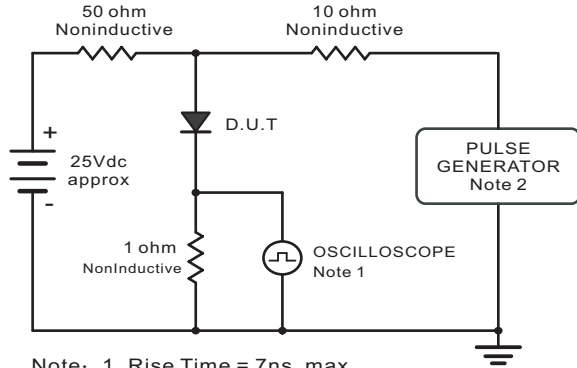
2) P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm) copper pad areas.



ES3ABF THRU ES3JBF Surface Mount Superfast Rectifiers

Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

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.

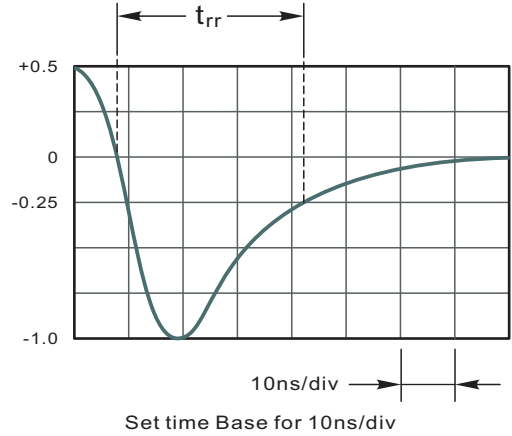


Fig.2 Maximum Average Forward Current Rating

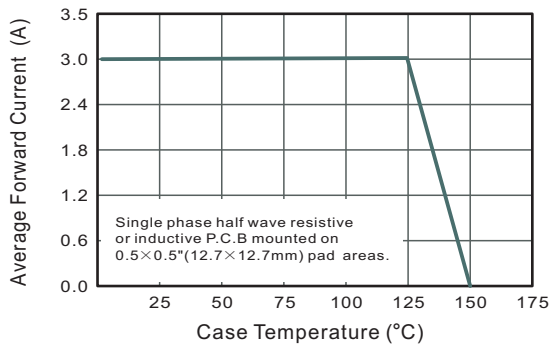


Fig.3 Typical Reverse Characteristics

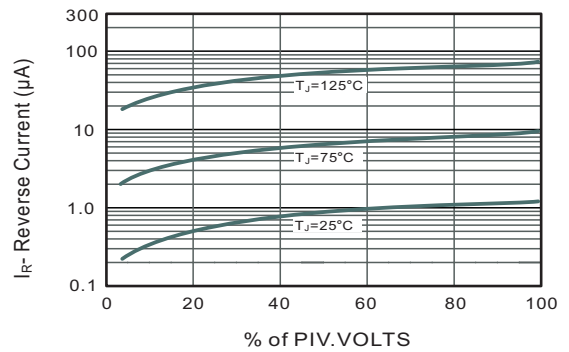


Fig.4 Typical Forward Characteristics

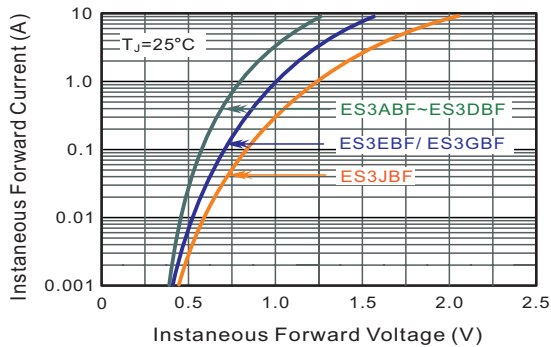


Fig.5 Typical Junction Capacitance

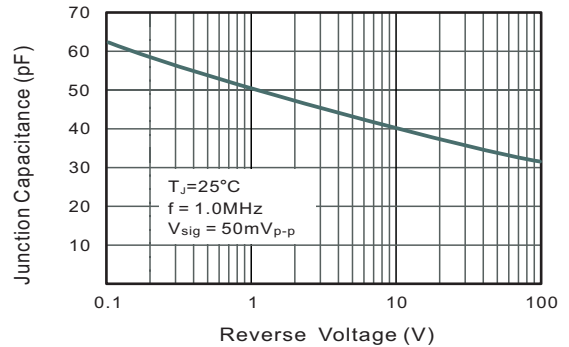
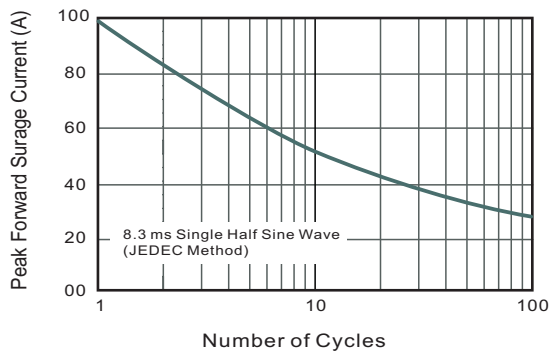


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



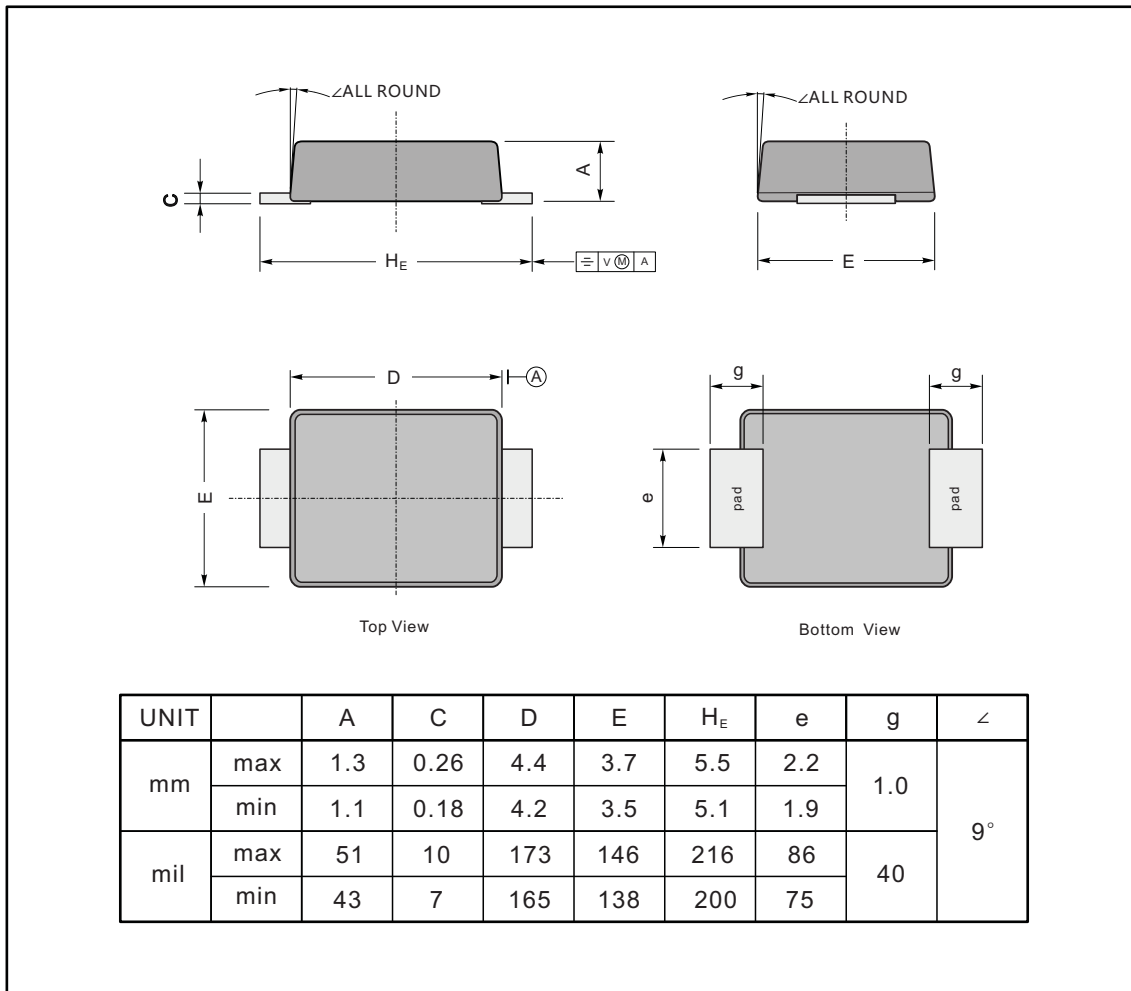


ES3ABF THRU ES3JBF Surface Mount Superfast Rectifiers

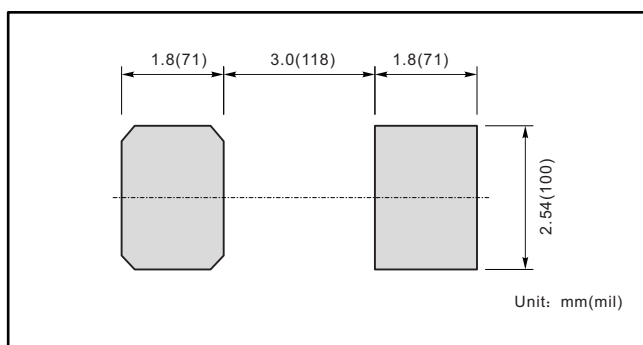
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMBF



The recommended mounting pad size



Marking

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

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Rectifiers](#) category:

Click to view products by [Juxing Electronic Technology](#) manufacturer:

Other Similar products are found below :

[70HFR40](#) [FR105 R0](#) [RL252-TP](#) [1N5397](#) [JANTX1N5634A](#) [1N4002G](#) [1N4005-TR](#) [JANS1N6640US](#) [481235F](#) [RRE02VS6SGTR](#) [067907F](#)
[MS306](#) [US2JFL-TP](#) [A1N5404G-G](#) [CRS12\(T5L,TEMQ\)](#) [ACGRB207-HF](#) [CLH07\(TE16L,Q\)](#) [CLH03\(TE16L,Q\)](#) [ACGRC307-HF](#)
[ACEFC304-HF](#) [DZ-1380](#) [NTE6356](#) [NTE6359](#) [JAN1N5555](#) [85HFR60](#) [40HFR60](#) [70HF120](#) [85HFR80](#) [D126A45C](#) [SCF7500](#) [SCHJ22.5K](#)
[SM100](#) [SCPA2](#) [SDHD5K](#) [ACGRA4001-HF](#) [D1821SH45T PR](#) [D1251S45T](#) [NTE6358](#) [NTE5850](#) [NTE5819](#) [NTE5837](#) [NTE5892](#) [NTE5900](#)
[NTE5911](#) [NTE5915](#) [NTE5921](#) [NTE6104](#) [NTE6105](#) [NTE6154](#) [NTE6158](#)