

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 2015/863/EU



MECHANICAL DATA

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

TYPICAL APPLICATIONS

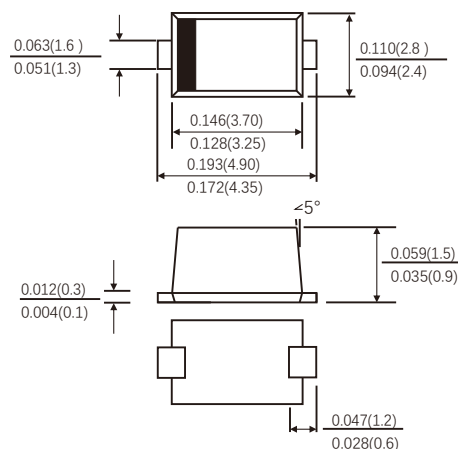
For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

MAXIMUM RATINGS

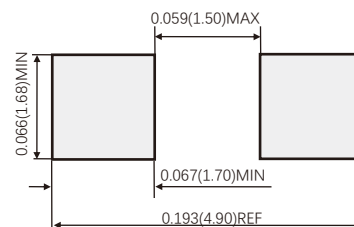
(Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	150	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

SMAF



Suggested PAD Layout



Dimensions in inches and (millimeters)

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

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	I _F =3.0A	T _A =25°C	V _F ¹⁾	0.82	0.85	V
		T _A =100°C		0.71	-	
		T _A =125°C		0.67	-	
Reverse current	V _R =150V	T _A =25°C	I _R ²⁾	-	10	μA
		T _A =100°C		-	200	
		T _A =125°C		-	1500	
Typical junction capacitance	4V,1MHz		C _J	70		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 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 (box/carton)	Quantity(carton) (K)
SS315LS-SMAF	T/R	Φ178	3000	180×180×105	6	550×200×205	5	90

FIG.1-FORWARD CURRENT DERATING CURVE

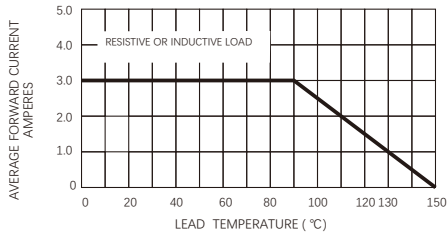


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

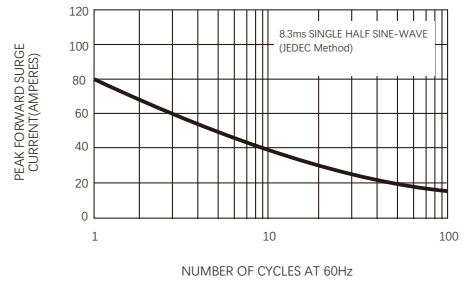


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

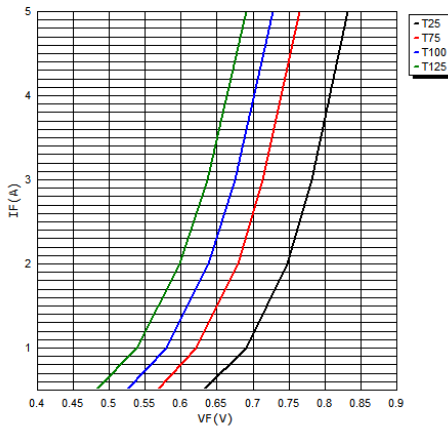


FIG.4-TYPICAL REVERSE CHARACTERISTICS

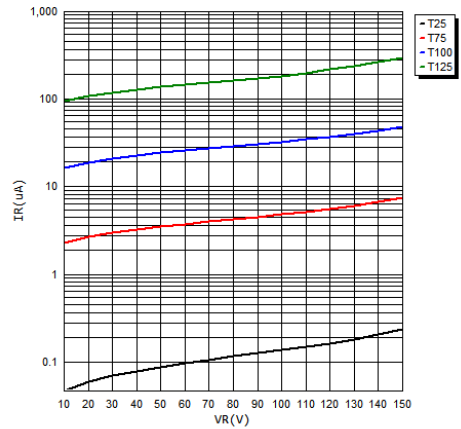
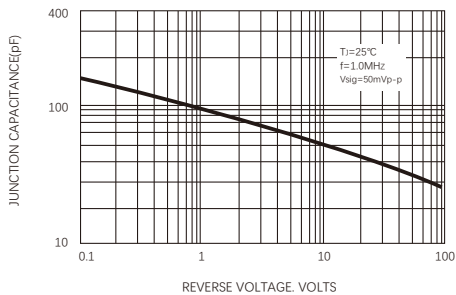


FIG.5-TYPICAL JUNCTION CAPACITANCE



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