SEMICONDUCTOR

SP5U60L

LOW VF SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 60Volts
Forward Current - 5.0Amperes

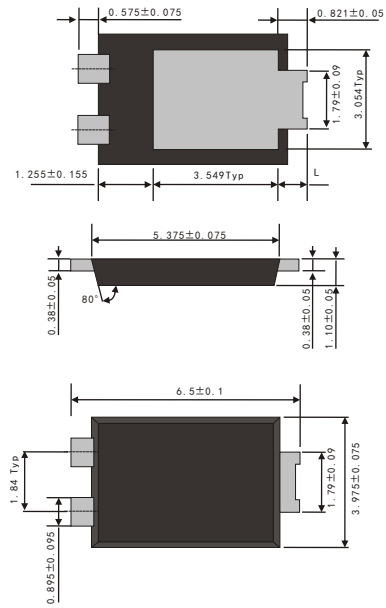
FEATURES

- 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

Pb
RoHS
COMPLIANT

TO–277

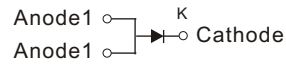


MECHANICAL DATA

- 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



Dimensions in inches and (millimetrers)

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	Symbol	SP5U60L	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	60	V
Maximum average forward rectified current	$I_{F(AV)}$	5.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	120	A
Operating junction temperature range	T_J	-55 to+150	℃
Storage temperature range	T_{stg}	-55 to+150	℃

RATINGS AND CHARACTERISTIC OF SP5U60L

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. 46	0. 49	V
		T_A=100℃		0. 45	–	
		T_A=125℃		0. 43	–	
	I_F=3.0A	T_A=25℃		0. 40	–	
		T_A=100℃		0. 37	–	
		T_A=125℃		0. 35	–	
Reverse current	VR=60V	T_A=25℃	I_R 2)	60	150	μA
		T_A=100℃		5	10	mA
		T_A=125℃		15	50	
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（T_A=25℃ Unless otherwise noted）

Parameter	Symbol	SP5U60L	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

AVAILABALE PACK INFORMATION

Product code	Pack	Box Size L*W*H(mm)	Quantity(pcs/box)	Carton SizeL*W*H(mm)	Quantity(box/carton)
SP5U60L-TO-277	T/B	340*340*50	10K	365*350*350	6

RATINGS AND CHARACTERISTIC OF SP5U60L

FIG.1-FORWARD CURRENT DERATING CURVE

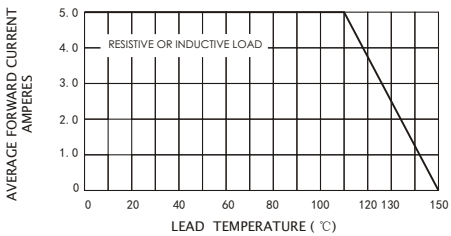


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

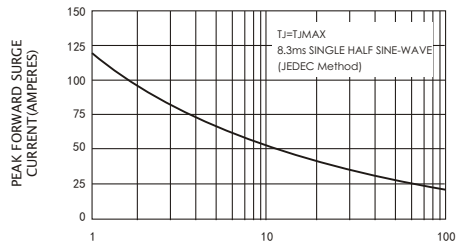


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

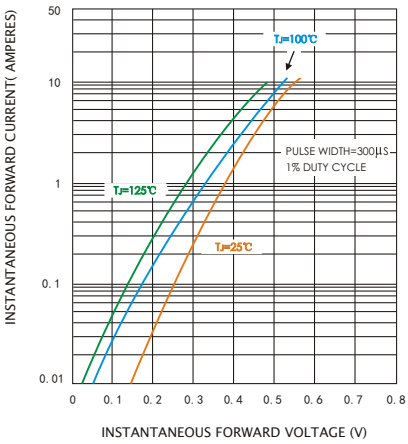


FIG.4-TYPICAL REVERSE CHARACTERISTICS

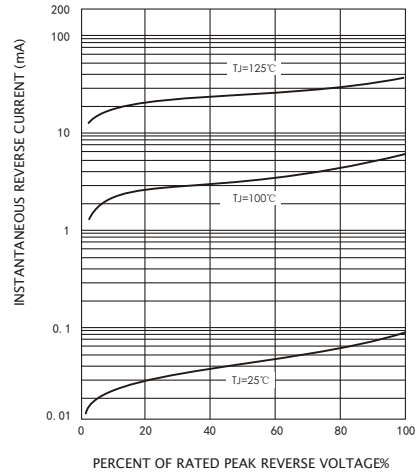


FIG.5-TYPICAL JUNCTION CAPACITANCE

