SR1020M2 THRU SR10200M2

SEMICONDUCTOR

SCHOTTKY BARRIER RECTIFIER

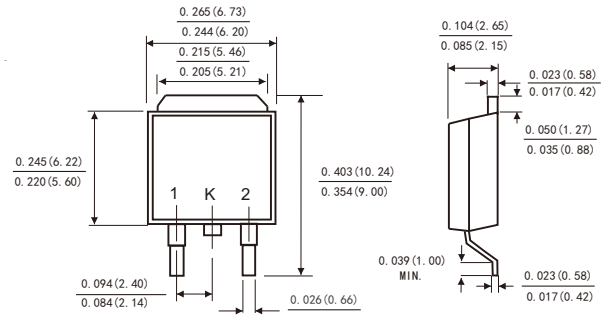
Reverse Voltage - 20 to 200 Volts
Forward Current - 10.0Amperes

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 2011/65/EU

TO-252

(DPAK)



Dimensions in inches and (milimeters)

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	SR 1020M2	SR 1030M2	SR 1040M2	SR 1060M2	SR 10100M2	SR 10150M2	SR 10200M2	Units
Maximum repetitive peak reverse voltage		V_{RRM}	20	30	45	60	100	150	200	Volts
Maximum RMS voltage		V_{RMS}	14	21	32	42	70	105	140	Volts
Maximum DC blocking voltage		V_{DC}	20	30	45	60	100	150	200	Volts
Maximum average forward rectified current (see Fig.1)		$I_{(AV)}$	10.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	150.0							Amps
Maximum instantaneous forward voltage at 10.0 A(Note 1)		V_F	0. 60			0.75	0.85	0.90	0.95	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	T_A =25°C	I_R	100				30			μA
	T_A =100°C		5				–			mA
	T_A =125°C		–				3			
Typical thermal resistance (Note 2)		$R_{\theta JC}$	2.5							℃/W
Operating junction temperature range		T_J	-55 to+150							℃
Storage temperature range		T_{STG}	-55 to+150							℃

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

FIG.1-FORWARD CURRENT DERATING CURVE

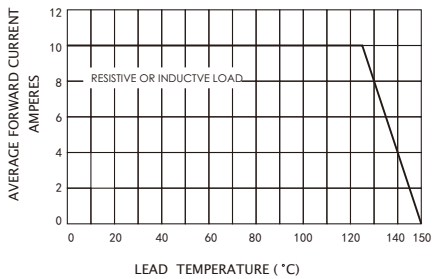


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

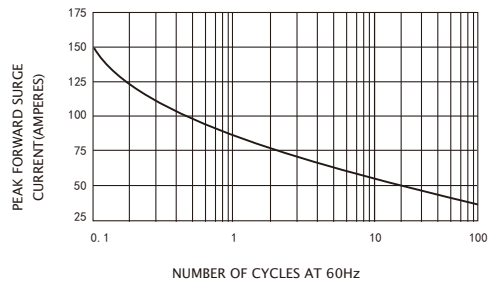


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

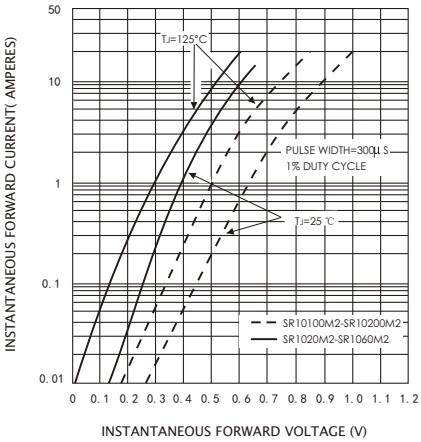


FIG.4-TYPICAL REVERSE CHARACTERISTICS

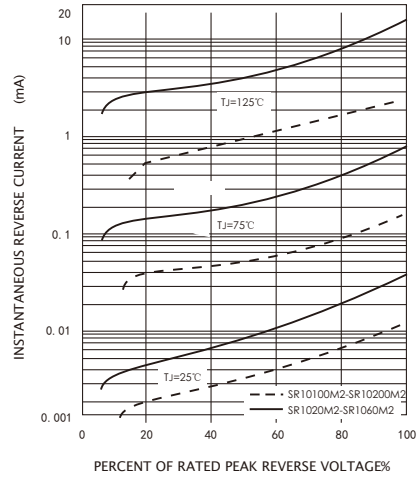


FIG.5-TYPICAL JUNCTION CAPACITANCE