SP5U100L

LOW VF SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 100Volts

Forward Current - 5.0Amperes

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
- Very low profile –typical height of 1.1mm
- Ideal for automated placement

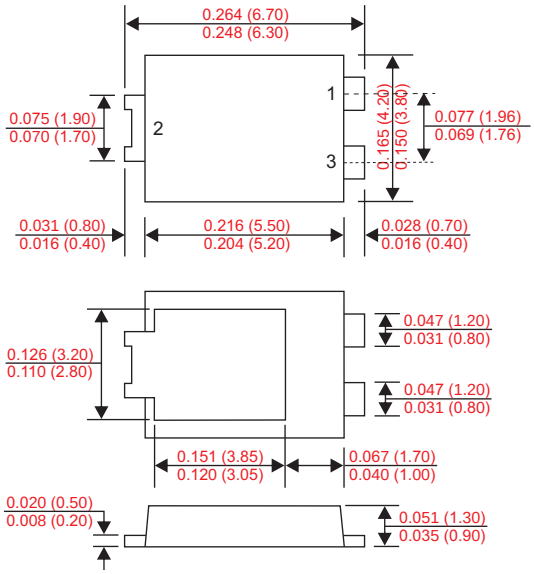
  High temperature soldering guaranteed:260℃/10 seconds at terminals

  Component in accordance to RoHS 2011/65/EU

Unit: mm

PIN 2 PIN 1 PIN 3

TO-277



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: TO-277 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Mounting Position: Any
- Weight: 0.092 grams (approx)

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)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	VRRM	100	V
Maximum average forward rectified current	IF(AV)	5.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	IFSM	120	A
Operating junction temperature range	TJ	-55 to+150	℃
Storage temperature range	Tstg	-55 to+150	℃

ELECTRICAL CHARACTERISTCS（T_A=25℃ Unless otherwise noted）

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	I_F=5.0A	T_A=25℃	V_F 1)	0.60	0.65	V
		T_A=100℃		0.57	–	
		T_A=125℃		0.55	–	
	I_F=2.0A	T_A=25℃		0.47	–	
		T_A=100℃		0.42	–	
		T_A=125℃		0.41	–	
Reverse current	VR=100V	T_A=25℃	I_R 2)	10	50	μA
		T_A=100℃		–	5	mA
		T_A=125℃		–	20	
Typical junction capacitance	4V,1MHz		C_J	370		pF

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

2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTCS

Parameter	Symbol	TO-277	Unit
Typical thermal resistance 3)	$R_{\theta JA}$	60.0	℃/W
	$R_{\theta JL}$	3.0	

3 Units mounted on recommended PCB 1 oz. Pad layout

RATINGS AND CHARACTERISTIC OF SP5U100L

FIG.1-FORWARD CURRENT DERATING CURVE

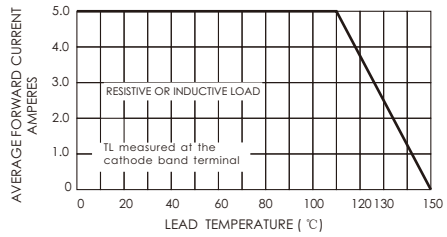


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

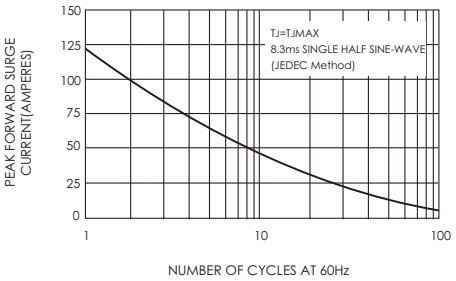


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

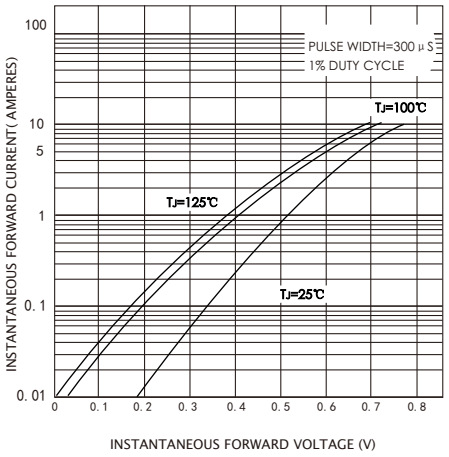


FIG.4-TYPICAL REVERSE CHARACTERISTICS

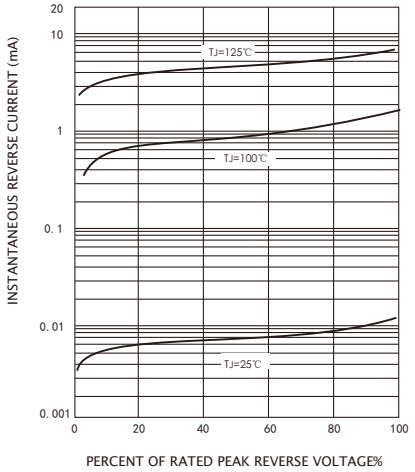


FIG.5-TYPICAL JUNCTION CAPACITANCE