

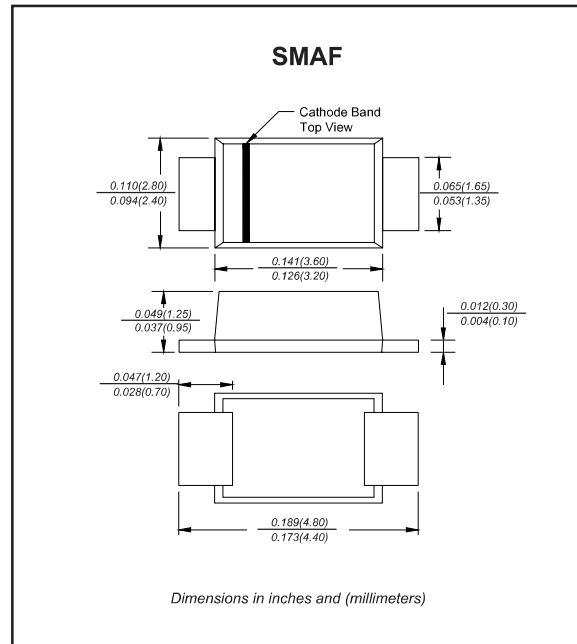
### Features

- ◆ 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
- ◆ Suffix "-Q1" for AEC-Q101

### 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	$V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$	$I_R$			0.5	mA
	$V_R = V_{RRM} \quad T_A = 100^\circ\text{C}$				20	
Thermal resistance	Junction to ambient NOTE 1	$R_{\theta JA}$		70		$^\circ\text{C}/\text{W}$
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.P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

SYMBOLS	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	Operating temperature $T_J$ , ( $^\circ\text{C}$ )
SL22-F-Q1	20	14	20	0.45	-55 to +125
SL23-F-Q1	30	21	30		
SL24-F-Q1	40	28	40		
SL25-F-Q1	50	35	50	0.55	-55 to +150
SL26-F-Q1	60	42	60		
SL28-F-Q1	80	56	80	0.75	
SL210-F-Q1	100	70	100		
SL215-F-Q1	150	105	150	0.85	
SL220-F-Q1	200	140	200		

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

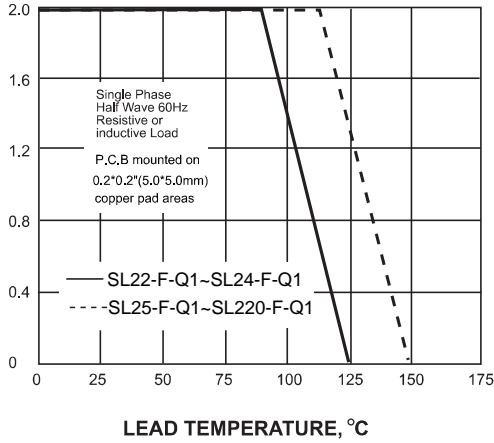
\*3 Continuous reverse voltage

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

### Rating and characteristic curves

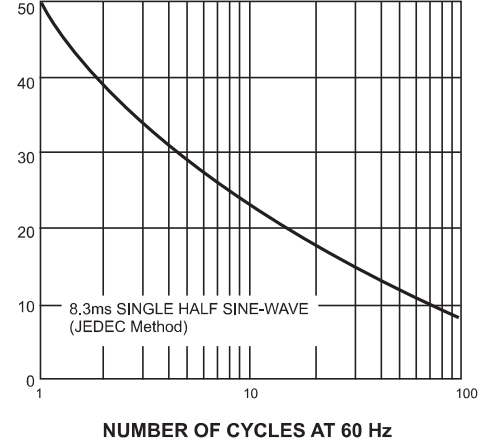
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



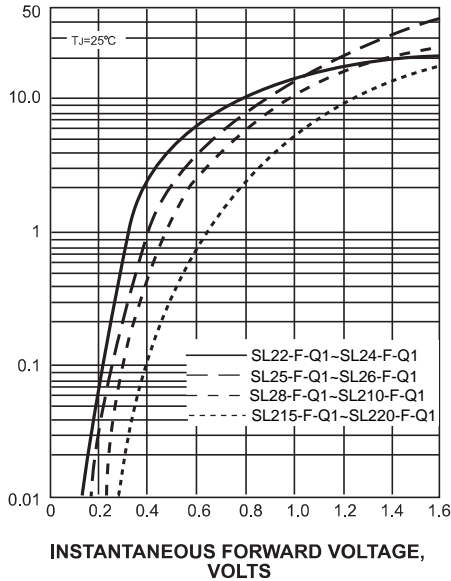
PEAK FORWARD SURGE CURRENT, AMPERES

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



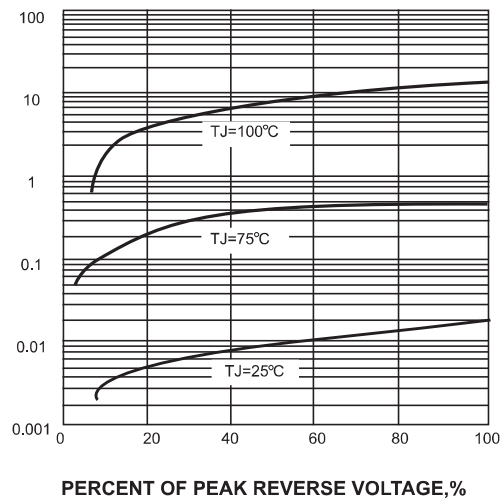
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



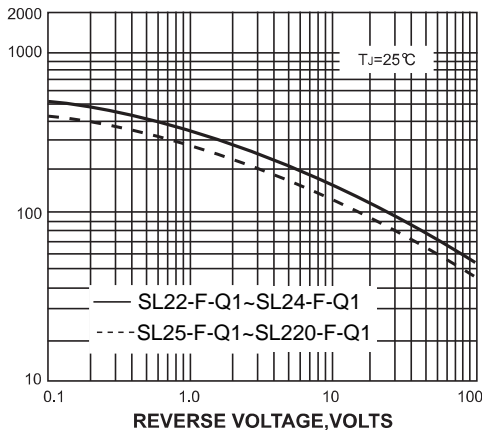
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



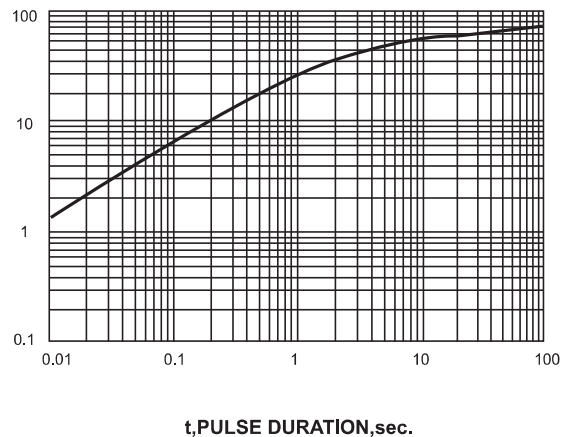
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE

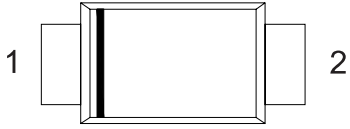



TRANSIENT THERMAL IMPEDANCE, °C/W

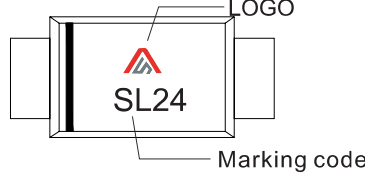
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



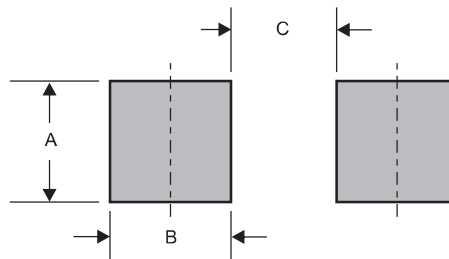
### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code	Example
SL22-F-Q1	SL22	
SL23-F-Q1	SL23	
SL24-F-Q1	SL24	
SL25-F-Q1	SL25	
SL26-F-Q1	SL26	
SL28-F-Q1	SL28	
SL210-F-Q1	SL210	
SL215-F-Q1	SL215	
SL220-F-Q1	SL220	

### 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)