

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



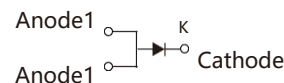
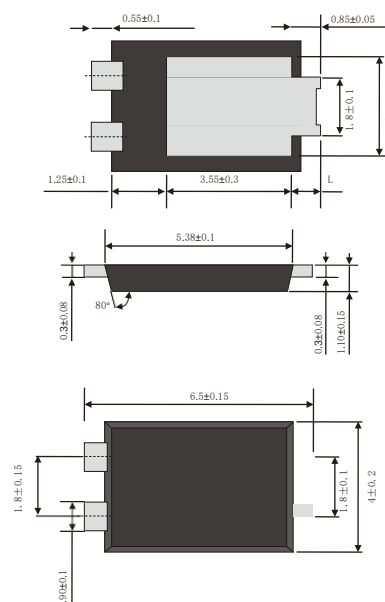
Mechanical Data:

- 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

TO-277



Dimensions in inches and (millimeters)

MAXIMUM RATINGS

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

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	300	V
Maximum average forward rectified current	$I_{F(AV)}$	10	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 KWSP10U300L

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

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instaneous forward voltage	If=10.0A	T _A =25°C	V _F ¹⁾	0.80	0.85	V
		T _A =100°C		0.72	-	
		T _A =125°C		0.68	-	
	If=2.0A	T _A =25°C		0.68	-	
		T _A =100°C		0.59	-	
		T _A =125°C		0.55	-	
Reverse current	V _R =300V	T _A =25°C	I _R ²⁾	–	2	μA
		T _A =100°C		–	0.15	mA
		T _A =125°C		–	0.60	
Typical junction capacitance	4V,1M Hz		C _J	170		pF

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

2.Pulse test: pulse width ≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	TO-277	Unit
Typical thermal resistance ³⁾	R _{θA}	60.0	°C/W
	R _{θJL}	3.0	

3 Units mounted on recommended PCB 1 oz. Pad layout

AVAILABLE 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)
KWSP10U300L	T/R	φ330	5000	338×338×40	2	365×365×360	7

RATINGS AND CHARACTERISTIC OF KWSP10U300L

FIG.1-FORWARD CURRENT DERATING CURVE

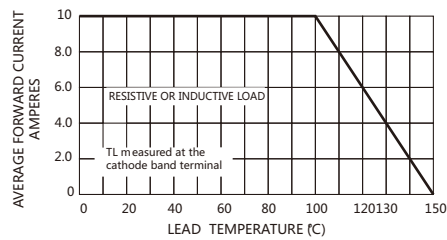


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

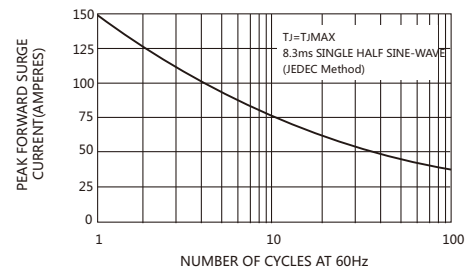


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

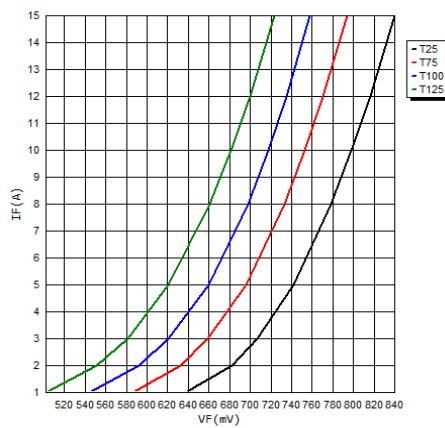


FIG.4-TYPICAL REVERSE CHARACTERISTICS

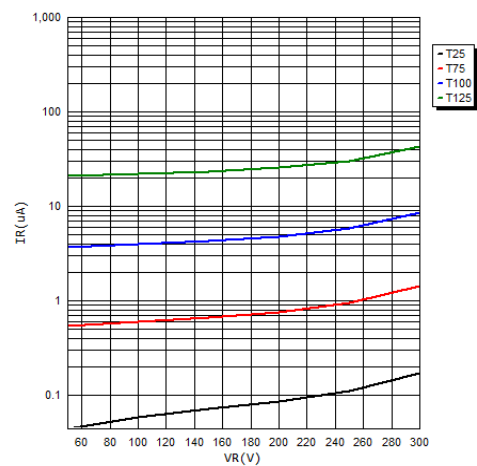


FIG.5-TYPICAL JUNCTION CAPACITANCE

