SR1020D1 THRU SR10200D1

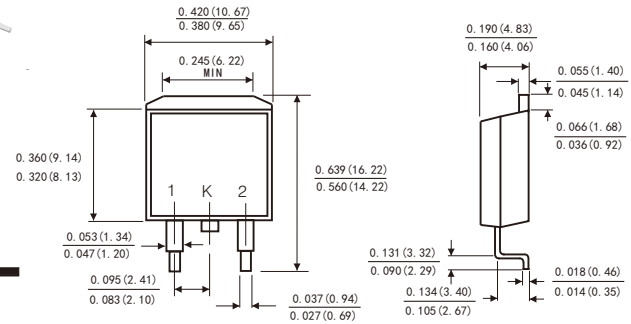
SEMICONDUCTOR

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
- For use in low voltage ,high frequency inverters,
- free wheeling ,and polarity protection applications
  Dual rectifier construction
- High temperature soldering guaranteed:260 °C/10 seconds,,
- 0.25"(6.35mm)from case
- Component in accordance to RoHS 2011/65/EU

TO-263
D2PAK



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: JEDEC TO-263 molded plastic body
- Terminals: Solderable per MIL-STD-202,method 208
- Polarity: As marked
- Mounting Position: Any
  Weight: 0.08ounce, 2.24 gram

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 1020D1	SR 1030D1	SR 1040D1	SR 1045D1	SR 1060D1	SR 10100D1	SR 10150D1	SR 10200D1	Units
Maximum repetitive peak reverse voltage		V_{RRM}	20	30	40	45	60	100	150	200	Volts
Maximum RMS voltage		V_{RMS}	14	21	28	32	42	70	105	140	Volts
Maximum DC blocking voltage		V_{DC}	20	30	40	40	60	100	150	200	Volts
Maximum average forward rectified current(see Fig.1)	Per leg	$I_{(AV)}$	5.0								Amps
	Total device		10.0								
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 5.0 A per leg(Notes 1)		V_F	0. 60				0.75	0.85	0.90	0.95	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Notes 1)	T_A=25°C	I_R	100					30			μA
	T_A=100°C		5					–			mA
	T_A=125°C		–					3			
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

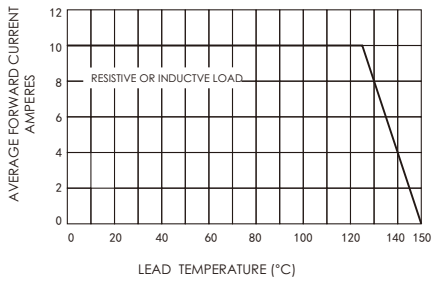


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

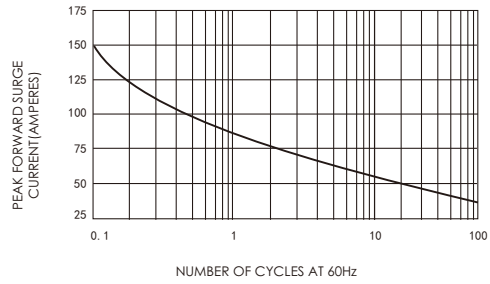


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

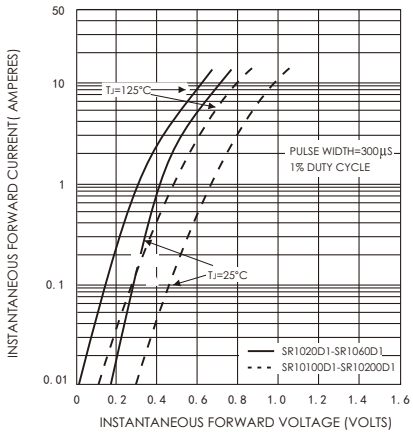


FIG.4-TYPICAL REVERSE CHARACTERISTICS