

SUPER LOW VF SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 50Volts
Forward Current - 15.0Amperes

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

Applications:

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

Mechanical data:

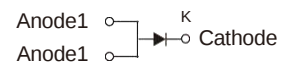
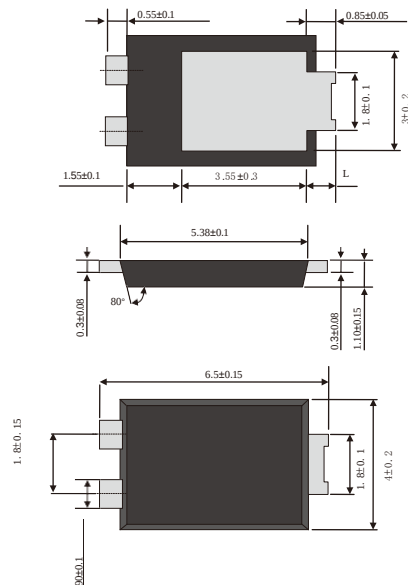
- Case: TO-277 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Mounting Position: Any
- Weight: 0.092 grams (approx)

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	V
Maximum average forward rectified current	I _{F(AV)}	15.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I _{FSM}	150	A
Operating junction temperature range	T _j	-55 to+150	℃
Storage temperature range	T _{stg}	-55 to+150	℃

TO-277



Dimensions in inches and (millimeters)

RATINGS AND CHARACTERISTIC OF SP15U50SL

ELECTRICAL CHARACTERISTICS (T_A=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instantaneous forward voltage	T _J =25°C	I _F =15A	V _F ¹⁾	0.45	0.48	V
		I _F =10A		0.41	—	
		I _F =5A		0.36	—	
	T _J =125°C	I _F =15A		0.42	—	
		I _F =10A		0.36	—	
		I _F =5A		0.30	—	
Reverse current	V _R =50V	T _A = 25°C	I _R ²⁾	50	200	μ A
		T _A = 100°C		8	—	mA
		T _A = 125°C		20	—	
Typical junction capacitance	4V,1MHz		C _J	750		pF

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

2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	TO-277	Unit
Typical thermal resistance ³⁾	θ R JA	60.0	°C/W
	θ R JL	3.0	

3 Units mounted on recommended PCB 1 oz. Pad layout

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)
SP15U50SL-TO-277	T/R	φ 330	5000	338×338×40	2	365×365×360	7

RATINGS AND CHARACTERISTIC OF SP15U50SL

FIG.1-FORWARD CURRENT DERATING CURVE

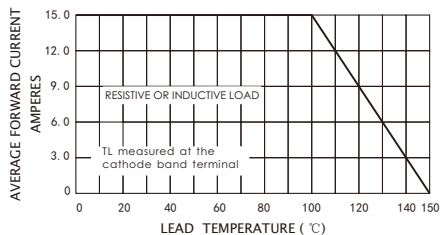


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

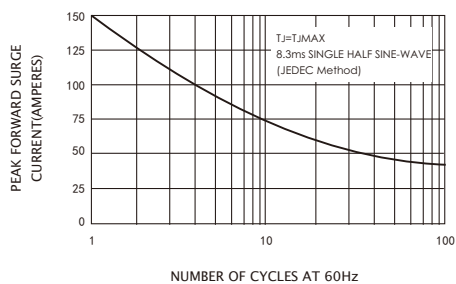


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

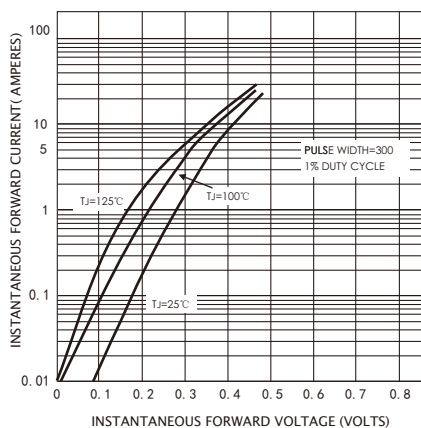


FIG.4-TYPICAL REVERSE CHARACTERISTICS

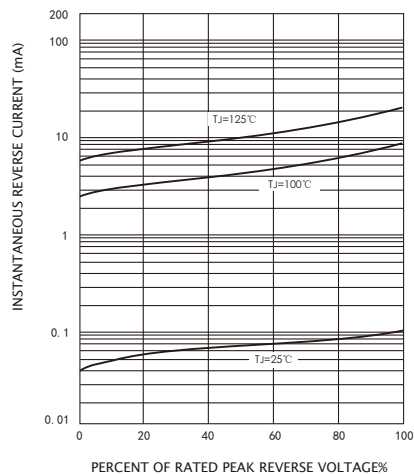
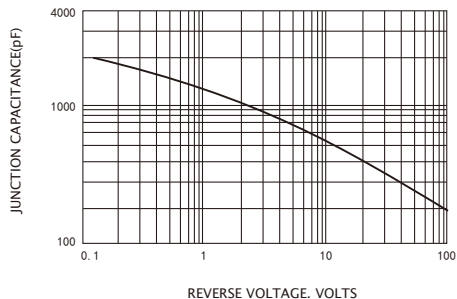
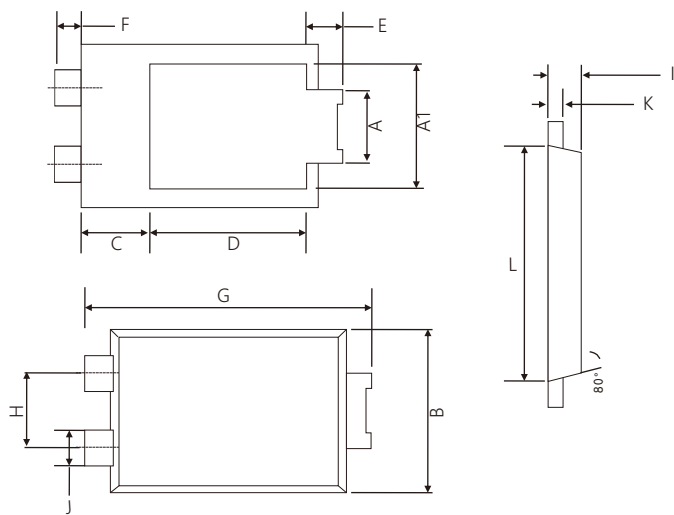


FIG.5-TYPICAL JUNCTION CAPACITANCE



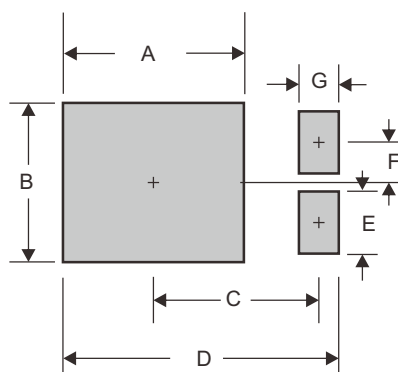
Recommended Soldering Footprint

TO-277



Dimensions in millimeters

TO-277		
Dim	Min	Max
A	1.70	1.90
A1	2.80	3.20
C	1.15	1.55
D	3.25	3.85
E	0.80	0.90
F	0.45	0.65
G	6.35	6.65
H	1.65	1.95
I	0.95	1.25
J	0.80	1.00
B	3.80	4.20
K	0.22	0.38
L	5.28	5.48



A	B	C	D	E	F	G
0.185 (4.70)	0.142 (3.60)	0.152 (3.87)	0.260 (6.60)	0.055 (1.40)	0.035 (0.90)	0.031 (0.80)

Dimensions in inches and (millimeters)