SEMICONDUCTOR

SR2020D1 THRU SR20200D1

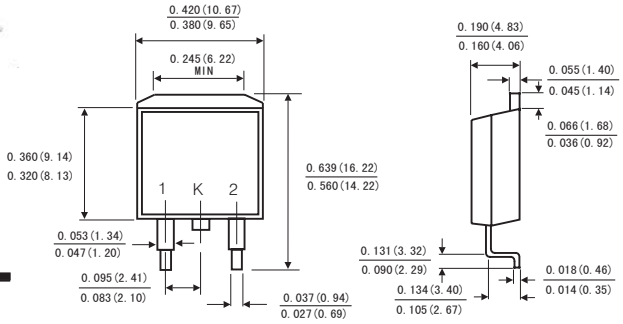
SCHOTTKY BARRIER RECTIFIER

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

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°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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	Symbols	SR 2020D1	SR 2030D1	SR 2045D1	SR 2060D1	SR 20100D1	SR 20150D1	SR 20200D1	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 — Per leg	$I_{(AV)}$	10.0							Amps
Maximum average forward rectified current See Fig. 1 — Total device	$I_{(AV)}$	20.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	200.0							Amps
Maximum instantaneous forward voltage per diode @IF=10A	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_C =25°C	I_R	200				50			μA
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) — T_C =100°C	I_R	5				–			mA
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) — T_C =125°C	I_R	–				5			mA
Typical thermal resistance (Note 2)	$R_{\theta JC}$	2. 5							°C/W
Operating junction temperature range	T_J	-65 to+150							°C
Storage temperature range	T_{STG}	-65 to+150							°C

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

RATINGS AND CHARACTERISTIC CURVES SR2020D1 THRU SR20200D1

FIG.1-FORWARD CURRENT DERATING CURVE

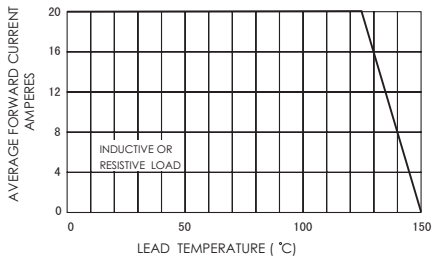


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

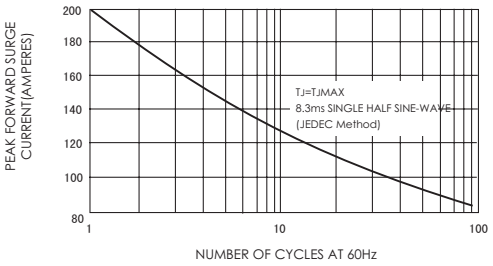


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

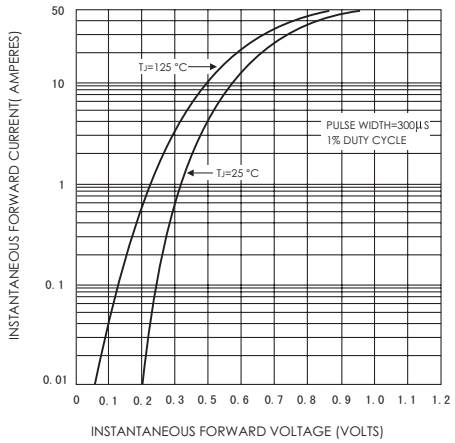


FIG.4-TYPICAL REVERSE CHARACTERISTICS

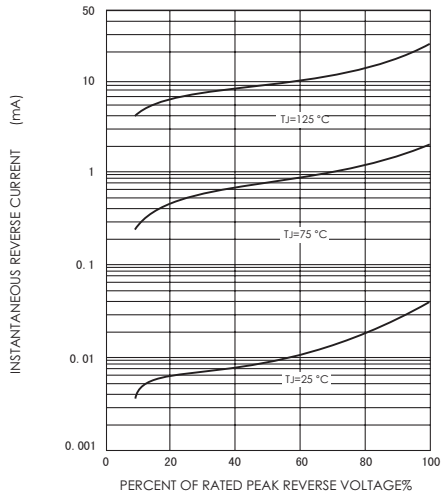


FIG.5-TYPICAL JUNCTION CAPACITANCE