

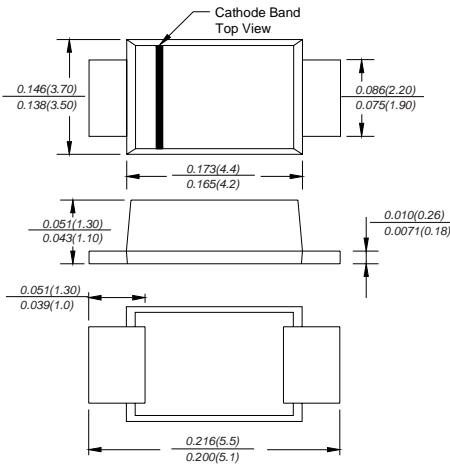


# SL54BF

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 40 Volts Forward Current - 5.0 Ampere

### SMBF



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Metal silicon junction, majority carrier conduction
- ◆ For surface mounted applications
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### 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	SL54BF	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	40	VOLTS
Maximum RMS voltage	$V_{RMS}$	28	VOLTS
Maximum DC blocking voltage	$V_{DC}$	40	VOLTS
Maximum average forward rectified current	$I_{(AV)}$	5.0	Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	125	Amps
Maximum instantaneous forward voltage at 5.0A	$V_F$	0.45	Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	1.0 50.0	mA
Typical junction capacitance (NOTE 1)	$C_J$	380	pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	25	$^\circ\text{C}/\text{W}$
Operating junction temperature range	$T_J$	-50 to +125	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-50 to +150	$^\circ\text{C}$

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 2. P.C.B. mounted with 0.5x0.5" (12.7x12.7mm) copper pad areas



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# RATINGS AND CHARACTERISTIC CURVES SL54BF

FIG.1-FORWARD CURRENT DERATING CURVE

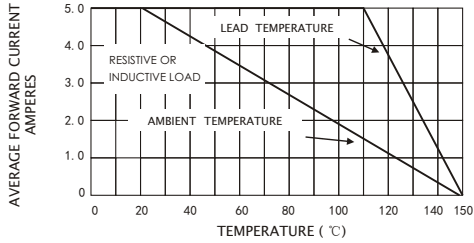


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

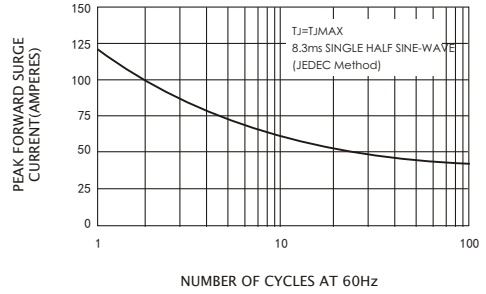


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

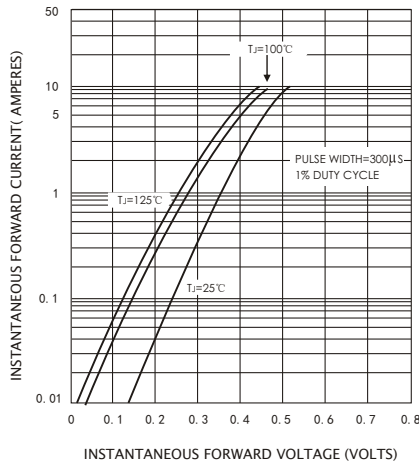


FIG.4-TYPICAL REVERSE CHARACTERISTICS

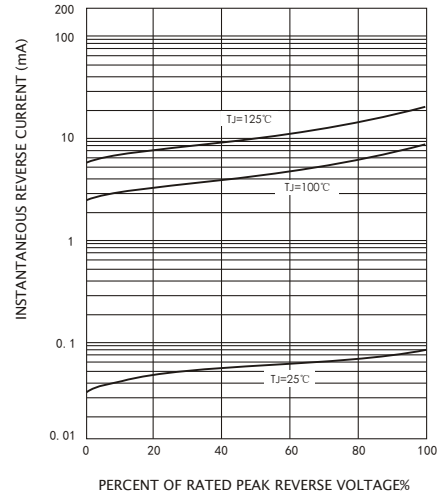
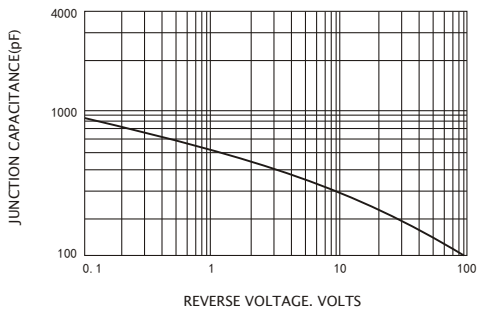


FIG.5-TYPICAL JUNCTION CAPACITANCE



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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