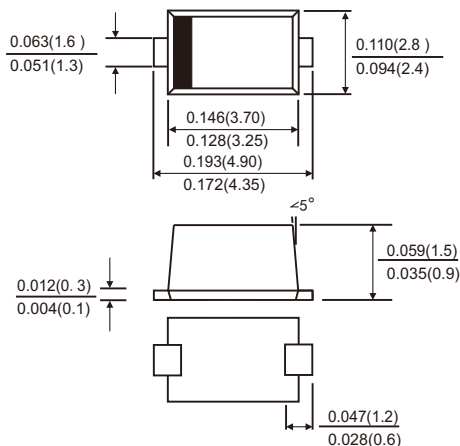


FEATURES

- 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 and WEEE 2012/19/EU



SMAF



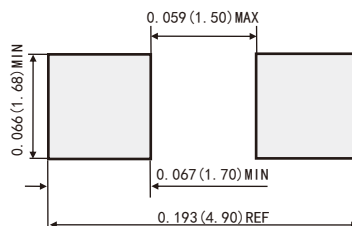
MECHANICAL DATA

- 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

Suggested PAD Layout



Dimensions in inches and (millimeters)

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	$I_{F(AV)}$	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	40	A
Operating junction temperature range	T_J	-55 to+150	°C
Storage temperature range	T_{stg}	-55 to+150	°C

RATINGS AND CHARACTERISTIC OF SS14LS

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	$I_F=1.0\text{A}$	$T_A=25^{\circ}\text{C}$	$V_F^{1)}$	0.43	0.45	V
		$T_A=100^{\circ}\text{C}$		0.37	-	
		$T_A=125^{\circ}\text{C}$		0.35	-	
Reverse current	$V_R=40\text{V}$	$T_A=25^{\circ}\text{C}$	$I_R^{2)}$	50	200	μA
		$T_A=100^{\circ}\text{C}$		5	10	mA
		$T_A=125^{\circ}\text{C}$		15	30	
Typical junction capacitance	4V, 1MHz		C_J	110		pF

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

2.Pulse test: pulse width $\leq 40\text{ms}$

THERMAL CHARACTERISTICS

Parameter	Symbol	SMAF	Unit
Typical thermal resistance ³⁾	$R_{\theta JA}$	150	$^{\circ}\text{C}/\text{W}$
	$R_{\theta JL}$	28	

3.P.C.B. mounted with 0.118" x 0.118" (3.0 mm x 3.0 mm) copper pad areas ($\geq 40\mu\text{m}$ 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)
SS14LS-SMAF	T/R	$\Phi 178$	3000	180×73×180	2	380×380×200	10

RATINGS AND CHARACTERISTIC OF SS14LS

FIG.1-FORWARD CURRENT DERATING CURVE

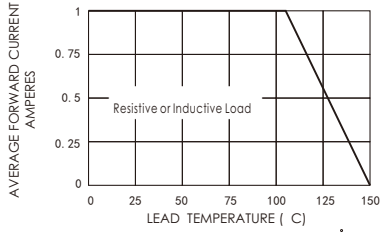


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

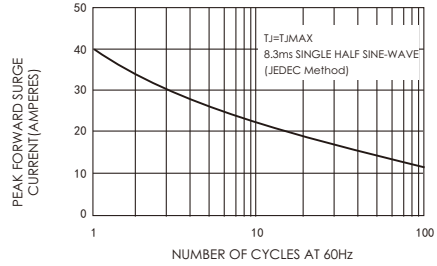


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

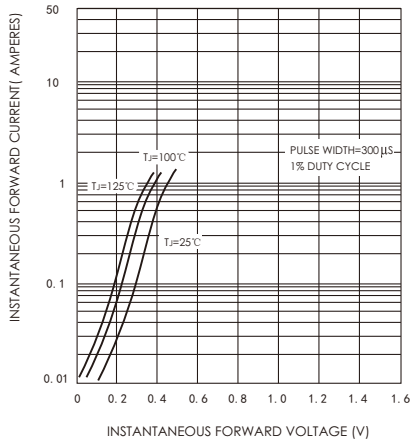


FIG.4-TYPICAL REVERSE CHARACTERISTICS

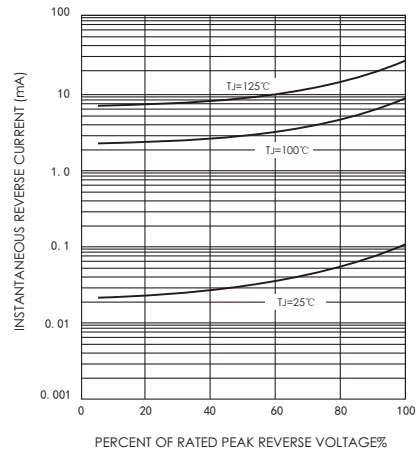


FIG.5-TYPICAL JUNCTION CAPACITANCE

