

# ES1ABF THRU ES1JBF

## Surface Mount Superfast Recovery Rectifier

Reverse Voltage - 50 to 600 V

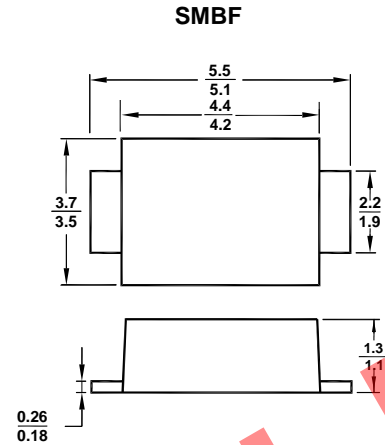
Forward Current - 1 A

### Features

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

### Mechanical Data

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



All Dimensions in mm

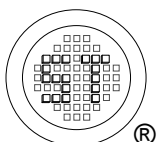
### Absolute Maximum Ratings and Characteristics

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         | ES1ABF | ES1BBF | ES1CBF | ES1DBF | ES1EBF        | ES1GBF | ES1JBF | Units              |
|---|-----------------|--------|--------|--------|--------|---------------|--------|--------|--------------------|
|   | Marking         | E1AB   | E1BB   | E1CB   | E1DB   | E1EB          | E1GB   | E1JB   | -                  |
| 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 $T_a = 100^\circ\text{C}$                                | $I_{F(AV)}$     | 1      |        |        |        |               |        |        | A                  |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)     | $I_{FSM}$       | 35     |        |        |        |               |        |        | A                  |
| Maximum Forward Voltage at 1 A  | $V_F$           | 1      |        |        |        | 1.25          |        | 1.65   | V                  |
| Maximum Reverse Current at Rated DC Blocking Voltage  | $I_R$           |        |        |        |        | 5             |        | 100    | $\mu\text{A}$      |
| Typical Junction Capacitance at $V_R = 4\text{ V}$ , $f = 1\text{ MHz}$                               | $C_j$           |        |        |        |        | 10            |        |        | 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 <sup>1)</sup>  | $R_{\theta JA}$ |        |        |        |        | 85            |        |        | $^\circ\text{C/W}$ |
| Operating Junction and Storage Temperature Range  | $T_j, T_{stg}$  |        |        |        |        | - 55 to + 150 |        |        | $^\circ\text{C}$   |

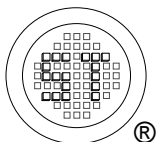
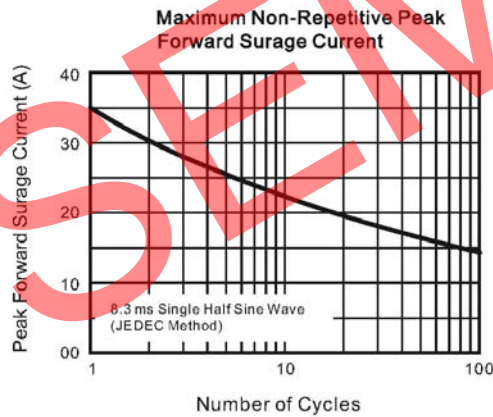
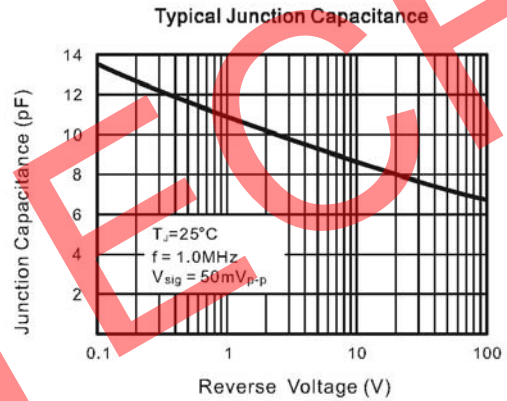
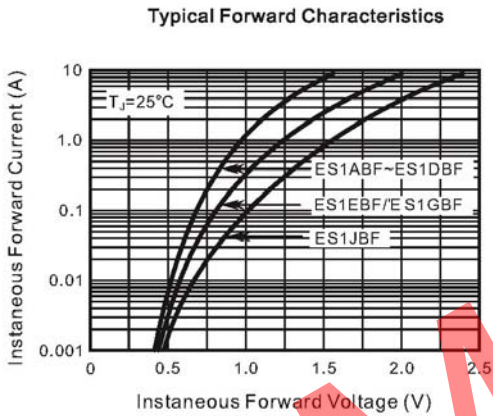
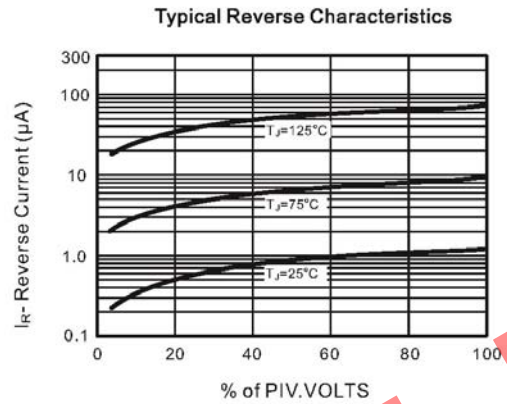
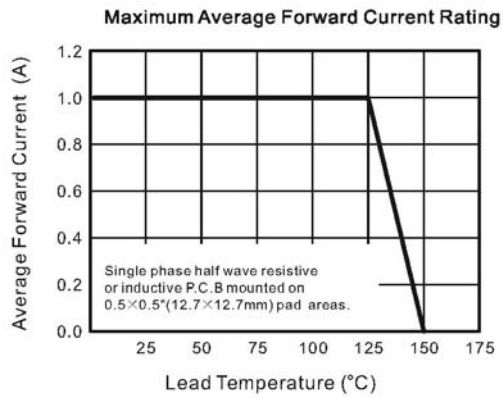
<sup>1)</sup> P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm<sup>2</sup>) copper pad areas.



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