# SURFACE MOUNT SUPERFAST RECOVERY RECTIFIER

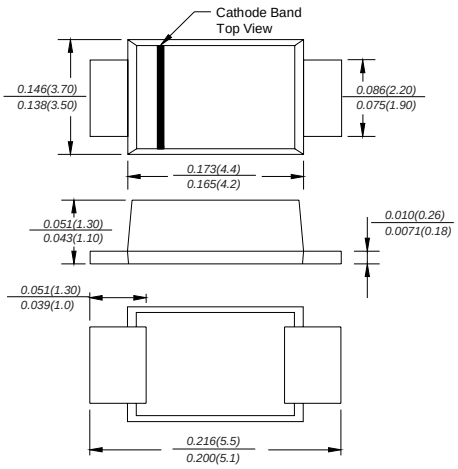
## Features:

- 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 diretives

## Mechanical Data:

**Case**: JEDEC SMBF molded plastic body
**Terminals**: leads solderable per MIL-STD-750, Method 2026
**Mounting Position**: Any
**Weight**:57mg/0.002oz

**SMBF**




*Dimensions in inches and (millimeters)*

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

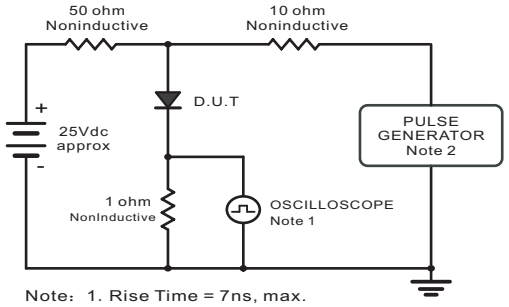
Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

| Type Number | SYMBOLS | ES2ABF | ES2BBF | ES2DBF | ES2GBF | ES2JBF | UNITS |
|---|---|---|---|---|---|---|---|
| Marking code | | E2AB | E2BB | E2DB | E2GB | E2JB | |
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | VOLTS |
| Maximum RMS voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | VOLTS |
| Maximum DC blocking voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | VOLTS |
| Maximum average forward rectified current at $T_L$=100℃ | $I_{(AV)}$ | 2.0 | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 50 | | | | | Amps |
| Maximum instantaneous forward voltage at 2.0A | $V_F$ | 1.0 | | | 1.25 | 1.65 | Volts |
| Maximum DC reverse current $T_A$=25℃ at rated DC blocking voltage $T_A$=125℃ | $I_R$ | 5.0<br>100.0 | | | | | μA |
| Maximum reverse recovery time (NOTE 1) | $t_{rr}$ | 35 | | | | | ns |
| Typical junction capacitance (NOTE 2) | $C_J$ | 45.0 | | | | | pF |
| Typical thermal resistance (NOTE 3) | $R_{\theta JA}$ | 65.0 | | | | | °C/W |
| Operating junction and storage temperature range | $T_J$,$T_{STG}$ | -55 to +150 | | | | | °C |

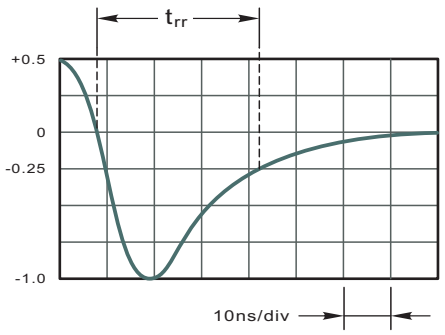
**Note:**1.Reverse recovery condition $I_F$=0.5A,$I_R$=1.0A,Irr=0.25A
2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3.P.C.B. mounted with 0.5x0.5"(12.7x12.7mm) copper pad areas

# RATINGS AND CHARACTERISTIC CURVES ES2ABF THRU ES2JBF

**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.




Set time Base for 10ns/div

**Fig.2 Maximum Average Forward Current Rating**

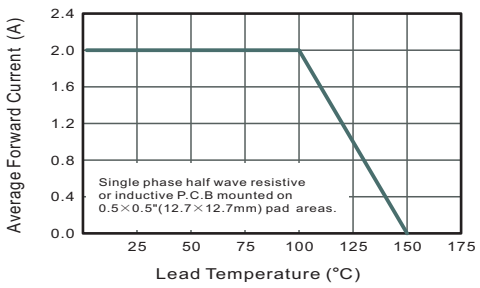



**Fig.3 Typical Reverse Characteristics**

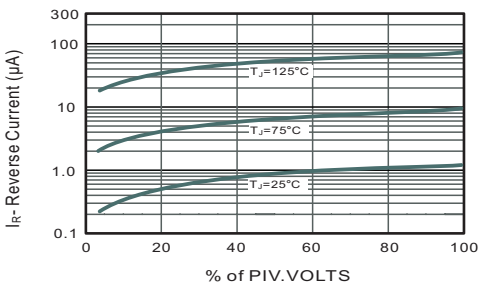



**Fig.4 Typical Forward Characteristics**

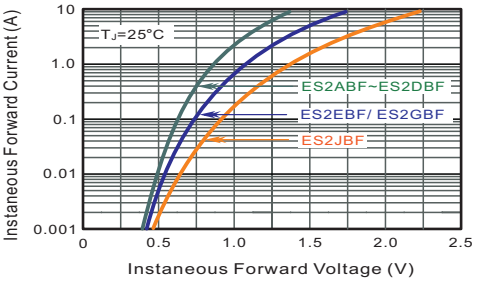



**Fig.5 Typical Junction Capacitance**

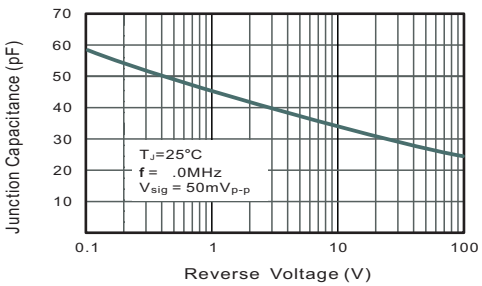
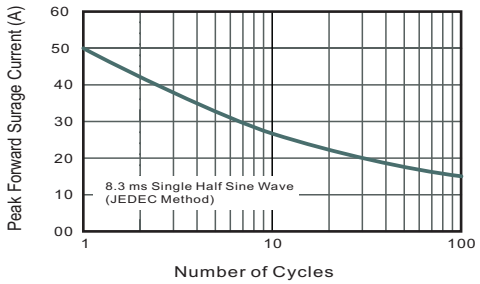



**Fig.6 Maximum Non-Repetitive Peak Forward Surage Current**




The cruve graph is for reference only, can't be the basis for judgment