

### FEATURES

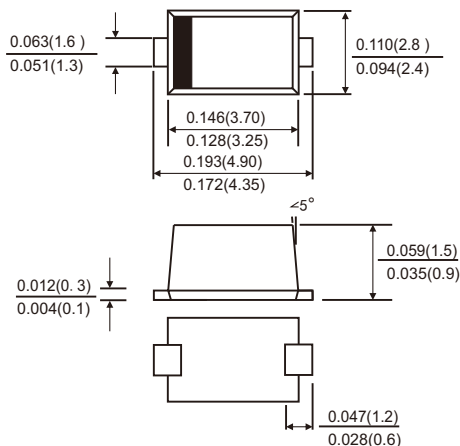
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



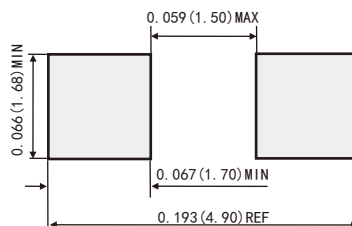
### MECHANICAL DATA

- Case: SMAF molded plastic body
- Terminals: Solder Plated, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end

### SMAF



### Suggested PAD Layout



Dimensions in inches and (millimeters)

### TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

### MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified )

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	80	V
Maximum average forward rectified current (see fig.1)	$I_{F(AV)}$	3.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	$I_{FSM}$	80	A
Operating junction temperature range	$T_J$	-55 to+150	°C
Storage temperature range	$T_{stg}$	-55 to+150	°C

# RATINGS AND CHARACTERISTIC OF SS38SLS

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instantaneous forward voltage	I <sub>F</sub> =3.0A	T <sub>A</sub> =25°C	V <sub>F</sub> <sup>1)</sup>	0.52	0.55	V
		T <sub>A</sub> =100°C		0.48	–	
		T <sub>A</sub> =125°C		0.46	–	
	I <sub>F</sub> =1.0A	T <sub>A</sub> =25°C		0.42	–	
		T <sub>A</sub> =100°C		0.34	–	
		T <sub>A</sub> =125°C		0.31	–	
Reverse current	V <sub>R</sub> =80V	T <sub>A</sub> =25°C	I <sub>R</sub> <sup>2)</sup>	20	100	μA
		T <sub>A</sub> =100°C		1.2	–	mA
		T <sub>A</sub> =125°C		4.5	–	
Typical junction capacitance	4V, 1MHz		C <sub>J</sub>	260		pF

Notes: 1.Pulse test: 300 μs pulse width, 1% duty cycle

2.Pulse test: pulse width ≤ 40ms

## THERMAL CHARACTERISTICS

Parameter	Symbol	SMAF	Unit
Typical thermal resistance <sup>3)</sup>	R <sub>θJA</sub>	150	°C/W
	R <sub>θJL</sub>	28.0	

3.P.C.B. mounted with 0.118" x 0.118" (3.0 mm x 3.0 mm) copper pad areas (≥40μm thick)

## AVAILABLE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Box Size L×W×H (mm)	Quantity (reel/box)	Carton Size L×W×H (mm)	Quantity (box/carton)
SS38SLS-SMAF	T/R	Φ 178	3000	180×73×180	2	380×380×200	10

# RATINGS AND CHARACTERISTIC OF SS38SLS

FIG.1-FORWARD CURRENT DERATING CURVE

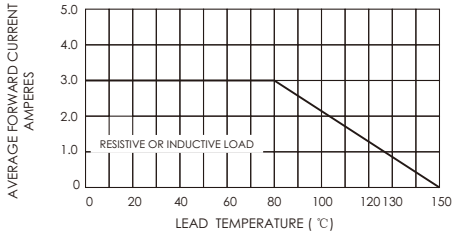


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

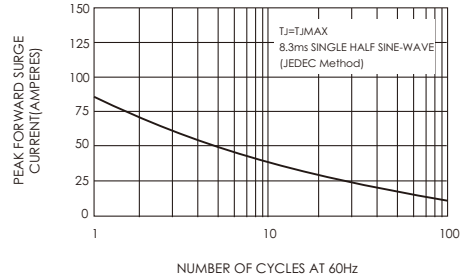


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

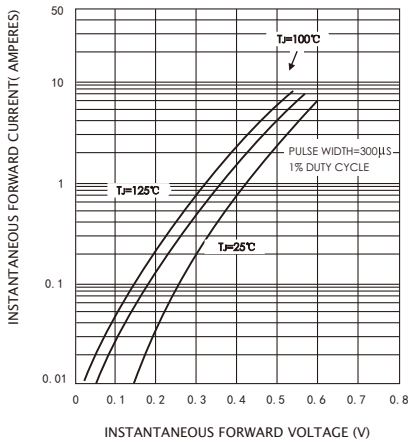


FIG.4-TYPICAL REVERSE CHARACTERISTICS

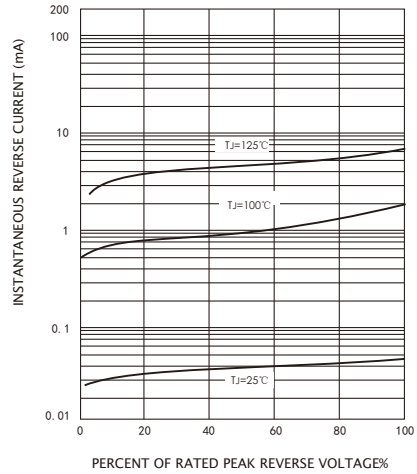


FIG.5-TYPICAL JUNCTION CAPACITANCE

