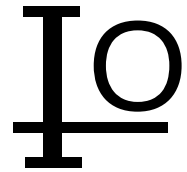


SP15U45SL

LOW VF SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 45Volts Forward Current - 15.0Amperes



FEATURS

- 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

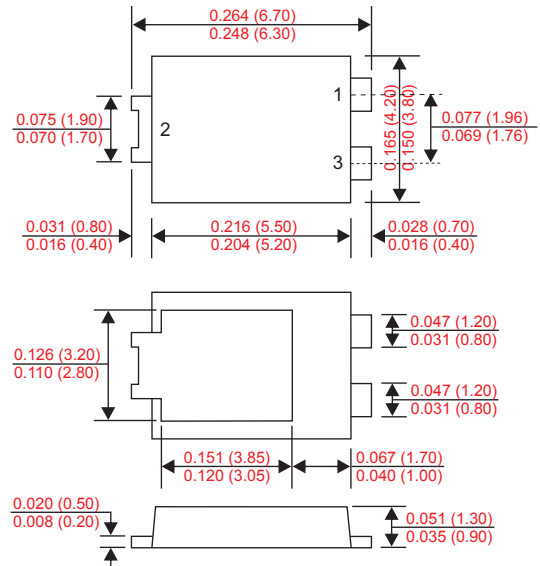
MECHANICAL DATA

- 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)
- Lead Free:Finish / RoHS Compliant

Unit: mm

PIN 2  PIN 1
PIN 3 

TO-277



TYPICAL PPLICATIONS

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

MAXIMUM RATINGS

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

Parameter	Symbol	SP15U45SL	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	45	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_{sig}	-55 to+150	°C

RATINGS AND CHARACTERISTIC OF SP15U45SL

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	0.47	V
		I _F =10A		0.42	-	
		I _F =5A		0.36	-	
	T _J =125°C	I _F =15A		0.43	0.45	
		I _F =10A		0.36	-	
		I _F =5A		0.28	-	
Reverse current	V _R =50V	T _A =25°C	I _R ²⁾	80	200	μA
		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 μs pulse width, 1% duty cycle
2. Pulse test: pulse width ≤ 40ms

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

Parameter	Symbol	SP15U45SL	Unit
Typical thermal resistance ³⁾	R _{θJA}	60.0	°C/W
	R _{θJL}	3.0	

3 Units mounted on recommended PCB 1 oz. Pad layout

RATINGS AND CHARACTERISTIC OF SP15U45SL

FIG.1-FORWARD CURRENT DERATING CURVE

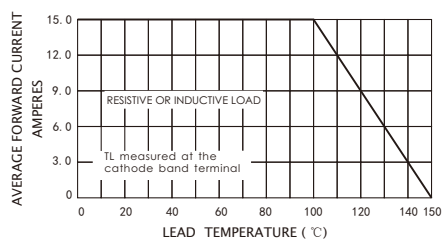


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

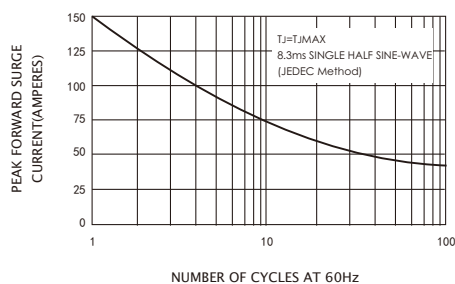


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

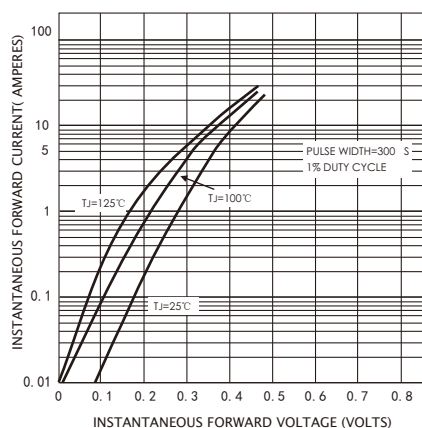


FIG.4-TYPICAL REVERSE CHARACTERISTICS

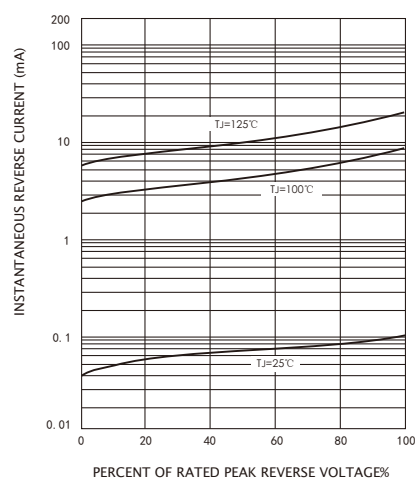


FIG.5-TYPICAL JUNCTION CAPACITANCE

