

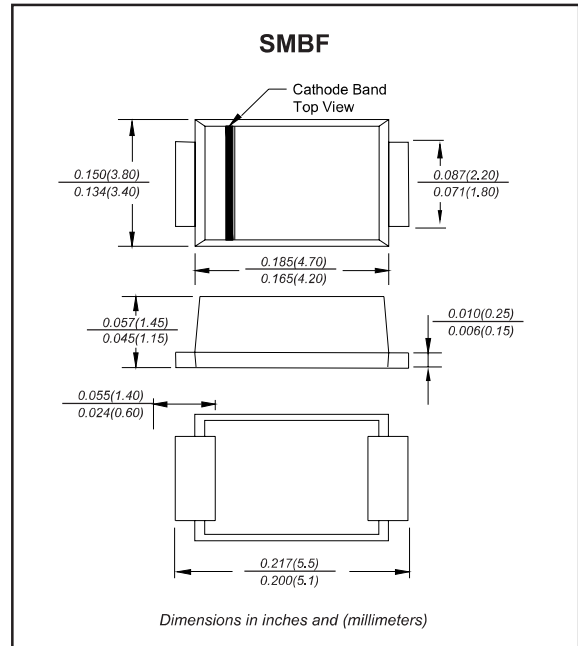
### Features

- ▶ 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		$I_O$			2.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)		$I_{FSM}$			50	A
Reverse current	$T_A = 25^\circ\text{C}$	$V_R = 40\text{V} - 60\text{V}$	$I_R$			0.5	mA
		$V_R = 80\text{V} - 200\text{V}$				0.1	
Reverse current	$T_A = 100^\circ\text{C}$	$V_R = 40\text{V} - 60\text{V}$	$I_R$			10	mA
		$V_R = 80\text{V} - 200\text{V}$				5	
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		$C_J$		220		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 $T_{Jr}$ ( $^\circ\text{C}$ )
SS24-BF	40	28	40	0.55	-55 to +125
SS245-BF	45	32	45		
SS25-BF	50	35	50	0.70	-55 to +150
SS26-BF	60	42	60		
SS28-BF	80	56	80	0.85	
SS210-BF	100	70	100		
SS215-BF	150	105	150	0.92	
SS220-BF	200	140	200		

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

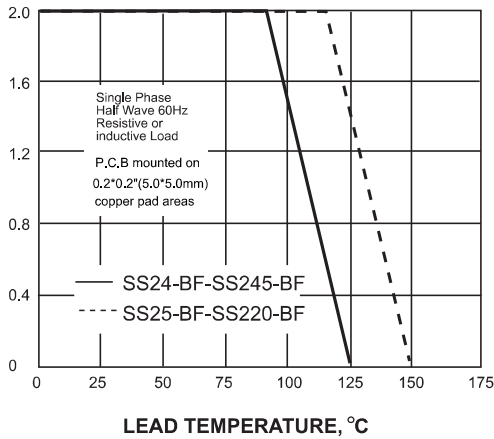
\*3 Continuous reverse voltage

\*4 Maximum forward voltage@ $I_F=2.0\text{A}$

### Rating and characteristic curves

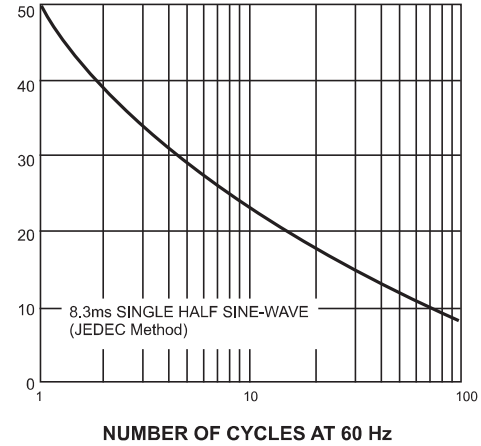
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



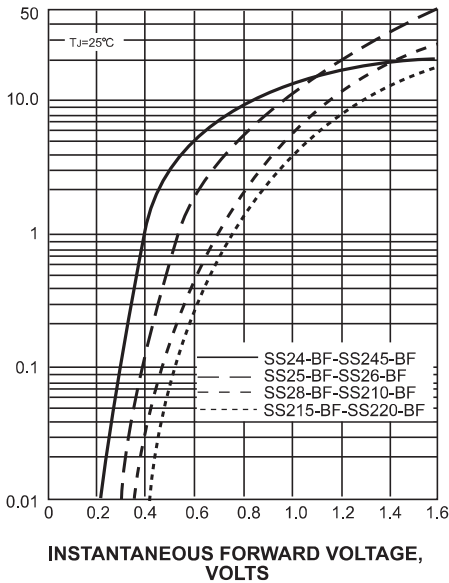
PEAK FORWARD SURGE CURRENT, AMPERES

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



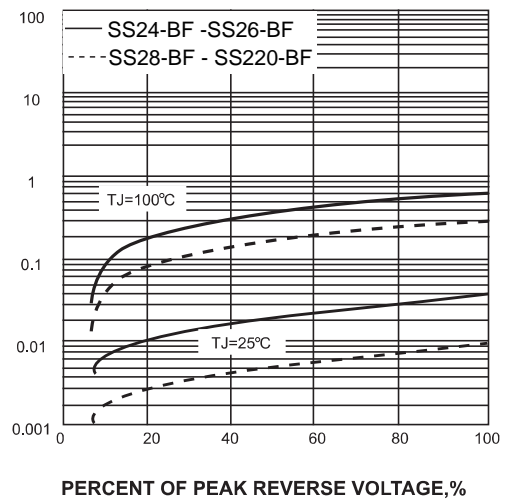
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



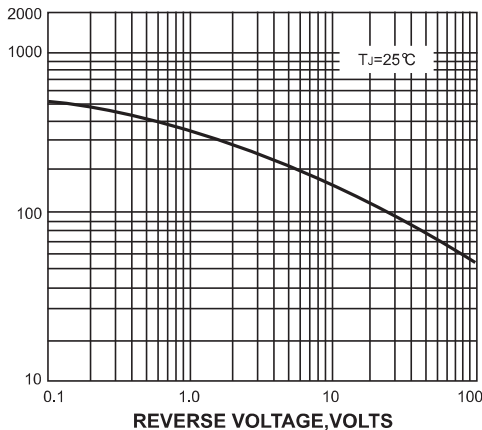
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



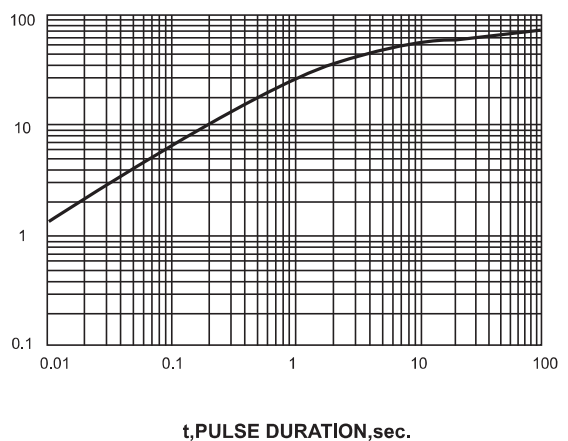
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE

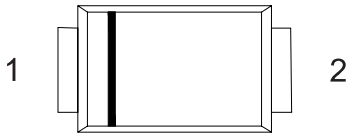



TRANSIENT THERMAL IMPEDANCE, °C/W

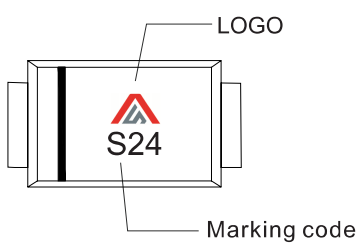
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



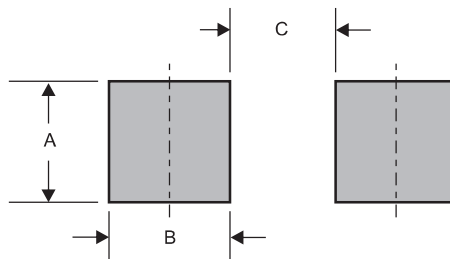
### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code	Example
SS24-BF	S24	
SS245-BF	S245	
SS25-BF	S25	
SS26-BF	S26	
SS28-BF	S28	
SS210-BF	S210	
SS215-BF	S215	
SS220-BF	S220	

### 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)