

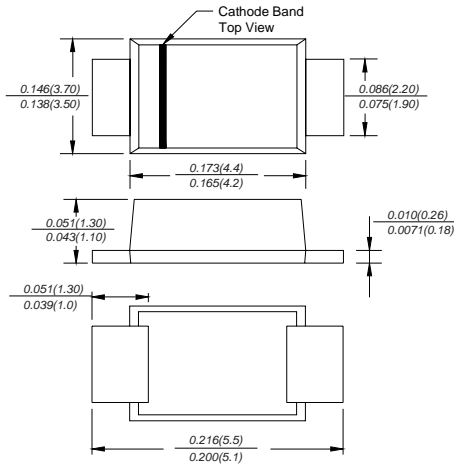


US5ABF THRU US5MBF

SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 5.0 Amperes

SMBF



FEATURES

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass Passivated Chip Junction
- ◆ Easy to pick and place
- ◆ 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%.

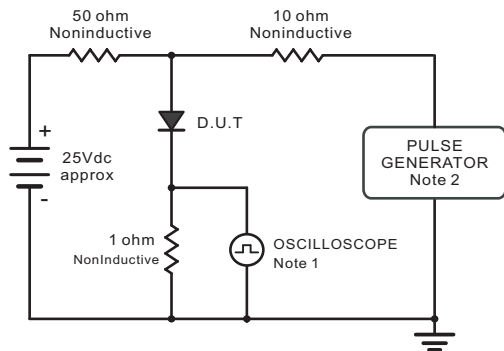
MDD Catalog Number	SYMBOLS	US5ABF	US5BBF	US5DBF	US5GBF	US5JBF	US5KBF	US5MBF	UNITS	
Marking code		U5AB	U5BB	U5DB	U5GB	U5JB	U5KB	U5MB		
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS	
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	VOLTS	
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	VOLTS	
Maximum average forward rectified current at $T_L=65^\circ\text{C}$	$I_{(AV)}$	5.0							Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	125.0							Amps	
Maximum instantaneous forward voltage at 5.0A	V_F	1.0		1.3		1.6			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							μA	
Maximum reverse recovery time (NOTE 1)	t_{rr}	50				75				ns
Typical junction capacitance (NOTE 2)	C_J	75							pF	
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$ $R_{\theta JL}$	55 16							$^\circ\text{C/W}$	
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" (12.5x12.7mm) copper pad areas

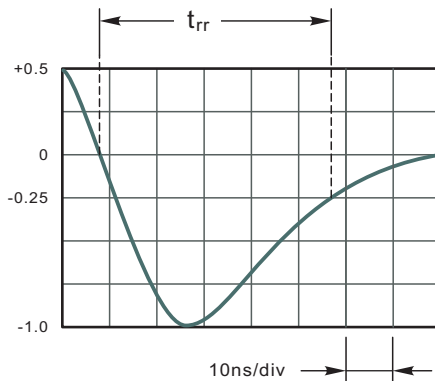


RATINGS AND CHARACTERISTIC CURVES US5ABF THRU US5MBF

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

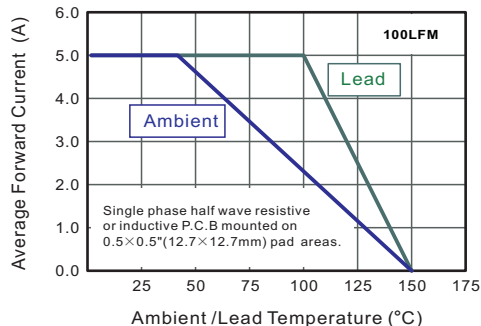


Fig.3 Typical Reverse Characteristics

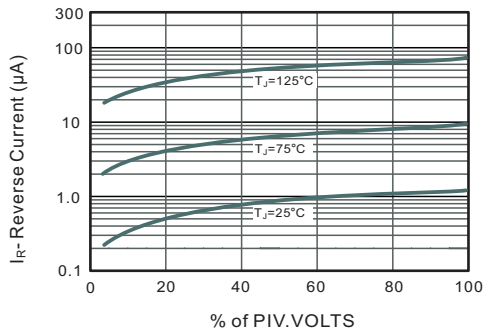


Fig.3 Typical Instantaneous Forward Characteristics

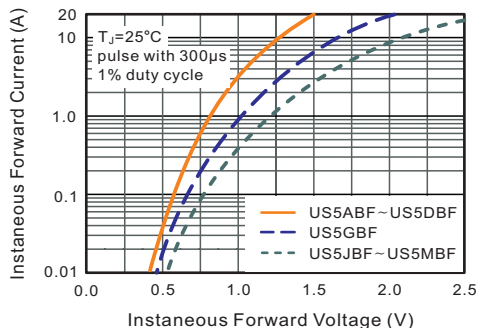
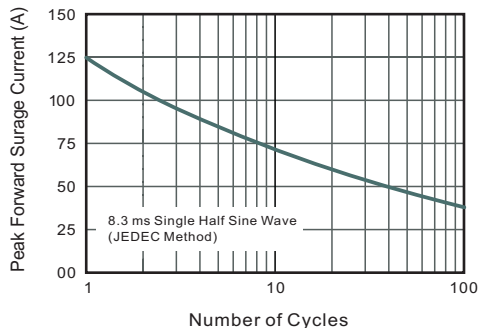


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



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



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