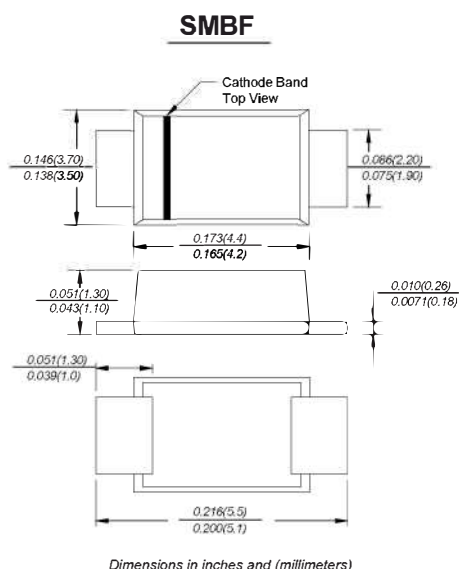


# SURFACE MOUNT SUPERFAST RECOVERY RECTIFIER



## 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 directives

## Mechanical Data:

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

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

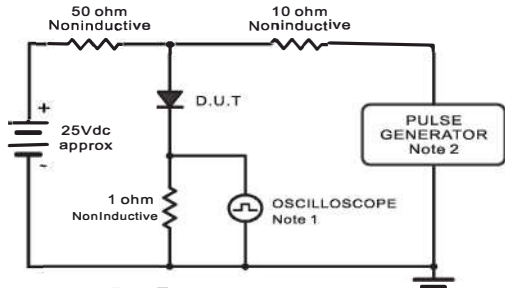
Ca talog Number	SYMBOLS	ES3ABF	ES3BBF	ES3DBF	ES3GBF	ES3JBF	UNITS
Marking code		E3AB	E3BB	E3DB	E3GB	E3JB	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	VOLTS
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	VOLTS
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	VOLTS
Maximum average forward rectified current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	3.0					Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	100					Amps
Maximum instantaneous forward voltage at 3.0A	$V_F$	1.0			1.25	1.7	Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	$I_R$	5.0 100.0					$\mu\text{A}$
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)	$R_{\theta JA}$	55.0					$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150					$^\circ\text{C}$

**Note:** 1. Reverse recovery condition  $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$   
 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

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RATINGS AND CHARACTERISTIC CURVES ES3ABF THRU ES3JBF

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.

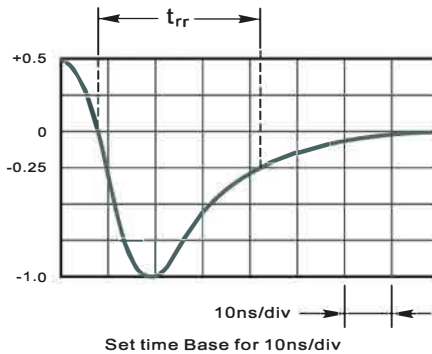


Fig.2 Maximum Average Forward Current Rating

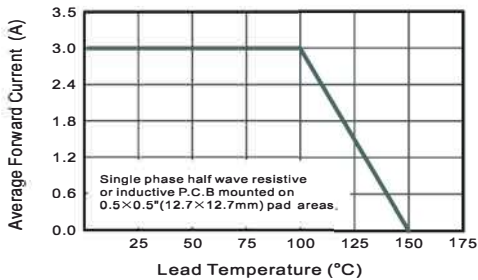


Fig.4 Typical Forward Characteristics

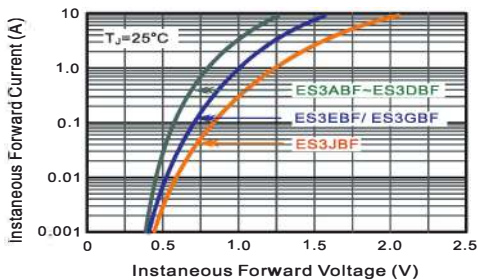


Fig.3 Typical Reverse Characteristics

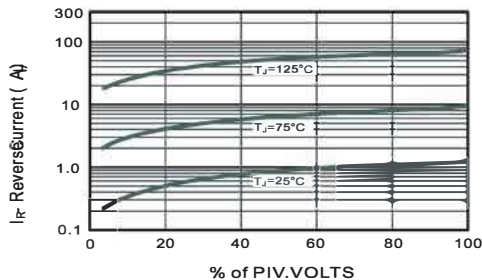


Fig.5 Typical Junction Capacitance

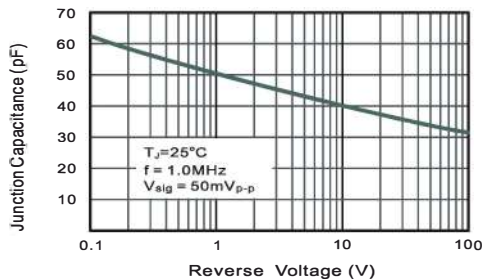
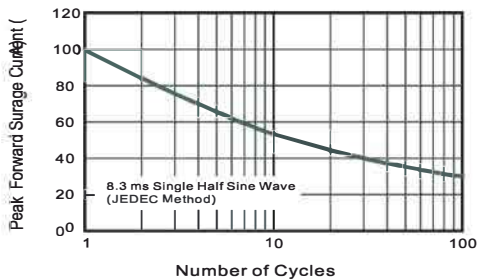


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考!)