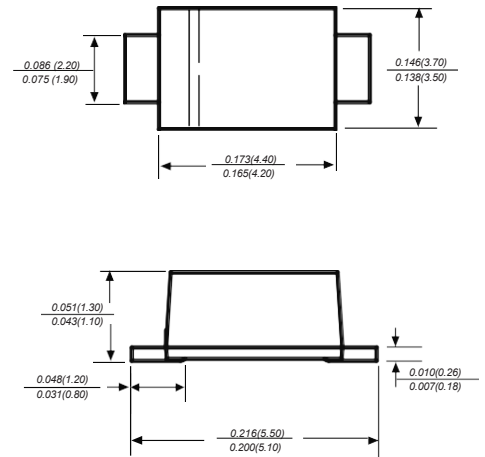


SURFACE MOUNT ULTRA FAST RECTIFIER

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Ultra fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed
250 °C/10 seconds at terminals

SMBF



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

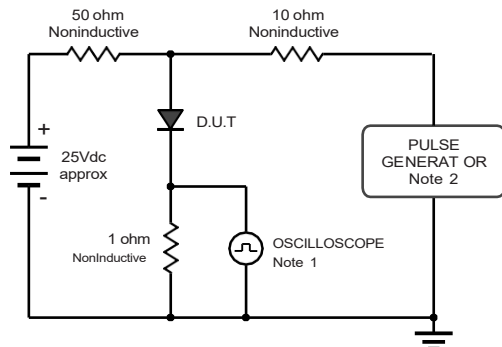
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	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	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at TL=55°C	I _(AV)	5.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed onrated load (JEDEC Method)	I _{FSM}	125							A
Maximum instantaneous forward voltage at 5.0A	V _F	1.0			1.30	1.60			V
Maximum DC reverse current T _A =25°C at rated DCblocking voltage T _A =125°C	I _R	5.0 150.0							μA
Maximum reverse recovery time	t _{rr}	50				75			ns
Typical thermal resistance	R _{θJA}	56.0							°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150							°C

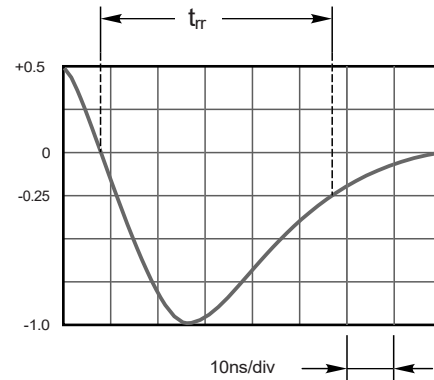
Note: 1. Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3. P.C.B. mounted with 0.5x0.5" (12.5x12.7mm) copper pad areas

Ratings And Characteristic Curves

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.



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

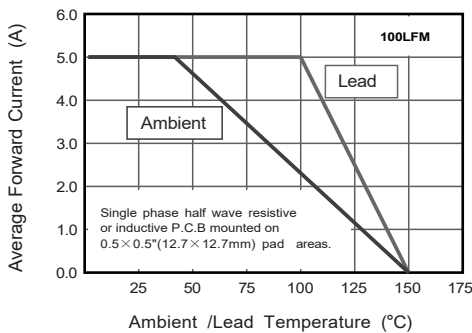


Fig.3 Typical Reverse Characteristics

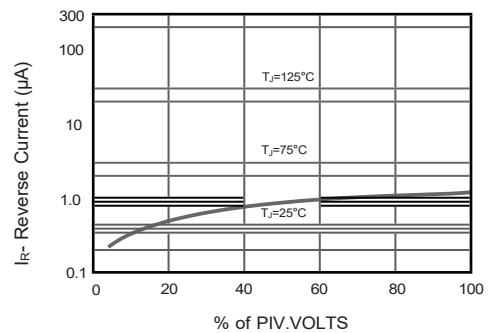


Fig.3 Typical Instantaneous Forward Characteristics

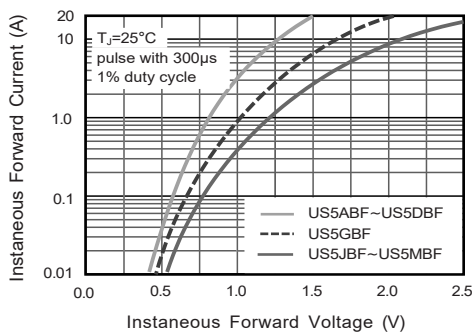
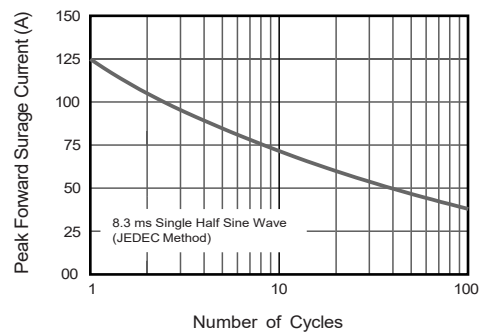


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.