

FEATURES

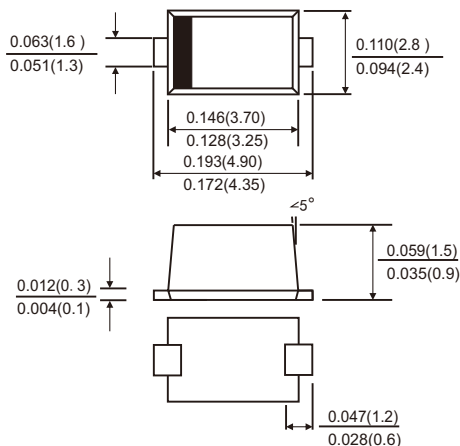
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature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



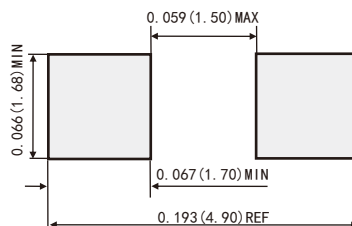
MECHANICAL DATA

- 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}	60	V
Maximum average forward rectified current (see fig.1)	$I_F(AV)$	5.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	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 SS56LS

ELECTRICAL CHARACTERISTICS (T_A=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	T _A =25℃	I _F =1.0A	V _F ¹⁾	0.35	—	V
		I _F =3.0A		0.44	—	
		I _F =5.0A		0.50	0.55	
	T _A =125℃	I _F =1.0A		0.26	—	
		I _F =3.0A		0.38	—	
		I _F =5.0A		0.47	—	
Reverse current	V _R =60V	T _A =25℃	I _R ²⁾	30	100	μ A
		T _A =100℃		—	5.0	mA
		T _A =125℃		—	20	
Typical junction capacitance	4V, 1MHz		C _J	430		pF

Notes: 1.Pulse test: 300 μ s pulse width,1% duty cycle
2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	SMAF	Unit
Typical thermal resistance ³⁾	R _{θJA}	150	℃/W
	R _{θJL}	28.0	

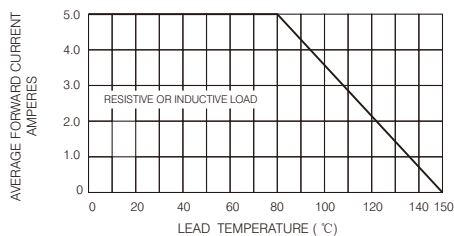
3.P.C.B. mounted with 0.118" x 0.118" (3.0 mm x 3.0 mm) copper pad areas (≥40μm thick)

AVAILABALE 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)
SS56LS-SMAF	T/R	Φ 178	3000	180×73×180	2	380×380×200	10

RATINGS AND CHARACTERISTIC OF SS56LS

FIG.1-FORWARD CURRENT DERATING CURVE



注：曲线拐点温度值由公式 $T_{JMAX} - V_f @ (I_f(AV))_{125^{\circ}C} \times I_f(AV) \times R_{\theta JL}$ 计算得出，设计时曲线仅供参考

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

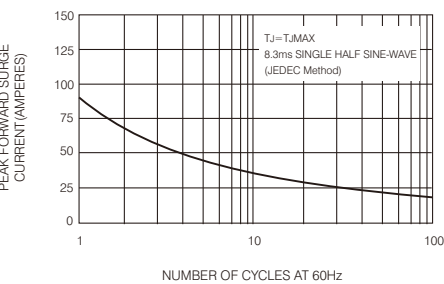


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

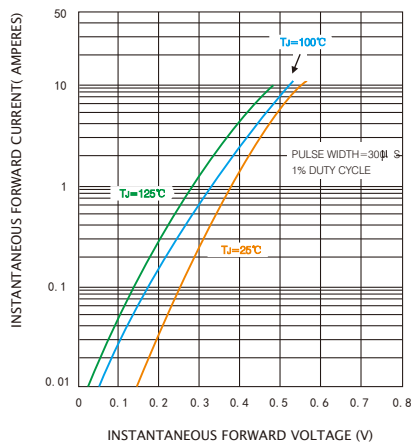


FIG.4-TYPICAL REVERSE CHARACTERISTICS

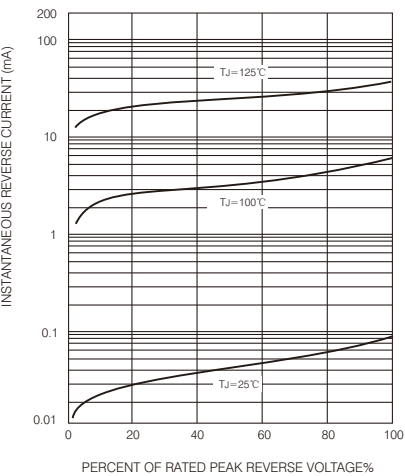
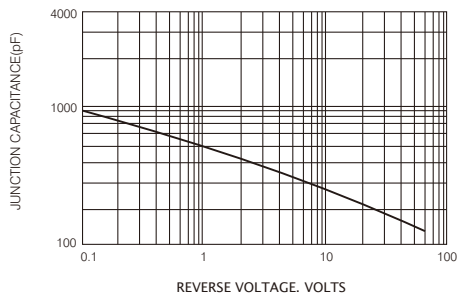


FIG.5-TYPICAL JUNCTION CAPACITANCE



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