

LOW VF SCHOTTKY BARRIER RECTIFIER

Features:

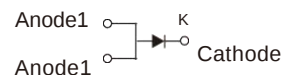
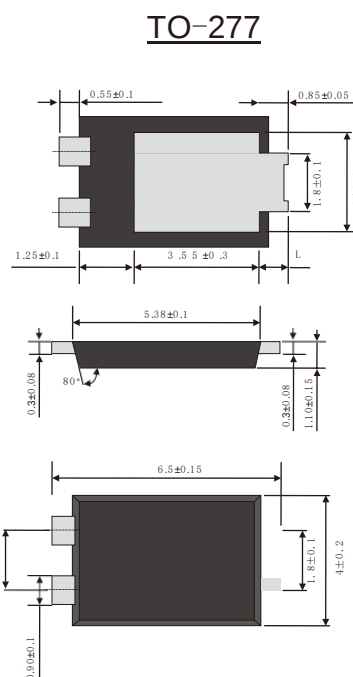
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
 - Metal silicon junction ,majority carrier conduction
 - Guard ring for overvoltage protection
 - Low power loss ,high efficiency
 - High current capability ,low forward voltage drop
 - High surge capability
 - Very low 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)

Application:

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	Value	Unit
Marking Code	SP10U100L / JF SP10U100L	-	-
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum average forward rectified current	$I_F(AV)$	10.0	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 KW10U100L

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

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	If=10.0A	$T_A=25^{\circ}\text{C}$	V_F ¹⁾	0.63	0.70	V
		$T_A=100^{\circ}\text{C}$		0.61	—	
		$T_A=125^{\circ}\text{C}$		0.59	—	
	If=5.0A	$T_A=25^{\circ}\text{C}$		0.52	—	
		$T_A=100^{\circ}\text{C}$		0.49	—	
		$T_A=125^{\circ}\text{C}$		0.47	—	
Reverse current	VR=100V	$T_A=25^{\circ}\text{C}$	I_R ²⁾	40	100	μA
		$T_A=100^{\circ}\text{C}$		5	10	mA
		$T_A=125^{\circ}\text{C}$		15	30	
Typical junction capacitance	4V, 1MHz		C_J	570		pF

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

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

THERMAL CHARACTERISTICS

Parameter	Symbol	TO-277	Unit
Typical thermal resistance ³⁾	$R_{\theta A}$	60.0	$^{\circ}\text{C}/\text{W}$
	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)
KW10U100L	T/R	$\phi 330$	5000	338×338×40	2	365×365×360	7

RATINGS AND CHARACTERISTIC OF KW10U100L

FIG.1-FORWARD CURRENT DERATING CURVE

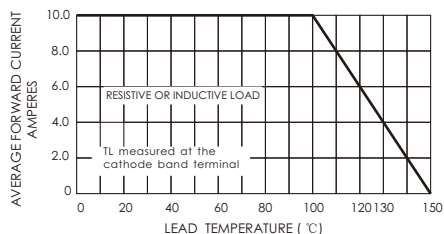


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

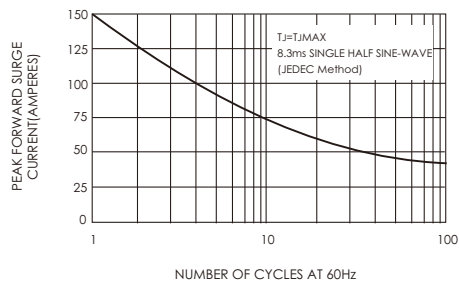


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

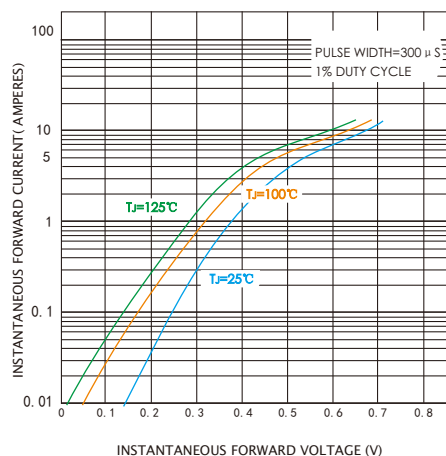


FIG.4-TYPICAL REVERSE CHARACTERISTICS

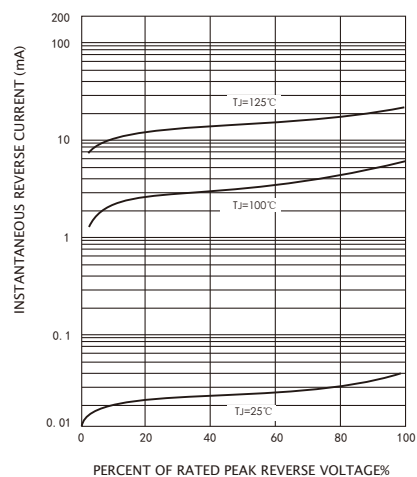


FIG.5-TYPICAL JUNCTION CAPACITANCE

