

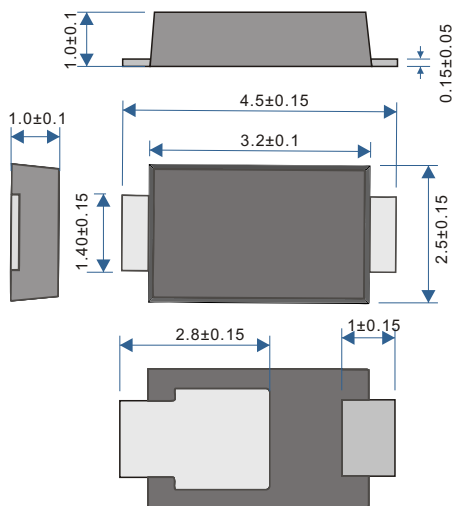
FEATURES

- 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
- Low thermal resistance



RoHS
COMPLIANT

SMAFLP



Dimensions in millimeters

MECHANICAL DATA

- Case: SMAFLP 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	SS24LTP	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	40	V
Maximum average forward rectified current	$I_{F(AV)}$	2.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	50	A
Operating junction temperature range	T_j	-55 to+150	°C
Storage temperature range	T_{stg}	-55 to+150	°C

RATINGS AND CHARACTERISTIC OF SS24LTP

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

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instantaneous forward voltage	I _F =2.0A	T _A =25°C	V _F ¹⁾	0.45	0.48	V
		T _A =100°C		0.41	–	
		T _A =125°C		0.40	–	
	I _F =1.0A	T _A =25°C		0.37	–	
		T _A =100°C		0.32	–	
		T _A =125°C		0.30	–	
Reverse current	V _R =40V	T _A =25°C	I _R ²⁾	50	200	μA
		T _A =100°C		2	–	mA
		T _A =125°C		5	–	
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 ≤ 40ms

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

Parameter	Symbol	SS24LTP	Unit
Typical thermal resistance	R _{θJA} ^{3) 4)}	115	°C/W
	R _{θJL} ³⁾	15	

3.Thermal resistance from junction to ambient and junction to lead mounted on PCB with 6.0mm×6.0mm copper pad areas, R_{θJL} is measured at the terminal of cathode band.

4.The heat generated must be less than thermal conductivity from junction to ambient: dPD/dT_J < 1/R_{θJA}

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)
SS24LTP-1-SMAFLP	T/R	Φ280	5000	285×285×40	2	305×305×440	10
SS24LTP-2-SMAFLP	T/R	Φ180	3000	185×185×80	4	305×305×440	5

RATINGS AND CHARACTERISTIC OF SS24LTP

FIG.1-FORWARD CURRENT DERATING CURVE

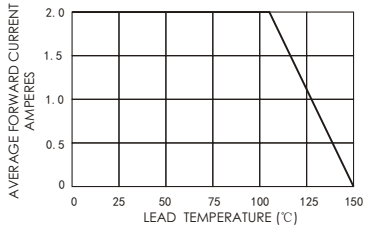


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

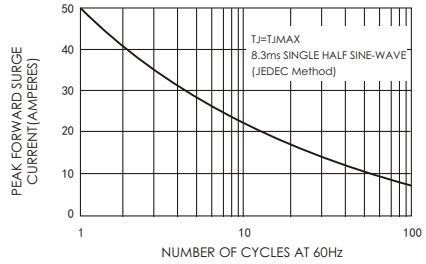


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

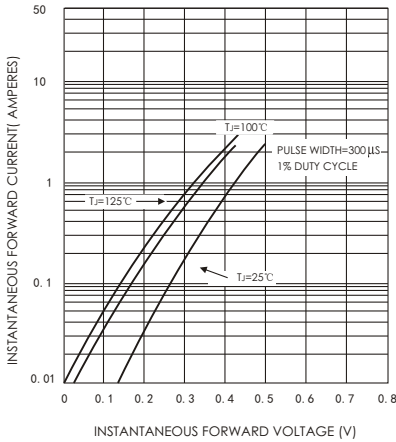


FIG.4-TYPICAL REVERSE CHARACTERISTICS

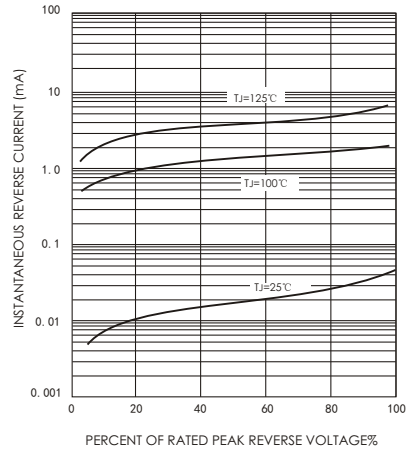


FIG.5-TYPICAL JUNCTION CAPACITANCE

