SAMYANG ELECTRONICS

SP10V45L

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 4.5 V
CURRENT: 10.0 A

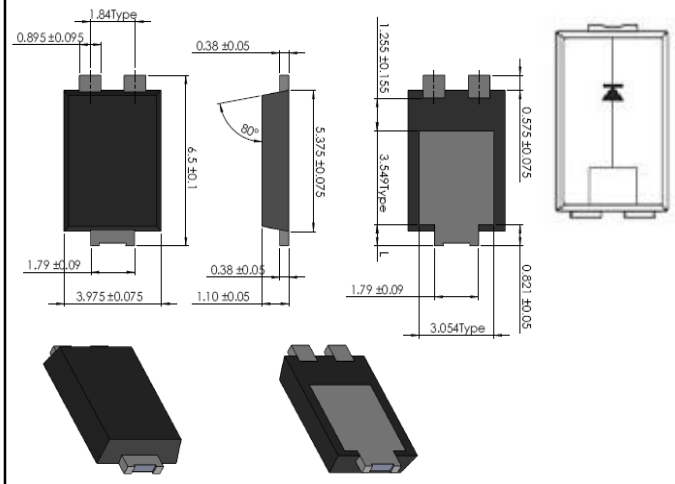
FEATURES

- 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
- Single rectifier construction
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260℃/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

MECHANICAL DATA

- CaseTO-277B molded plastic body
- Terminats Solderable per MIL-STD-750,method 2026
- PolarityAs marked

TO-277B Unit: mm



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

	Symbols		SP 10V45L	Units
Maximum repetitive peak reverse voltage	V_{RRM}		45	Volts
Maximum RMS voltage	V_{RMS}		32	Volts
Maximum DC blocking voltage	V_{DC}		45	Volts
Maximum average forward rectified current (see Fig.1)	$I_{(AV)}$		10	Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}		280	Amps
Maximum instantaneous forward voltage at 10.0 A(Note 1)	V_F	TYP.	0.42	Volts
		MAX.	0.45	
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	I_R	T_A =25℃	0.5	mA
		T_A =125℃	15	
Typical thermal resistance (Note 2)	$R_{\theta JC}$		2.5	℃/W
Operating junction temperature range	T_J		-65 to+150	℃
Storage temperature range	T_{STG}		-65 to+150	℃

NOTE: 1. Pulse test : 300μs pulse width,1% duty cycle.
2. Measured at 1.0MH_Z and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to ambient

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FIG.1-FORWARD CURRENT DERATING CURVE

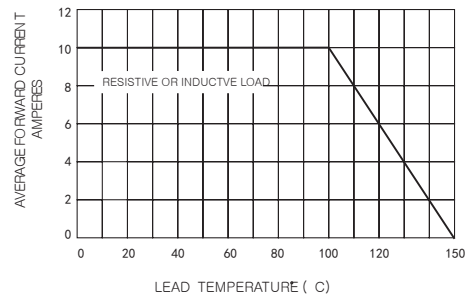


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

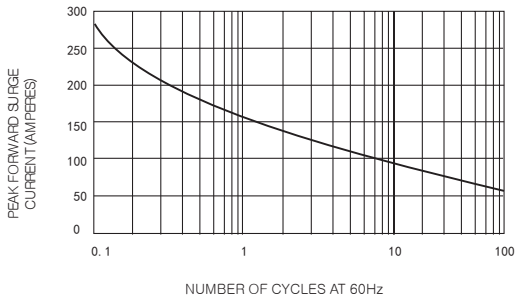


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

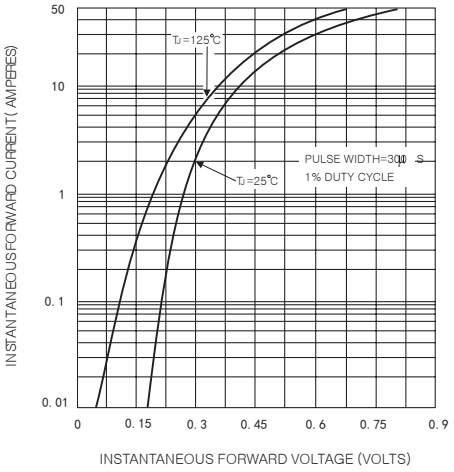


FIG.4-TYPICAL REVERSE CHARACTERISTICS

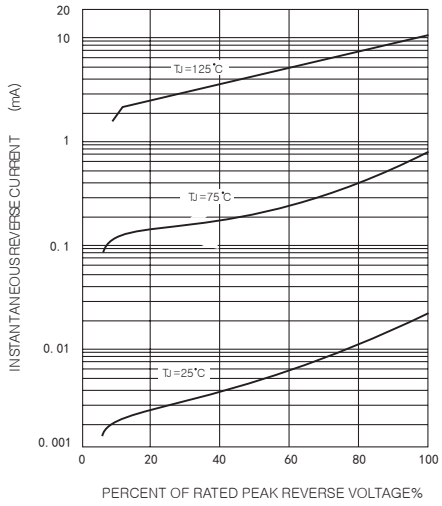


FIG.5-TYPICAL JUNCTION CAPACITANCE

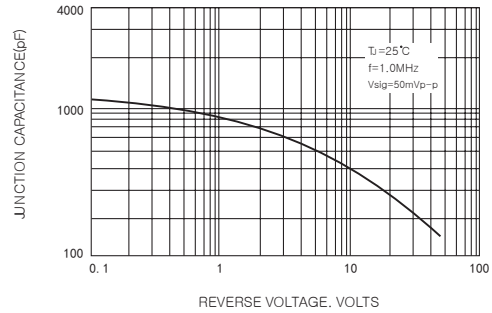


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

