



# FRB3KF-LE~FRB3MF-LE

## SMALL SURFACE MOUNT FAST DIODES

**Voltage**

**800~1000 V**

**Current**

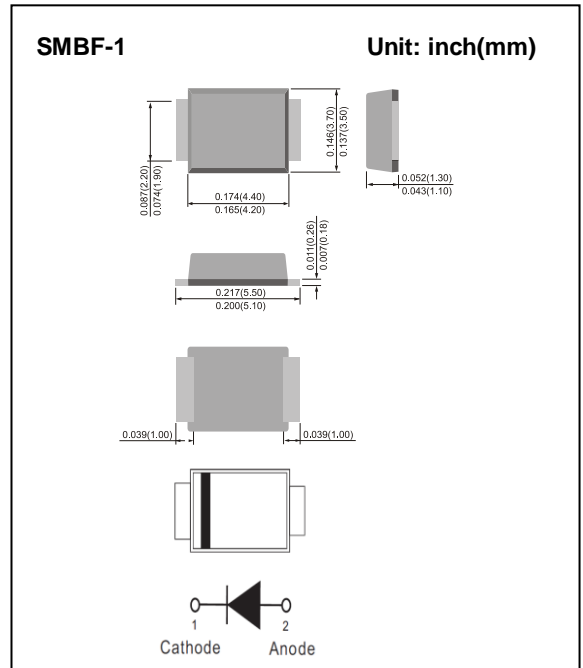
**3 A**

### 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		$\mu\text{A}$	
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 100cm<sup>2</sup> copper pad area



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## TYPICAL CHARACTERISTIC CURVES

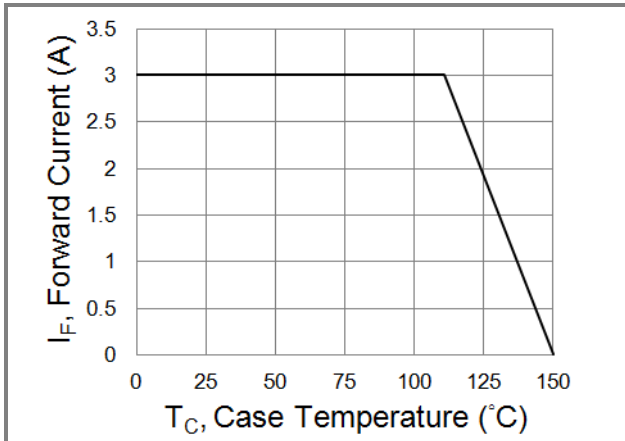


Fig.1 Forward Current Derating Curve

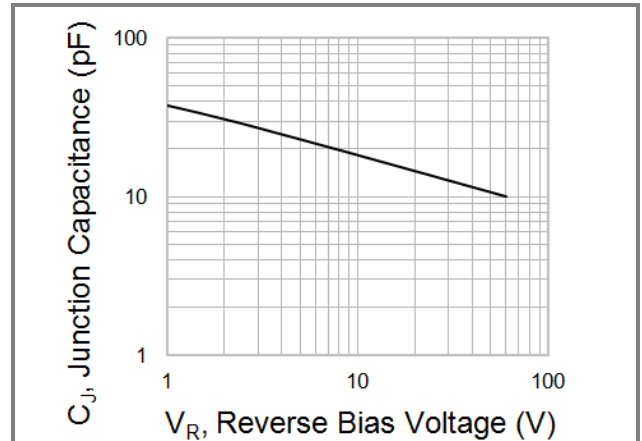


Fig.2 Typical Junction Capacitance

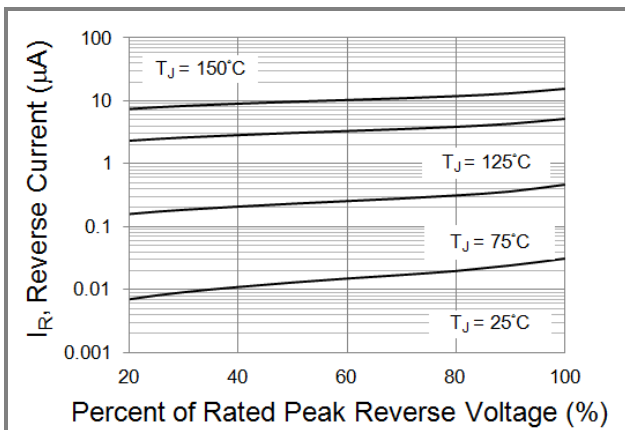


Fig.3 Typical Reverse Characteristics

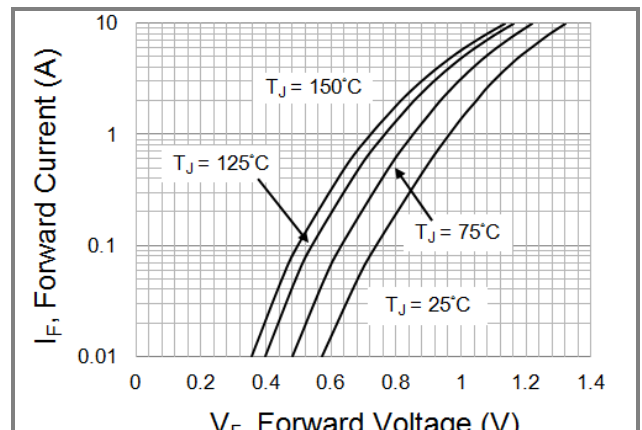


Fig.4 Typical Forward Characteristics

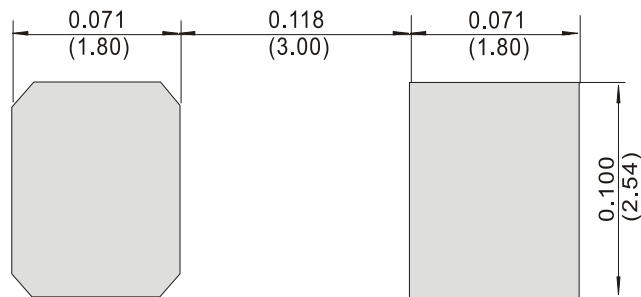


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## Mounting Pad Layout

SMBF-1

Unit : inch(mm)





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