

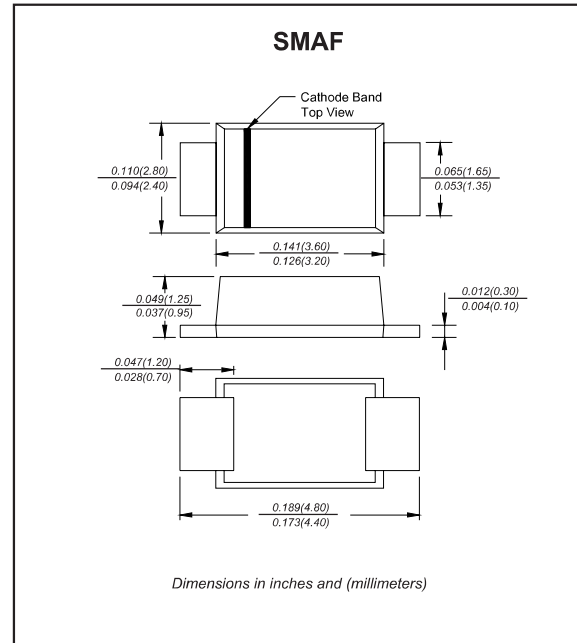
### Features

- ▶ 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 SMAF 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	$V_R = V_{RRM} \quad T_J = 25^\circ\text{C}$	$I_R$			1.0	mA
	$V_R = V_{RRM} \quad T_J = 100^\circ\text{C}$				50	
Thermal resistance (1)	Junction to Ambient	$R_{\theta JA}$		78		$^\circ\text{C/W}$
	Junction to Case	$R_{\theta JC}$		18		
	Junction to Lead	$R_{\theta JL}$		20		
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	$C_j$		210		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 $T_J$ ( $^\circ\text{C}$ )
SU24-F	40	28	40	0.40	-55 to +125

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

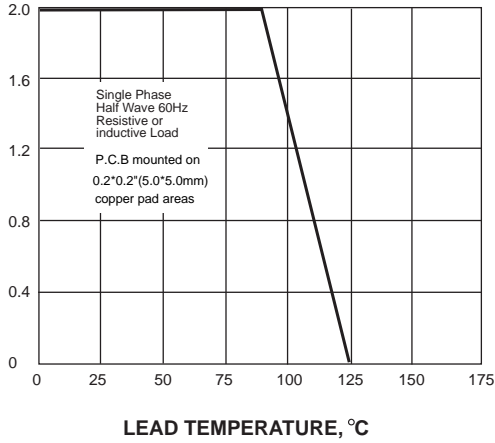
\*3 Continuous reverse voltage

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

### Rating and characteristic curves

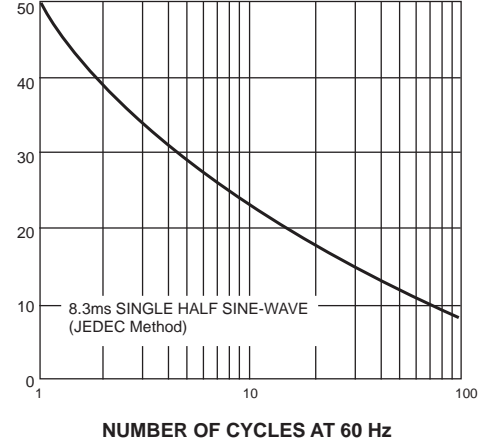
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



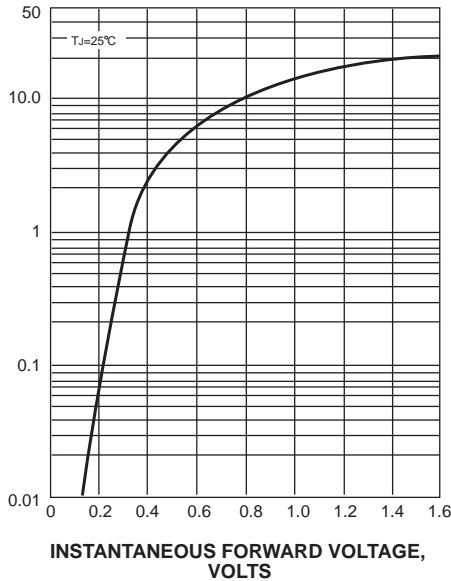
PEAK FORWARD SURGE CURRENT, AMPERES

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



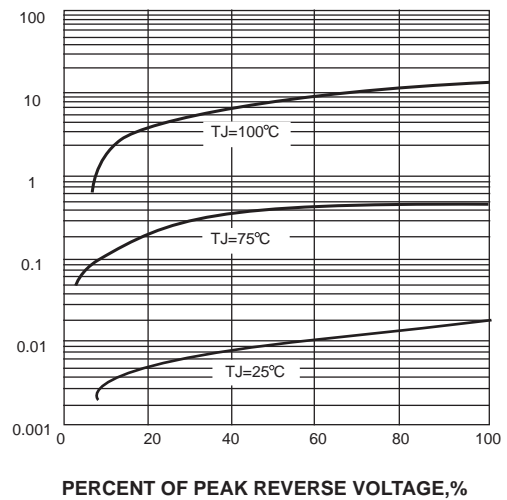
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



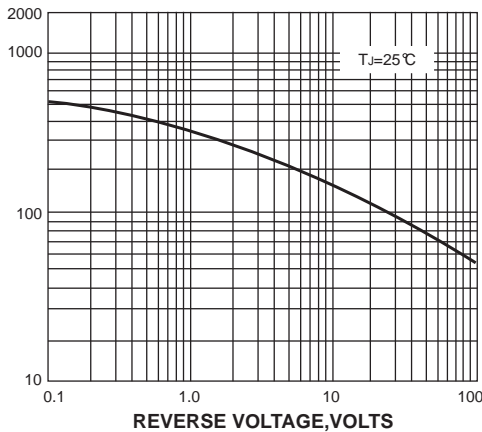
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



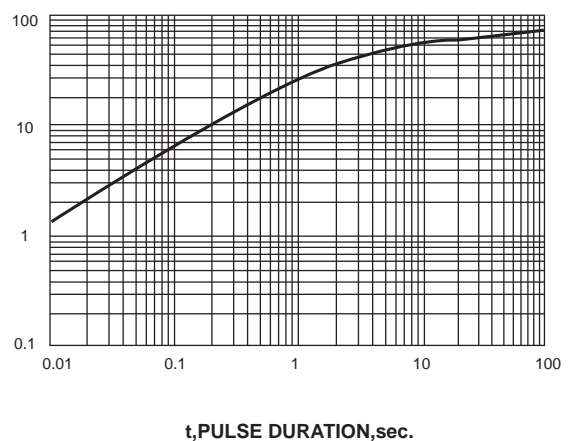
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE

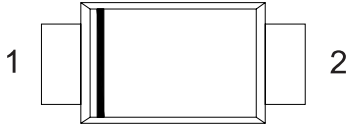



TRANSIENT THERMAL IMPEDANCE, °C/W

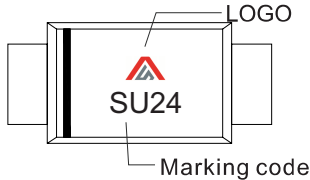
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



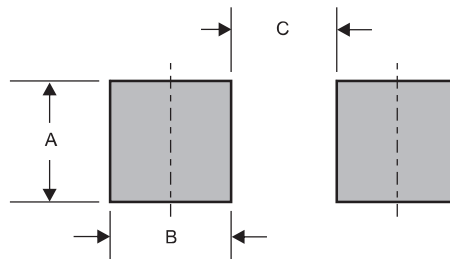
### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code	Example
SU24-F	SU24	

### Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMAF	0.110 (2.80)	0.063 (1.60)	0.087 (2.20)