LOW VF SCHOTTKY BARRIER RECTIFIER

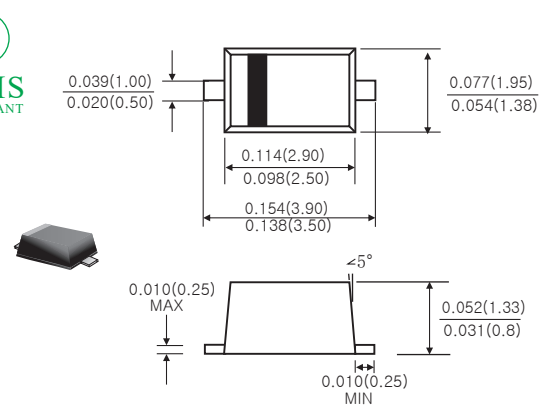
Reverse Voltage - 60 Volts
Forward Current - 1.0Amperes

FEATURES

- Very low profile package
- Ideal for automated placement
- 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
- Meets MSL Level 1,per J-STD-020,LF maximum peak of 260℃
- Componentin accordance to RoHS2015/65/EU

RoHS COMPLIANT

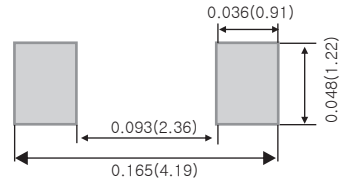
SOD-123FL



MECHANICAL DATA

- Case: Flat lead SOD-123FL small outline plastic package
- Molding compound meets UL 94 V-0 flammability rating
- Terminals: solderable per J-STD-002 and JESD22-B102
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight: 8.85 mg(approximately)

Suggested PAD Layout



Dimensions in inches and (millimeters)

TYPICALAPPLICATIONS

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)

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	℃
Storage temperature range	T_{stg}	-55 to+150	℃

RATINGS AND CHARACTERISTIC

ELECTRICAL CHARACTERISTCS (TA=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instaneous forward voltage	IF=1.0A	TJ=25℃	VF 1)	0.47	0.52	V
		TJ=100℃		0.43	0.48	
		TJ=125℃		0.41	0.46	
Reverse current	VR=60V	TJ=25℃	IR 2)	8.0	30	μA
		TJ=100℃		-	5.0	mA
		TJ=125℃		-	23	
Typical junction capacitance	4V,1MHz		CJ	78		pF

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle
2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTCS

Parameter		Symbol	L16	Unit
Typical thermal resistance 3)	Junction to Ambient	$R_{\theta JA}$	82	℃/W
	Junction to Lead	$R_{\theta JL}$	26	

3.Mounted on 1 inch square pad size (1 x 0.5 inch for each lead) on FR4 board. The heat generated must be less than the thermal conductivity from junction-to-ambient: $dP_D/dT_J < 1/R_{\theta JA}$

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)
L16-SOD-123FL	T/R	Φ330	7500	330×35×333	2	364×364×360	8

RATINGS AND CHARACTERISTIC

FIG.1-FORWARD CURRENT DERATING CURVE

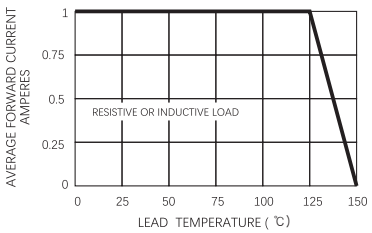


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

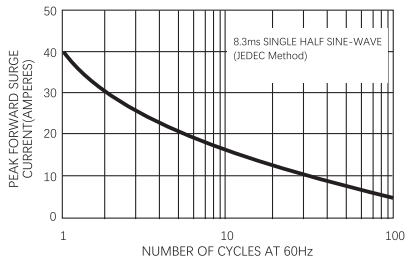


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

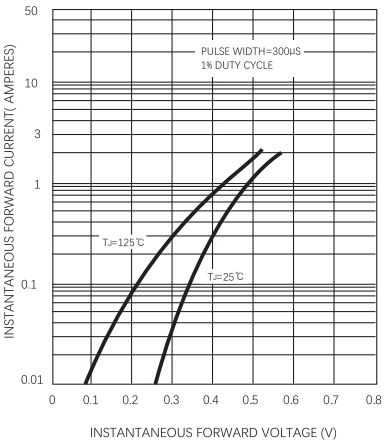


FIG.4-TYPICAL REVERSE CHARACTERISTICS

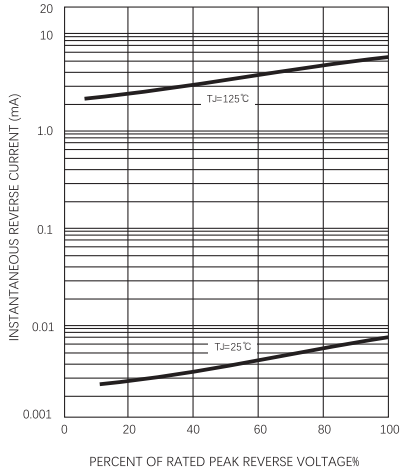


FIG.5-TYPICAL JUNCTION CAPACITANCE

