

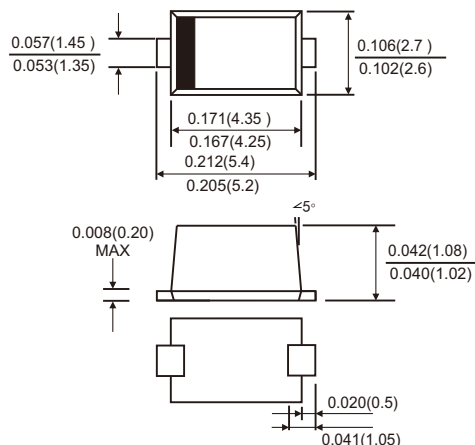
FEATURES

- 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℃/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU and WEEE 2012/19/EU



RoHS
COMPLIANT

SMAFL



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: SMAFL molded plastic body

Terminals: Solder Plated, solderable per MIL-STD-750,method 2026

Polarity: Color band denotes cathode end

Weight: 0.0012ounce, 0.0328 gram

TYPICAL APPLICATIONS

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

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

PRIMARY CHARACTERISTICS	
$I_F(AV)$	5.0A
V_{RRM}	100V
I_{FSM}	80A
V_F at $I_F=5.0A, 25^\circ C$	0.68V
T_{JMAX}	150℃

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	100	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	℃
Storage temperature range	T_{stg}	-55 to +150	℃

RATINGS AND CHARACTERISTIC OF SS510LT

ELECTRICAL CHARACTERISTICS (TA=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	TA=25℃	IF=1.0A	VF 1)	0.46	—	V
		IF=3.0A		0.58	—	
		IF=5.0A		0.68	0.70	
	TA=125℃	IF=1.0A		0.36	—	
		IF=3.0A		0.52	—	
		IF=5.0A		0.60	—	
Reverse current	VR=100V	TA=25℃	IR 2)	20	50	μ A
		TA=100℃		1.0	—	mA
		TA=125℃		4.0	—	
Typical junction capacitance	4V, 1MHz		CJ	330		pF

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

2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	SMAFL	Unit
Typical thermal resistance	RθJA 3) 4)	115	℃/W
	RθJL 3)	28	

3.Free air,mounted on recommended PCB ,2 oz.pad area

4.The heat generated must be less than thermal conductivity from junction to ambient:dPd/dtJ<1/R θ JA

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)
SS510LT-SMAFL	T/R	Φ280	5000	285×285×40	2	305×305×440	10
SS510LT-SMAFL	T/R	Φ180	3000	185×185×80	4	305×305×440	5

RATINGS AND CHARACTERISTIC OF SS510LT

FIG.1-FORWARD CURRENT DERATING CURVE

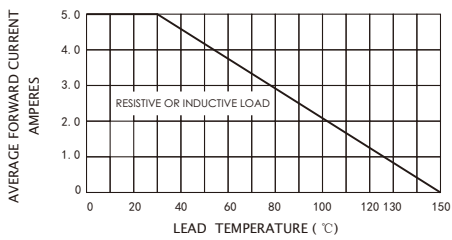


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

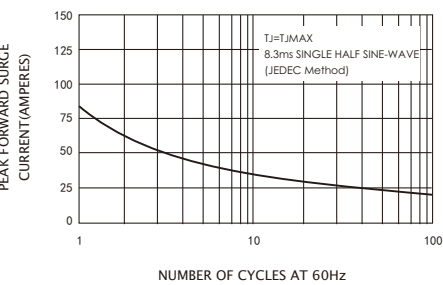


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

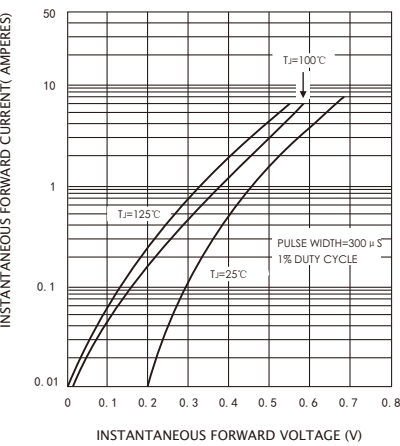


FIG.4-TYPICAL REVERSE CHARACTERISTICS

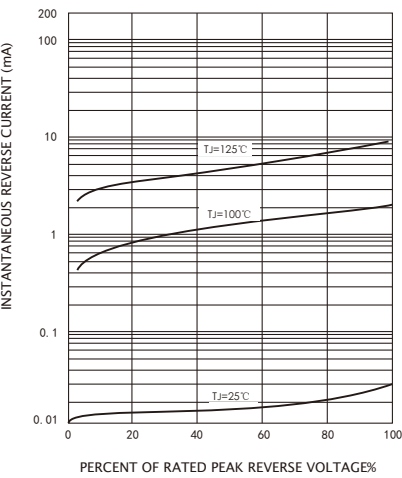


FIG.5-TYPICAL JUNCTION CAPACITANCE

