

### FEATURES

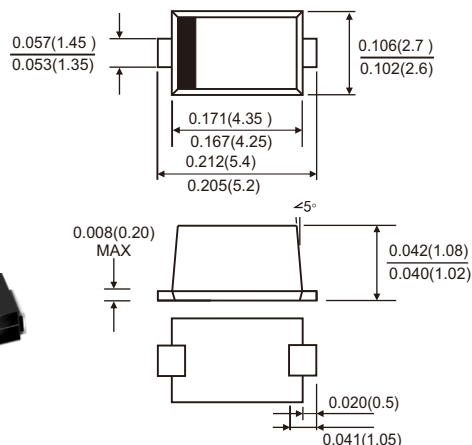
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature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



RoHS  
COMPLIANT



### SMAFL



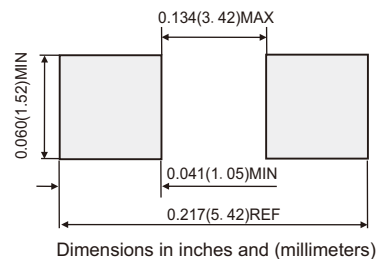
### MECHANICAL DATA

- 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

### Suggested PAD Layout



### 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)	$I_{F(AV)}$	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 SS16LT

## 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>A</sub> =25°C	V <sub>F</sub> <sup>1)</sup>	0.53	0.55	V
		T <sub>A</sub> =100°C		0.47	0.49	
		T <sub>A</sub> =125°C		0.45	0.47	
Reverse current	V <sub>R</sub> =60V	T <sub>A</sub> =25°C	I <sub>R</sub> <sup>2)</sup>	60	150	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	SS16LT	Unit
Typical thermal resistance	R <sub>θJA</sub> <sup>3)</sup>	115	°C/W
	R <sub>θJL</sub> <sup>4)</sup>	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: dP/dt < 1/R<sub>θJA</sub>

## 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)
SS16LT-SMAFL	T/R	Φ280	5000	285×285×40	2	305×305×440	10
SS16LT-SMAFL	T/R	Φ180	3000	185×185×80	4	305×305×440	5

# RATINGS AND CHARACTERISTIC OF SS16LT

FIG.1-FORWARD CURRENT DERATING CURVE

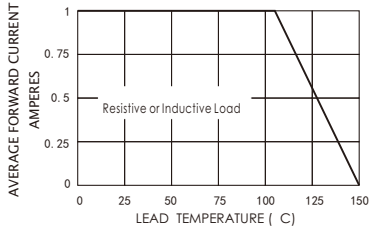


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

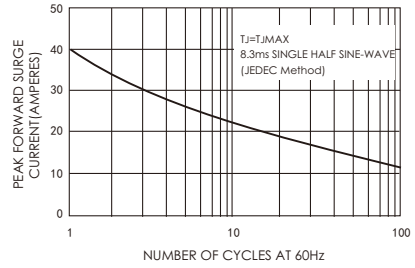


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

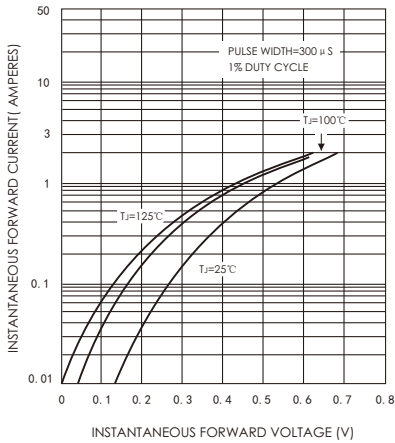


FIG.4-TYPICAL REVERSE CHARACTERISTICS

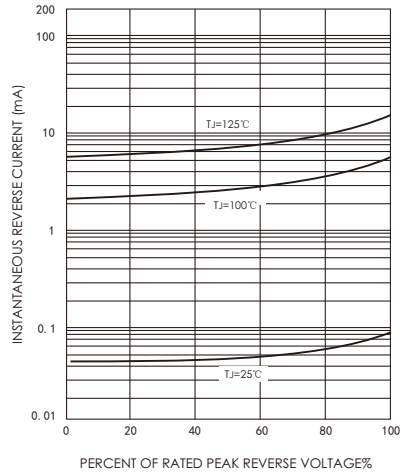


FIG.5-TYPICAL JUNCTION CAPACITANCE

