



FRB3KF-LE~FRB3MF-LE

SMALL SURFACE MOUNT FAST DIODES

Voltage

800~1000 V

Current

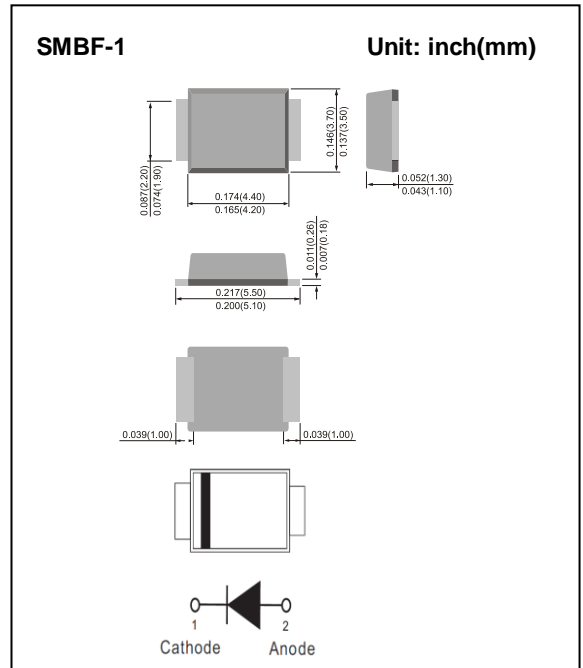
3 A

Features

- For surface mounted applications in order to optimize board space
- Ultra thin profile package for space constrained utilization
- Easy pick and place package suitable for automated handling
- Package suitable for automated handling
- Ideal for automated placement
- Glass passivated chip junction
- High temperature soldering : 260°C / 10 seconds at terminals
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Green molding compound as per IEC61249 Std..(Halogen Free)

Mechanical Data

- Case: Molded plastic, SMBF-1
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color Band denotes cathode end
- Approx. Weight: 0.0018 ounces, 0.05 grams



Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	FRB3KF-LE	FRB3MF-LE	UNIT
Marking		LFB3KF	LFB3MF	
Maximum repetitive peak reverse voltage	V_{RRM}	800	1000	V
Maximum rms voltage	V_{RMS}	560	700	V
Maximum dc blocking voltage	V_R	800	1000	V
Maximum average forward current	$I_{F(AV)}$	3		A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100		A
Maximum forward voltage at 3A	V_F	1.3		V
Maximum dc reverse current at rated dc blocking voltage	I_R	5		μA
Typical junction capacitance Measured at 1MHz and applied $V_R=4\text{V}$	C_J	30		pF
Maximum reverse recovery time (Note 1)	T_{RR}	500		ns
Typical Thermal Resistance	(Note 2)	$R_{\theta JA}$	135	$^{\circ}\text{C/W}$
	(Note 3)	$R_{\theta JC}$	15	
Operating and storage temperature range	T_J, T_{STG}	-55 to +150		$^{\circ}\text{C}$

Note:1.Reverse Recovery Test Conditions : $I_F=0.5\text{A}$, $I_R=-1\text{A}$, $I_{RR}=-0.25\text{A}$

2.Mounted on a FR4 PCB, single-sided copper, mini pad.

3.Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area



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TYPICAL CHARACTERISTIC CURVES

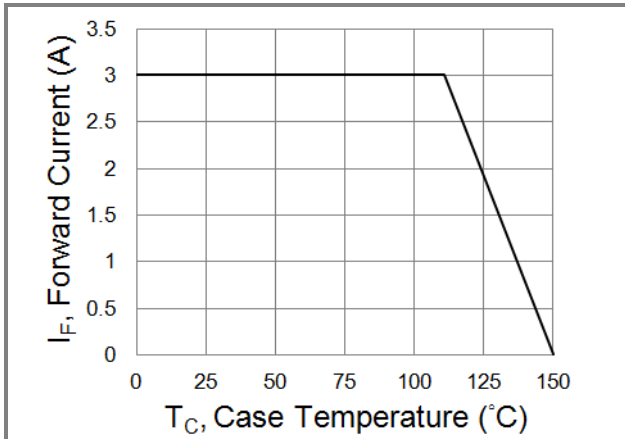


Fig.1 Forward Current Derating Curve

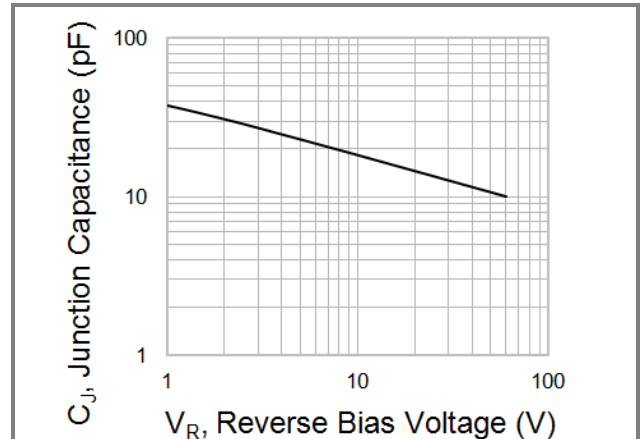


Fig.2 Typical Junction Capacitance

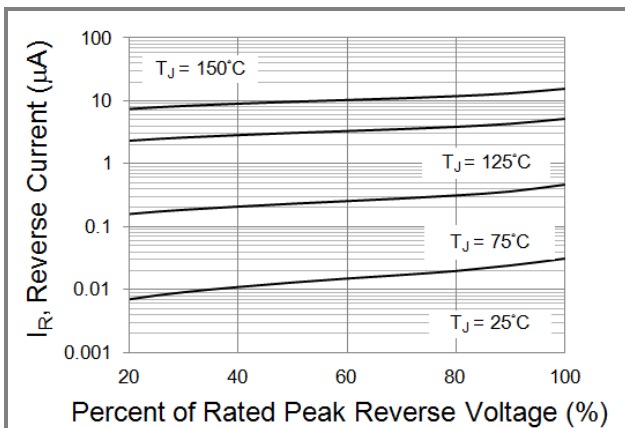


Fig.3 Typical Reverse Characteristics

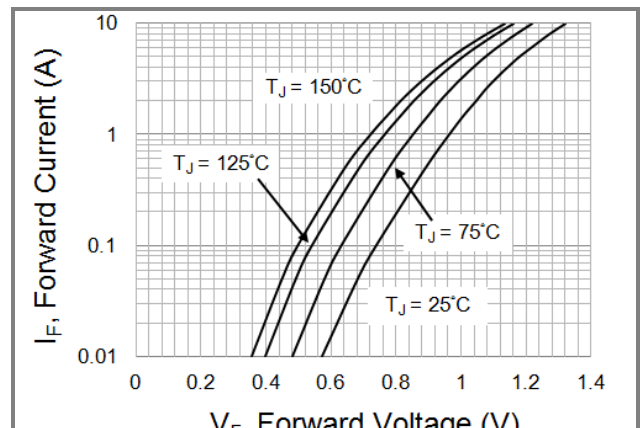


Fig.4 Typical Forward Characteristics

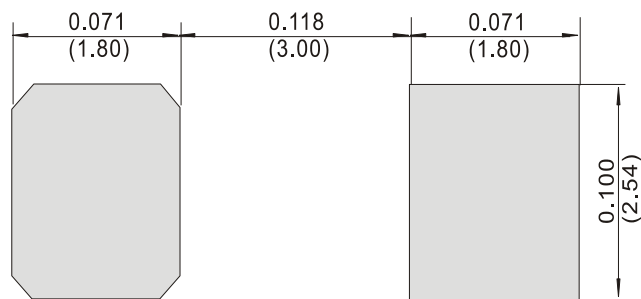


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Mounting Pad Layout

SMBF-1

Unit : inch(mm)





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