

# SCHOTTKY BARRIER RECTIFIER

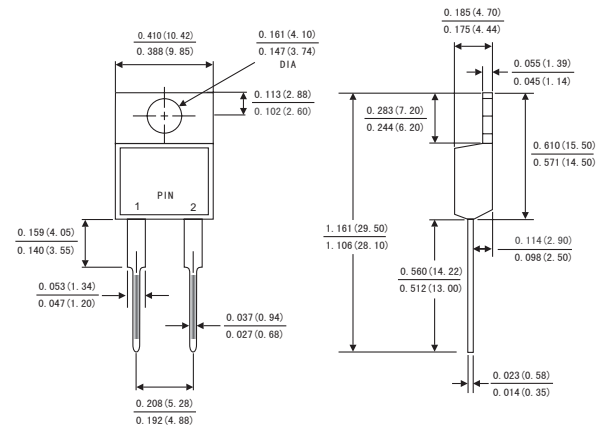
## SR1045 45 V 10.0 A

### 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°C/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2011/65/EU



### TO-220AC



### MECHANICAL DATA

- Case: JEDEC TO-220AC molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- 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 1020	SR 1030	SR 1045	SR 1060	SR 10100	SR 10150	SR 10200	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)	$T_s=25^{\circ}C$	200			50				$\mu A$
	$T_s=100^{\circ}C$	5			-				mA
	$T_s=125^{\circ}C$	-			5				
Typical thermal resistance (Note 2)	$R_{\theta JC}$	2.5							$^{\circ}C/W$
Operating junction temperature range	$T_J$	-65 to+150							$^{\circ}C$
Storage temperature range	$T_{STG}$	-65 to+150							$^{\circ}C$

- Notes:** 1.Pulse test: 300 $\mu s$  pulse width,1% duty cycle  
2.Thermal resistance from junction to case

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### RATINGS AND CHARACTERISTIC CURVES SR1020 THRU SR10200

FIG.1-FORWARD CURRENT DERATING CURVE

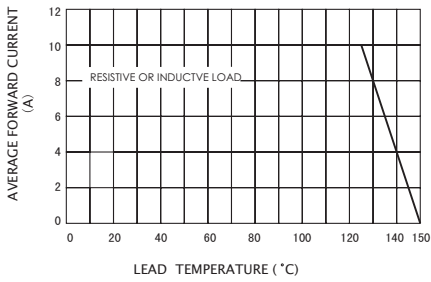


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

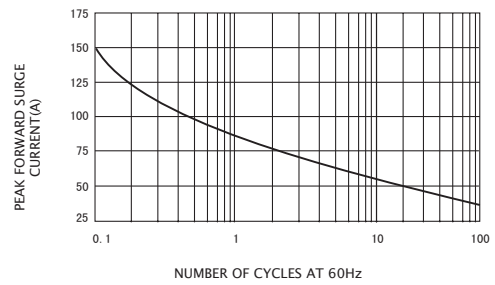


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

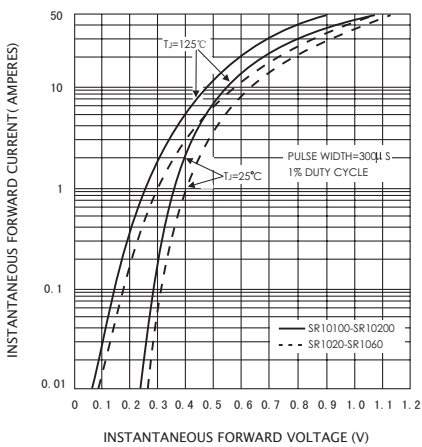


FIG.4-TYPICAL REVERSE CHARACTERISTICS

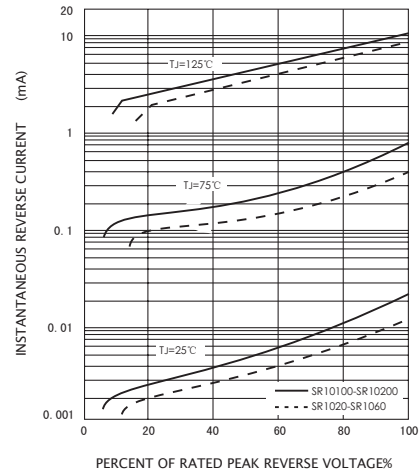


FIG.5-TYPICAL JUNCTION CAPACITANCE

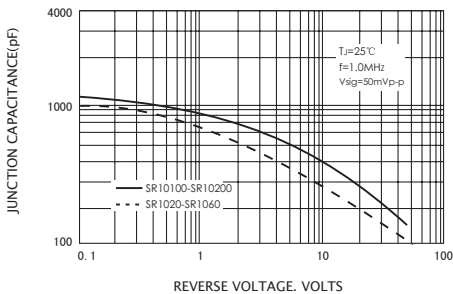


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

