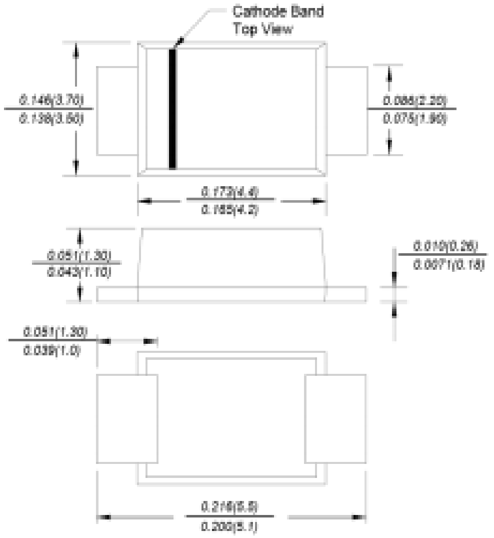
ES3ABF THRU ES3JBF

SURFACE MOUNT SUPERFAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 600 Volts   Forward Current - 3.0 Amperes

SMBF



Dimensions in inches and (millimeters)

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

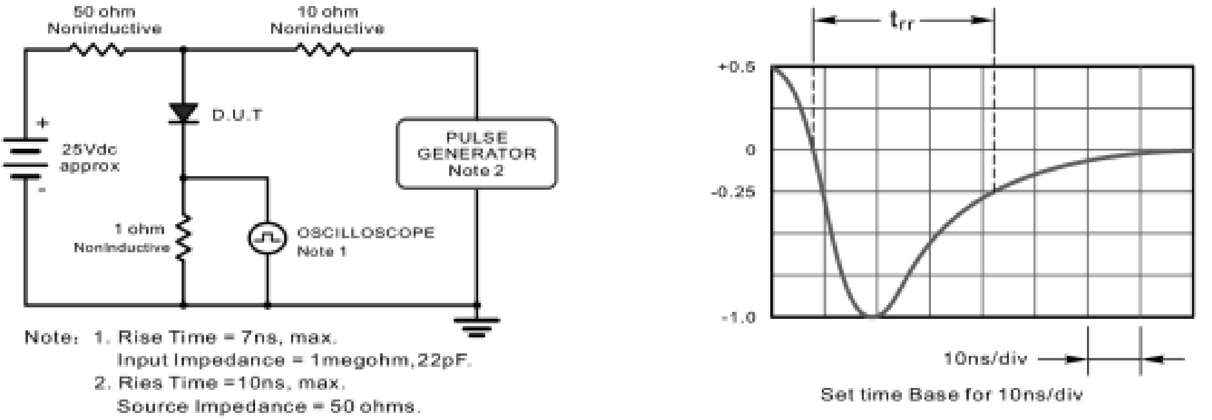
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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%.

TWGMC Catalog Number	SYMBOLS	ES3ABF	ES3BBF	ES3DBF	ES3GBF	ES3JBF	UNITS
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°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°C at rated DC blocking voltage T_A=125°C	I_R	5.0 100.0					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)	$R_{\theta JA}$	55.0					°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 ES3ABF THRU ES3JBF



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

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram

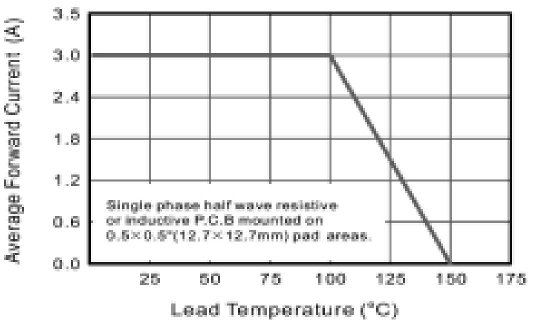


Fig.2 Maximum Average Forward Current Rating

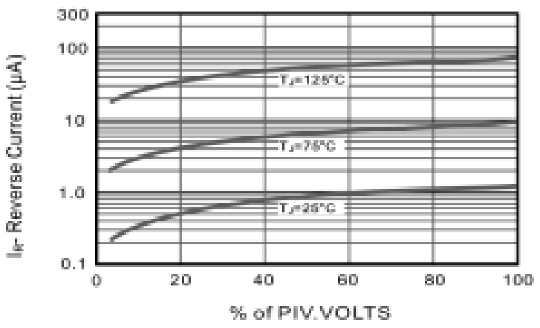


Fig.3 Typical Reverse Characteristics

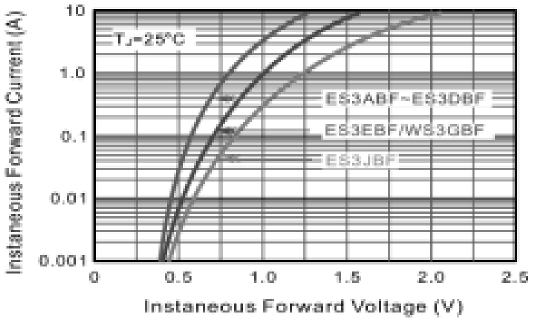


Fig.4 Typical Forward Characteristics

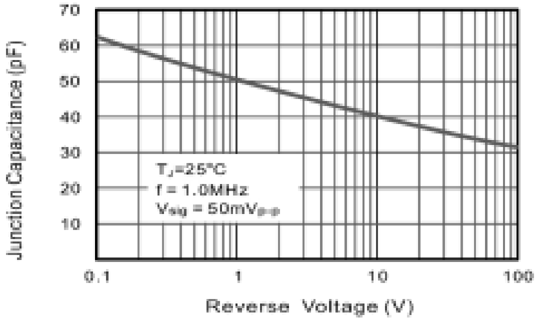


Fig.5 Typical Junction Capacitance

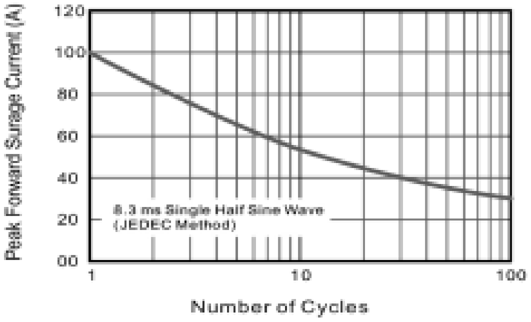


Fig.6 Maximum Non-Repetitive Peak Forward Surage Current