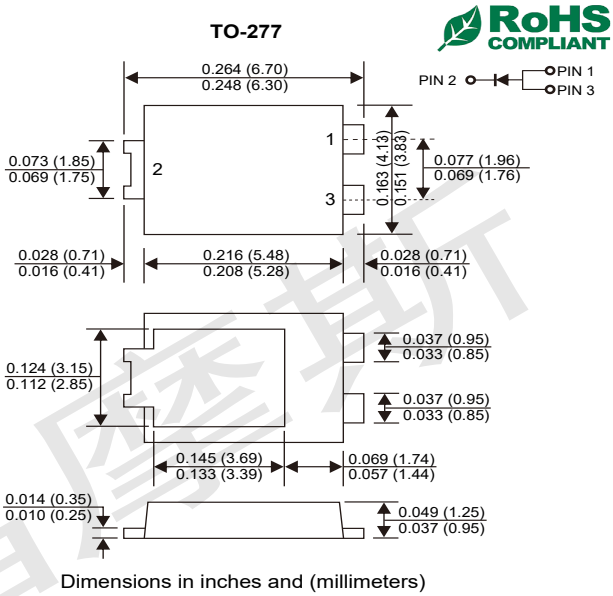
Low VF Schottky Barrier Rectifier

SR1045SP-TFH-L 45V 10.0A

RoHS COMPLIANT

Features And Mechanical Data

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for over voltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering:260℃ MAX at 10 seconds, per JESD 22-B106 or MIL-STD-750,method 2026
- Case: JEDEC TO-277 molded plastic body



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified. Single phase, half wave, 60HZ, resistive or inductive load. For capacitive load, derate current by 20%.

Type Numbe		Symbols	SR1045SP-TFH-L			Units
Device Marking			TSA1045			
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	45			Volts
Maximum RMS Voltage		V_{RMS}	31.5			Volts
Maximum DC Blocking Voltage		V_{DC}	45			Volts
Maximum average forward rectified current (see Fig.1)		$I_{(AV)}$	10.0			Amp
Peak Forward Surge Current, 8.3 ms single half-sine-wave superimposed on rated load (JEDEC method) (Rating of per diode)		I_{FSM}	120			Amp
Maximum instantaneous forward voltage at $I_{(AV)}$ (Note 1)		V_F	Min	Typ	Max	Volts
	1A@ T_J =25℃		-	0.39	-	
	3A@ T_J =25℃		-	0.43	-	
	10A@ T_A =25℃		-	0.52	0.55	
	1A@ T_J=125℃		-	0.27	-	
	3A@ TJ =125℃		-	0.31	-	
	10A@ T_J=125℃		-	0.40	-	
Maximum Reverse Current at Rated DC Blocking Voltage(Note 2)	T_J=25℃	I_R	-	5	50	uAmp
	T_J=100℃		-	3.5	10	mAmp
Thermal resistance from junction to case		$R_{\Theta}JC$	10			℃/W
Operating Temperature Range		T_J	-65 to +175			℃
Storage Temperature Range		T_{STG}	-65 to +175			℃

NOTES:

1. Pulse test: 300 μs pulse width, 1% duty cycle
2. Pulse test: Pulse width ≦40 ms

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RoHS COMPLIANT

RATINGS AND CHARACTERISTIV CURVES

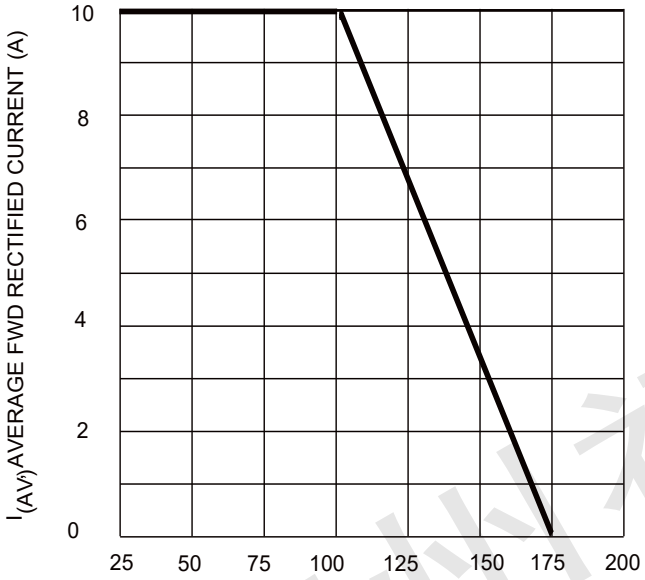


Fig. 1 Forward Derating Curve

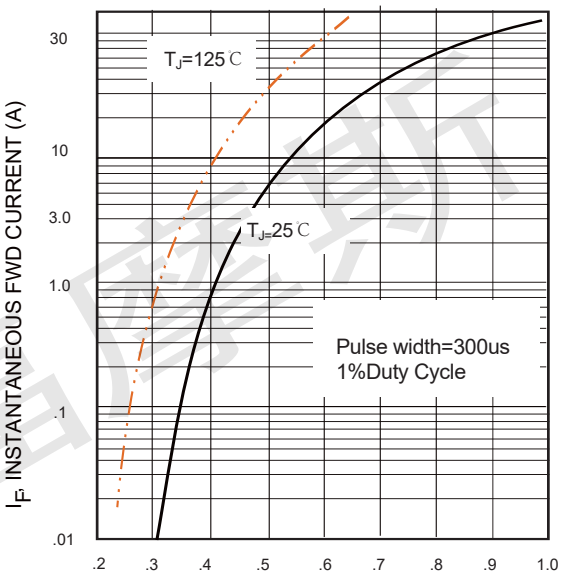


Fig. 2 Typical Forward Characteristics

TJ=125℃ TJ=100℃80~200V

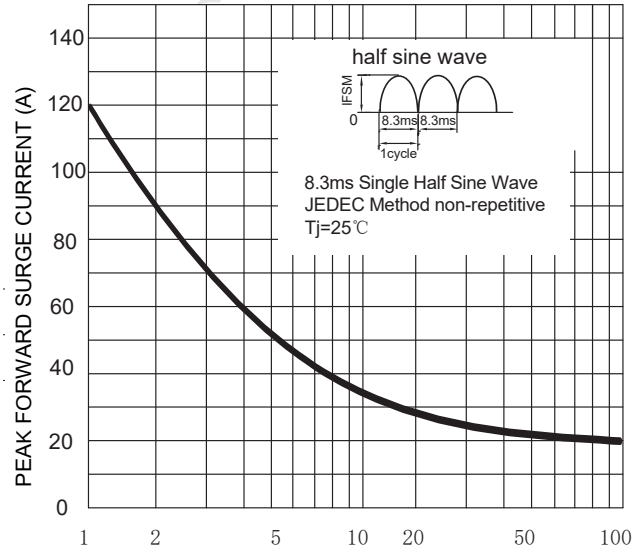


Fig. 3 Peak Forward Surge Current

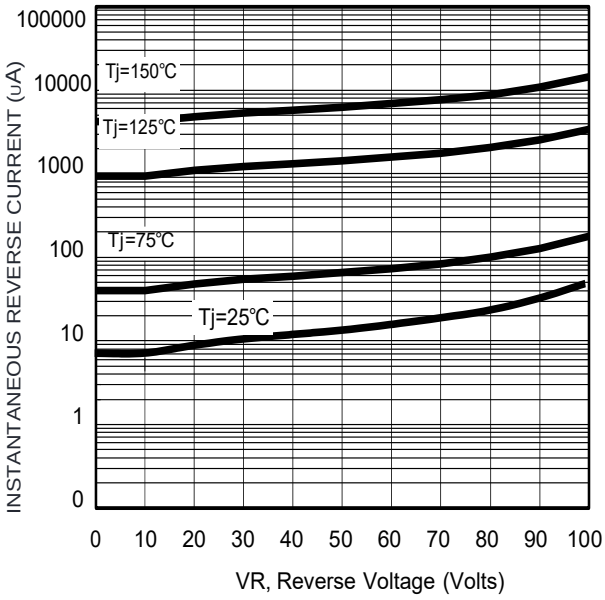


Fig.4-Typical Forward Characteristics

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