

## 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
- AEC-Q101 qualified and PPAP capable



AEC-Q101 Qualified

## Mechanical Data

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

SMAF



## 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	$I_{F(AV)}$	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

## 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> =1.0A	T <sub>J</sub> =25°C	V <sub>F</sub> <sup>1)</sup>	0.43	0.45	V
		T <sub>J</sub> =100°C		0.37	-	
		T <sub>J</sub> =125°C		0.35	-	
Reverse current	V <sub>R</sub> =40V	T <sub>A</sub> =25°C	I <sub>R</sub> <sup>2)</sup>	50	200	μA
		T <sub>A</sub> =100°C		5	10	mA
		T <sub>A</sub> =125°C		15	30	
Typical junction capacitance	4V, 1MHz		C <sub>J</sub>	110		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>θL</sub>	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)
SS14LS-V-SMAF	T/R	Φ178	3000	180×73×180	2	380×380×200	10

# RATINGS AND CHARACTERISTICS OF SS14LS-V

FIG.1-FORWARD CURRENT DERATING CURVE

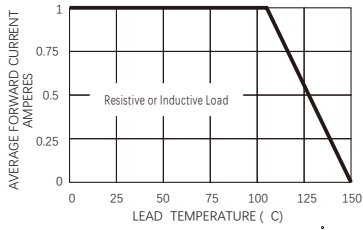


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

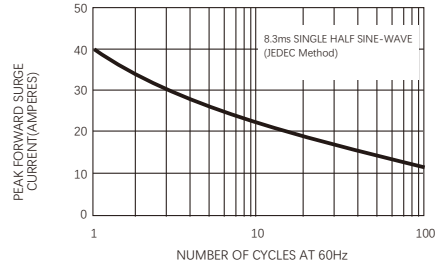


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

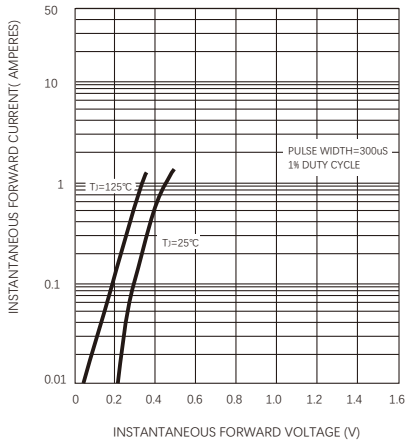


FIG.4-TYPICAL REVERSE CHARACTERISTICS

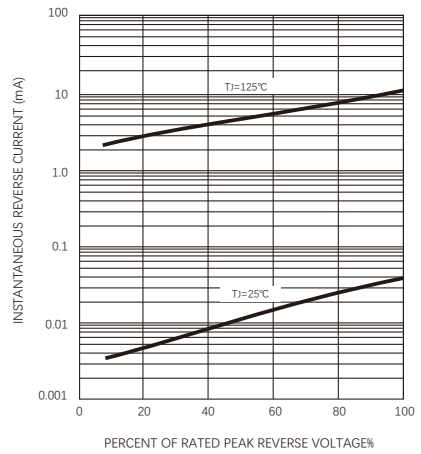
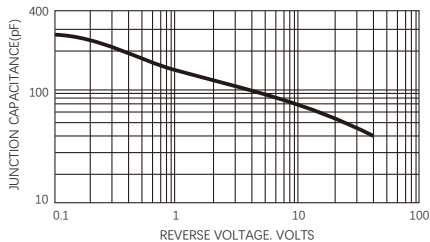
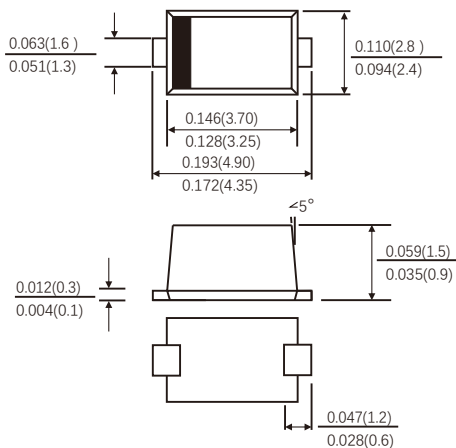


FIG.5-TYPICAL JUNCTION CAPACITANCE



SMAF



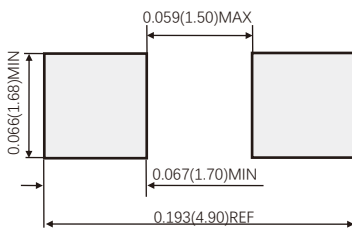
Marking



Marking:

JF:Logo  
xxxx:Date code  
SS14LS-V:Type

Suggested PAD Layout



Dimensions in inches and (millimeters)

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