

FEATURES

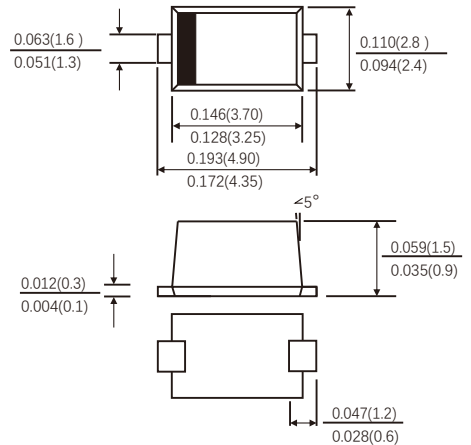
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Very low profile - typical height of 1.0 mm
- Ideal for automated placement
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



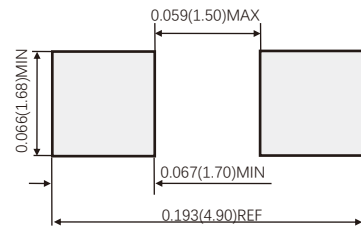
MECHANICAL DATA

- 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}	40	V
Maximum average forward rectified current	$I_{F(AV)}$	5.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	120	A
Operating junction temperature range	T_J	-55 to+150	°C
Storage temperature range	T_{stg}	-55 to+150	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instantaneous forward voltage	I _F =5.0A	T _A =25°C	V _F ¹⁾	0.43	0.47	V
		T _A =100°C		0.38	-	
		T _A =125°C		0.36	-	
	I _F =3.0A	T _A =25°C		0.38	-	
		T _A =100°C		0.32	-	
		T _A =125°C		0.30	-	
Reverse current	V _R =40V	T _A =25°C	I _R ²⁾	-	100	μA
		T _A =100°C		-	8	mA
		T _A =125°C		-	20	
Typical junction capacitance	4V,1M Hz		C _J	825		pF

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

2.Pulse test: pulse width ≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	SMAF	Unit
Typical thermal resistance ³⁾	R _{θJA}	150	°C/W
	R _{θJL}	28	

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 (Kpcs)
SS54SLS-SMAF	T/R	Φ178	3000	185×185×66	2	370×370×240	120

FIG.1-FORWARD CURRENT DERATING CURVE

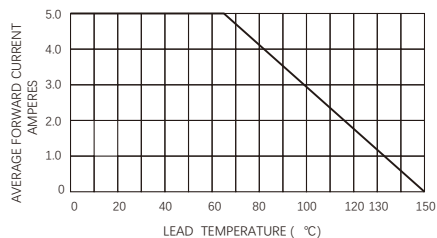


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

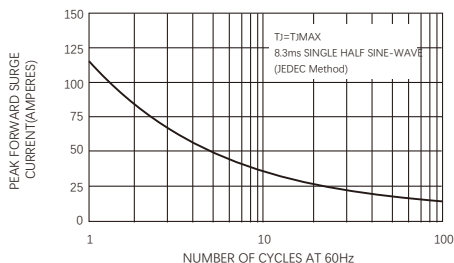


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

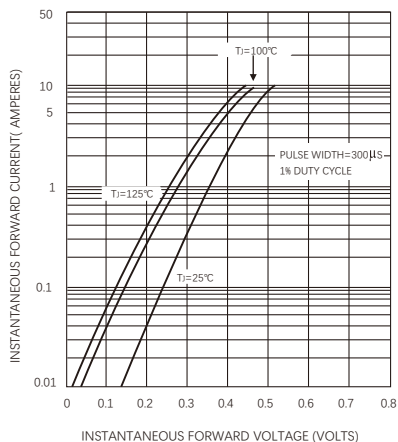


FIG.4-TYPICAL REVERSE CHARACTERISTICS

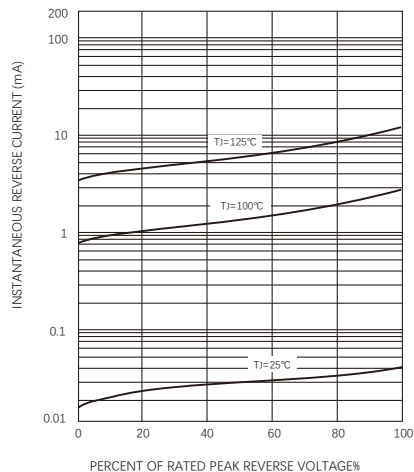


FIG.5-TYPICAL JUNCTION CAPACITANCE

