SEMICONDUCTOR

SR1045M1

SCHOTTKY BARRIER RECTIFIER

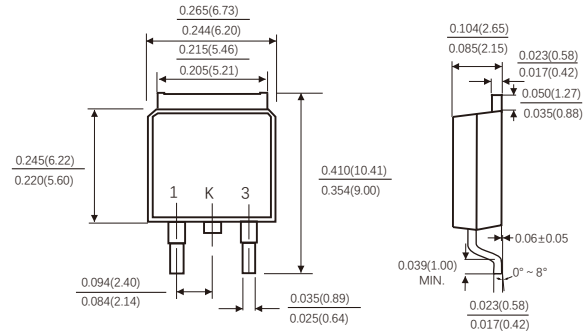
Reverse Voltage - 45Volts
Forward Current - 10.0Amperes

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 2015/863/EU

TO-252

(DPAK)



MECHANICAL DATA

- Case: JEDEC TO-252 molded plastic body
- Terminals: Solderable per MIL-STD-202,method 208
- Polarity: As marked
- Mounting Position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Parameters		Symbols	Value	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)	Per leg	$I_{F(AV)}$	5.0	Amps
	Total device		10.0	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load,Per Leg (JEDEC method)		I_{FSM}	120	Amps
Maximum instantaneous forward voltage at 5.0 A per leg(Notes 1)		V_F	0.55	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Notes 1)	T_J=25°C	I_R	100	μA
	T_J=100°C		5.0	mA
Typical thermal resistance (Notes 2)		$R_{\theta JC}$	2.5	°C/W
Operating junction temperature range		T_J	-55 to+150	°C
Storage temperature range		T_{STG}	-55 to+150	°C

Notes: 1.Pulse test: 300μs pulse width,1% duty cycle
2.Thermal resistance from junction to case

FIG.1-FORWARD CURRENT DERATING CURVE

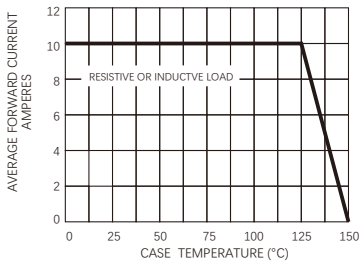


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

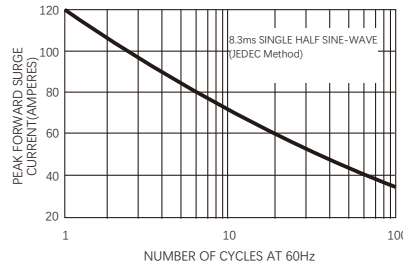


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

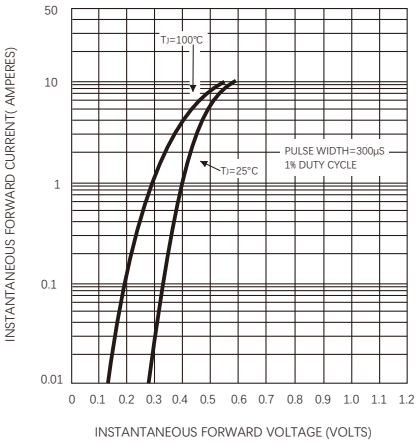


FIG.4-TYPICAL REVERSE CHARACTERISTICS

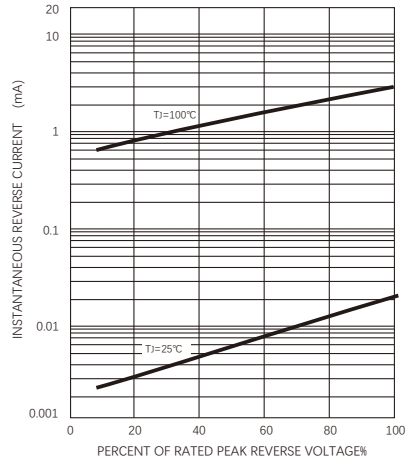
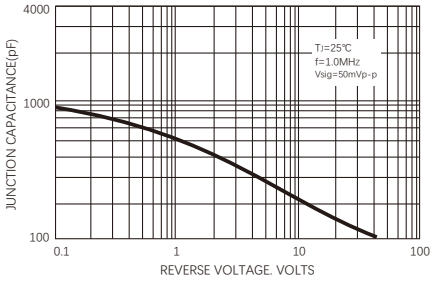
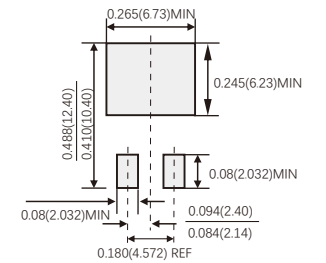


FIG.5-TYPICAL JUNCTION CAPACITANCE



Suggested Pad Layout

(TO-252)



(设计者可参考推荐值根据焊接工艺
要求自行确定适合的焊盘尺寸)
(Designers can refer to the recommended values according to the manufacturing process requirements to determine the appropriate pad size)

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