

SL54-BF THRU SL520-BF

5.0A Low VF Surface Mount
Schottky Barrier Rectifiers -40V-200V

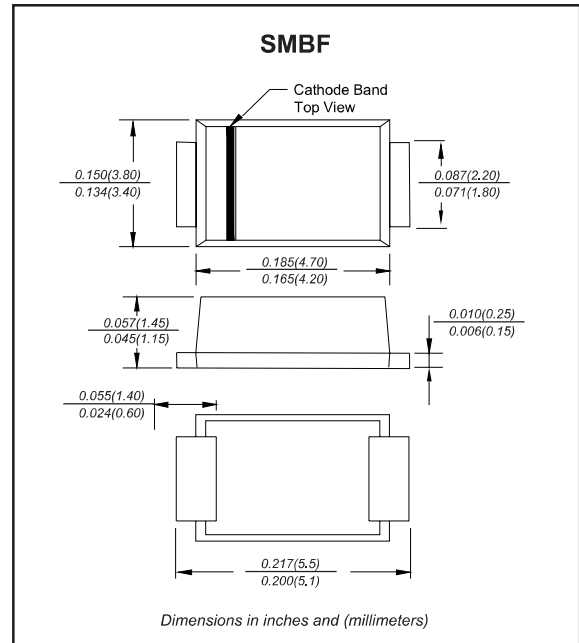
Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
250°C/10 seconds at terminals
- ◆ Compliant to RoHS Directive 2011/65/EU
- ◆ Compliant to Halogen-free

Mechanical data

- ◆ **Case:** JEDEC SMBF molded plastic body
- ◆ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Mounting Position:** Any

Package outline

Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_O			5.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			120	A
Reverse current	$V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$	I_R			0.5	mA
	$V_R = V_{RRM} \quad T_A = 100^\circ\text{C}$				20	
Thermal resistance (1)	Junction to Ambient	$R_{\theta JA}$		65		$^\circ\text{C/W}$
	Junction to Case	$R_{\theta JC}$		16		
	Junction to Lead	$R_{\theta JL}$		15		
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		580		pF
Storage temperature		T_{STG}	-65		+150	$^\circ\text{C}$

Note: (1) Device mounted on p.c.b. with 10 mm x 20 mm x 0.1 mm copper pad area.

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	Operating temperature T_J , (°C)
SL54-BF	40	28	40	0.45	-55 to +125
SL545-BF	45	32	45		
SL55-BF	50	35	50	0.55	-55 to +150
SL56-BF	60	42	60		
SL58-BF	80	56	80	0.75	
SL510-BF	100	70	100		
SL515-BF	150	105	150	0.85	
SL520-BF	200	140	200		

*1 Repetitive peak reverse voltage

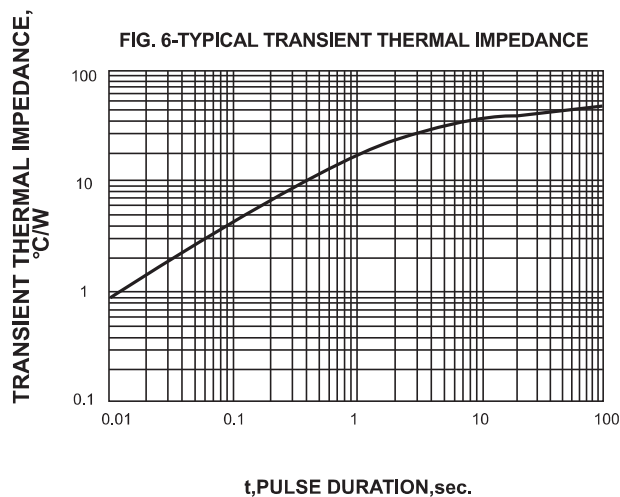
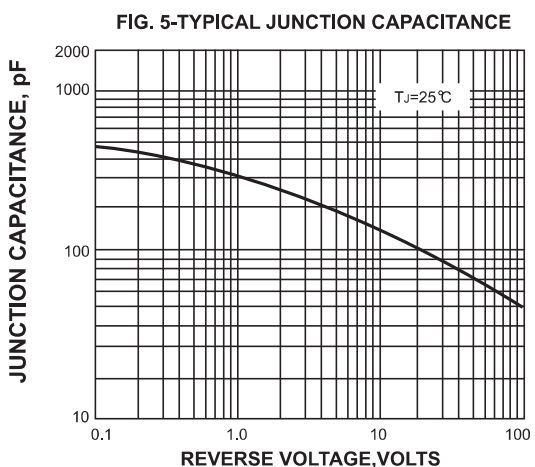
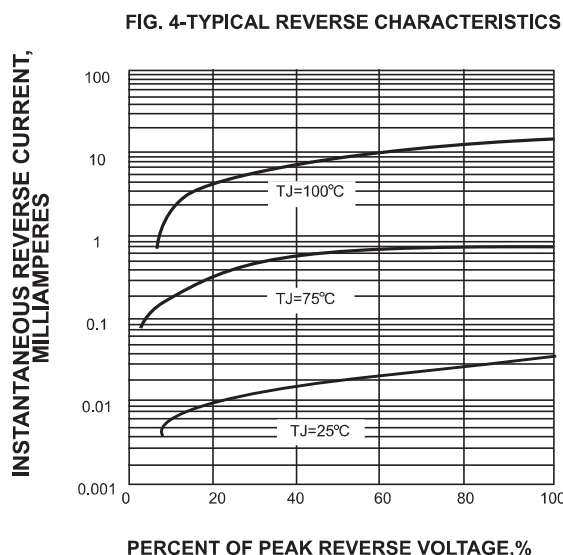
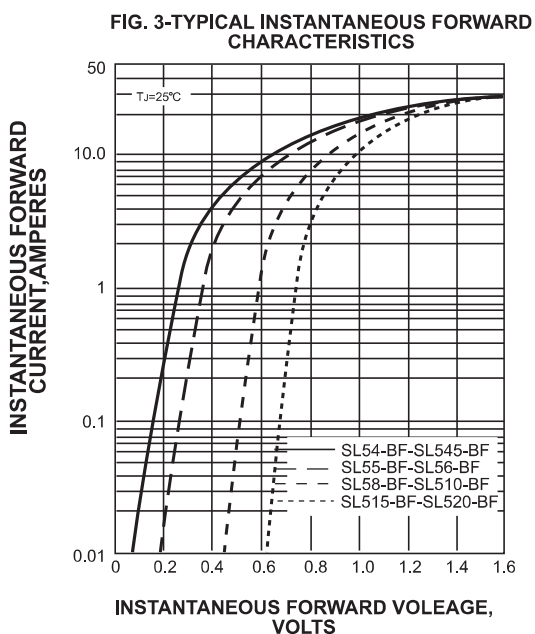
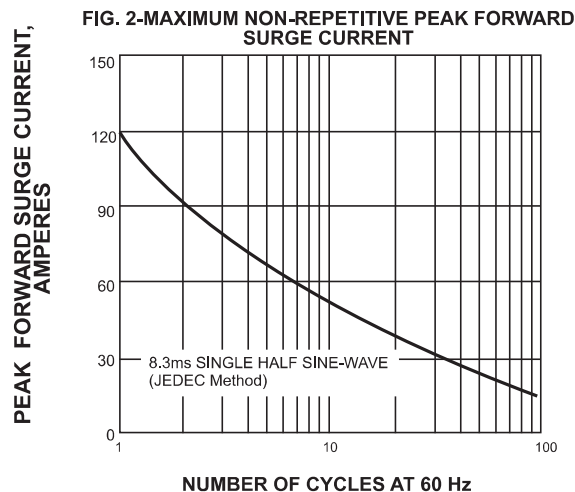
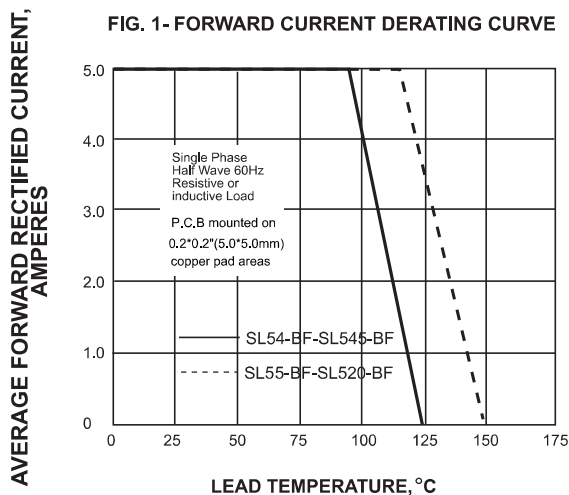
*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@ $I_F=5.0\text{A}$

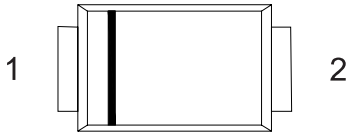
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Rating and characteristic curves

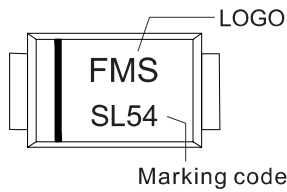


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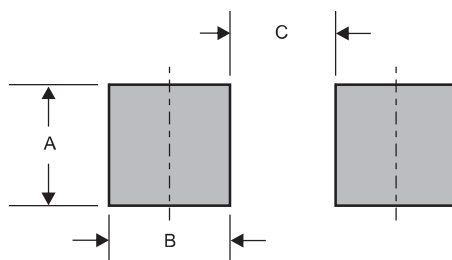
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code	Example
SL54-BF	SL54	
SL545-BF	SL545	
SL55-BF	SL55	
SL56-BF	SL56	
SL58-BF	SL58	
SL510-BF	SL510	
SL515-BF	SL515	
SL520-BF	SL520	

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMBF	0.098 (2.50)	0.071 (1.80)	0.118 (3.00)