

LOW VF SCHOTTKY BARRIER RECTIFIER

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°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU

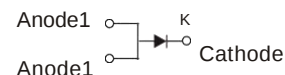
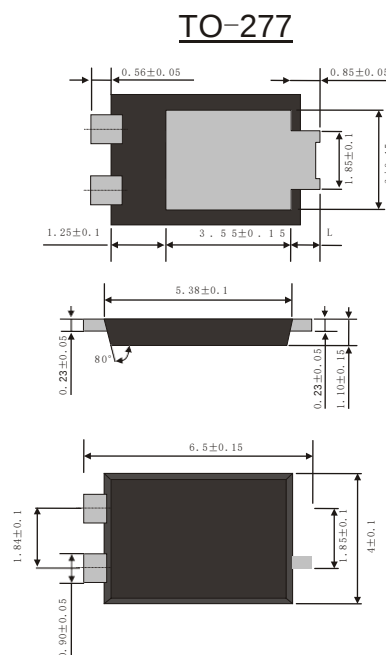


Mechanical Data:

- 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)

Applications:

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



Dimensions in inches and (millimeters)

MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	KW15U100L	Unit
Marking Code	-	JF SP15U100L SP15U100L	-
Maximum repetitive peak reverse voltage	V_{RRM}	100	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	°C
Storage temperature range	T_{stg}	-55 to +150	°C

RATINGS AND CHARACTERISTIC OF KW15U100L

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Parameter	Test Conditions	Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	$T_J=25^{\circ}\text{C}$	$I_F=15\text{A}$	0.68	0.72	V
		$I_F=5\text{A}$	0.50	—	
		$I_F=1\text{A}$	0.39	—	
	$T_J=125^{\circ}\text{C}$	$I_F=15\text{A}$	0.61	—	
		$I_F=5\text{A}$	0.45	—	
		$I_F=1\text{A}$	0.28	—	
Reverse current	$V_R=100\text{V}$	$T_A=25^{\circ}\text{C}$	20	50	μA
		$T_A=100^{\circ}\text{C}$	2	3	mA
		$T_A=125^{\circ}\text{C}$	10	20	
Typical junction capacitance	4V, 1MHz	C_J	750		pF

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

2.Pulse test: pulse width $\leq 40\text{ms}$

THERMAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Parameter	Symbol	KWSP15U100L	Unit
Typical thermal resistance ³⁾	$R_{\theta JA}$	60.0	$^{\circ}\text{C}/\text{W}$
	$R_{\theta JL}$	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 Size L*W*H (mm)	Quantity (box/carton)
KW15U100L	T/B	340*340*50	10K	365*350*350	6

RATINGS AND CHARACTERISTIC OF KW15U100L

FIG.1-FORWARD CURRENT DERATING CURVE

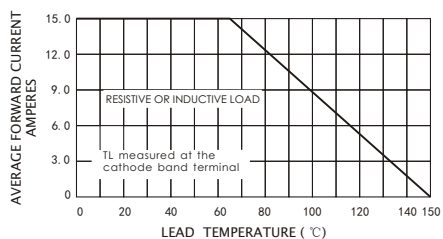


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

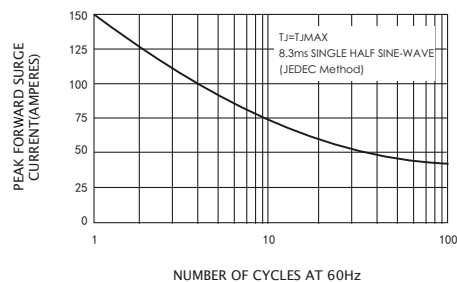


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

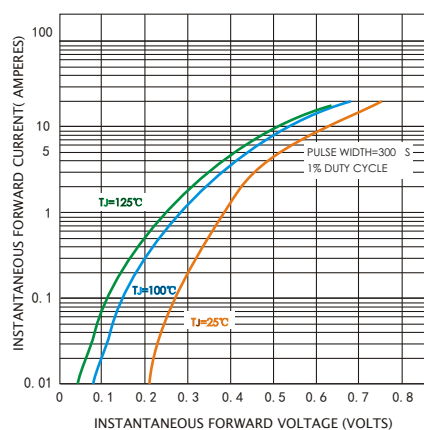


FIG.4-TYPICAL REVERSE CHARACTERISTICS

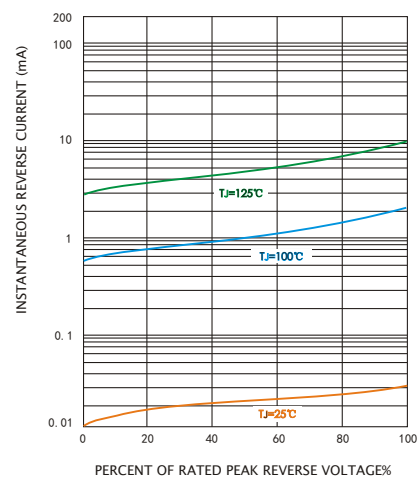
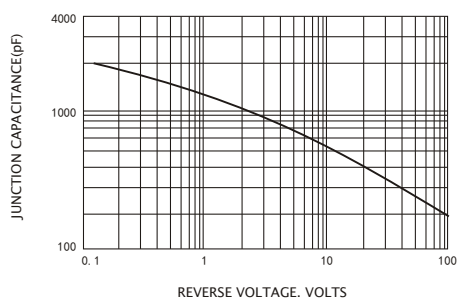
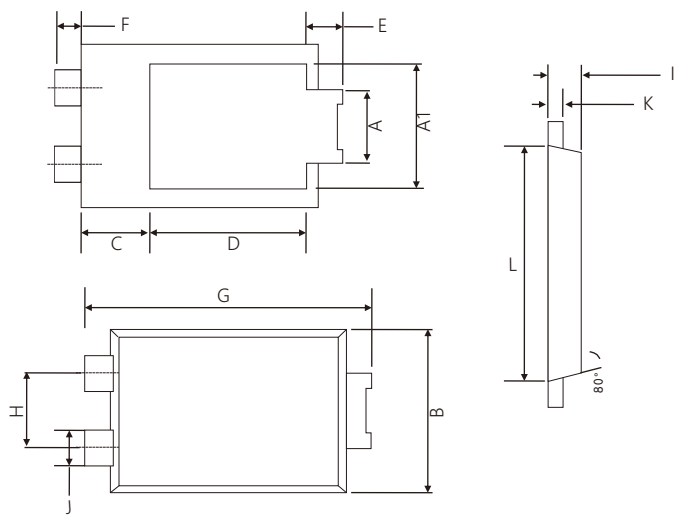


FIG.5-TYPICAL JUNCTION CAPACITANCE



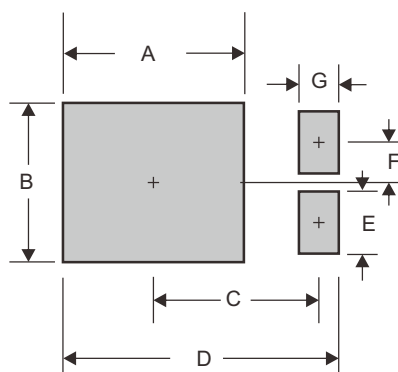
Recommended Soldering Footprint

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)