

SR1020CT THRU SR10200CT



SCHOTTKY BARRIER RECTIFIER

REVERSE VOLTAGE: 20 to 200 VOLTS
FORWARD CURRENT: 10.0 AMPERE

FEATURES

- Plastic package has UL flammability classification 94V-0
- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- High capability
- Low power loss, high efficiency
- High current capability, low V_F
- High surge capacity
- For use in low voltage, high frequency inverters, free whelling, and polarity protection applications

MECHANICAL DATA

Case: Molded plastic, TO-220

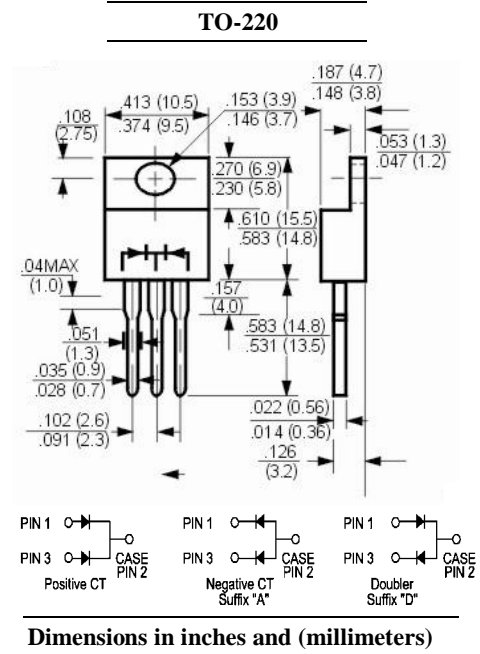
Epoxy: UL 94V-0 rate flame retardant

Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.08ounce, 2.24gram



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	SR1020CT	SR1030CT	SR1040CT	SR1050CT	SR1060CT	SR1080CT	SR10100CT	SR10150CT	SR10200CT	Units	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	Volts	
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	Volts	
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	150	200	Volts	
Maximum Average Forward Rectified Current See Fig. 1	$I_{(AV)}$	10.0									Amp	
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	175									Amp	
Maximum Forward Voltage at 5.0A DC and 25°C	V_F	0.55			0.70		0.85		0.95		Volts	
Maximum Reverse Current at Rated DC Blocking Voltage	I_R	0.5					50					mAmp
Typical Junction Capacitance (Note 1)	C_J	700				450						pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	3.0									°C/W	
Operating Temperature Range	T_J	-55 to +125				-55 to +150						°C
Storage Temperature Range	T_{stg}	-55 to +150									°C	

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance from Junction to Case Per Leg

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RATINGS AND CHARACTERISTIC CURVES

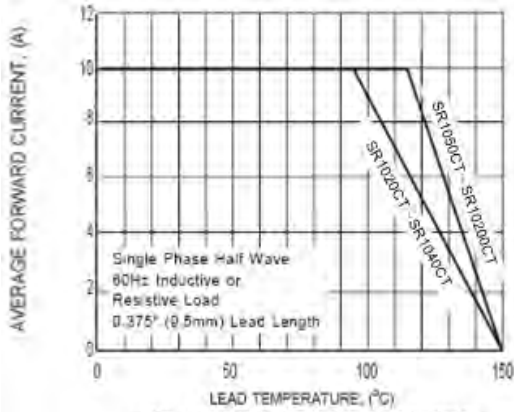


FIG. 1 TYPICAL FORWARD CURRENT DERATING CURVE

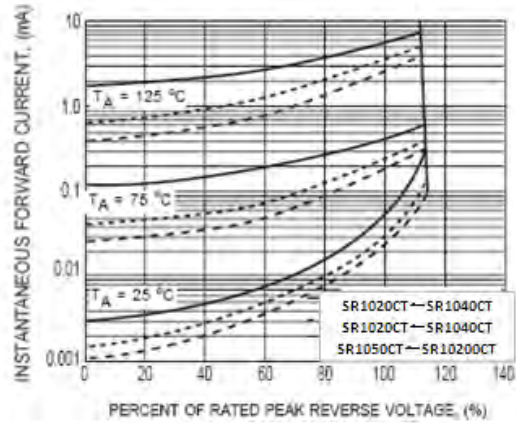


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

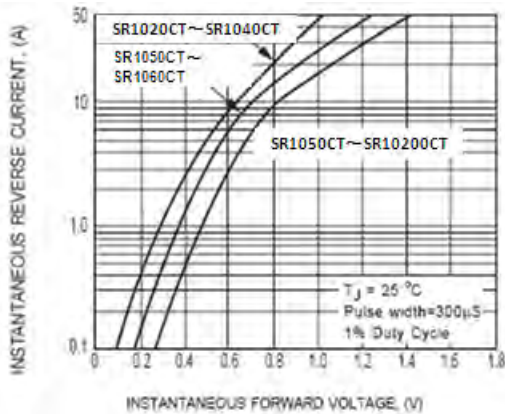


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

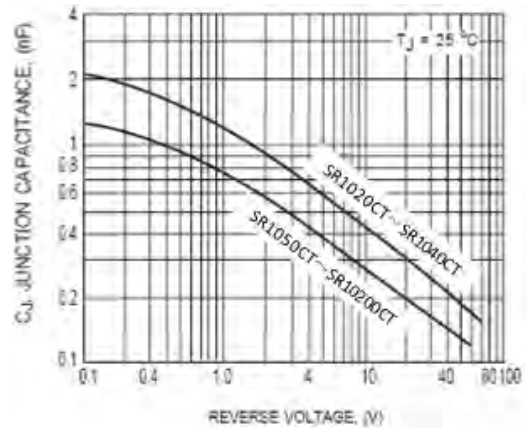


FIG. 4 TYPICAL JUNCTION CAPACITANCE

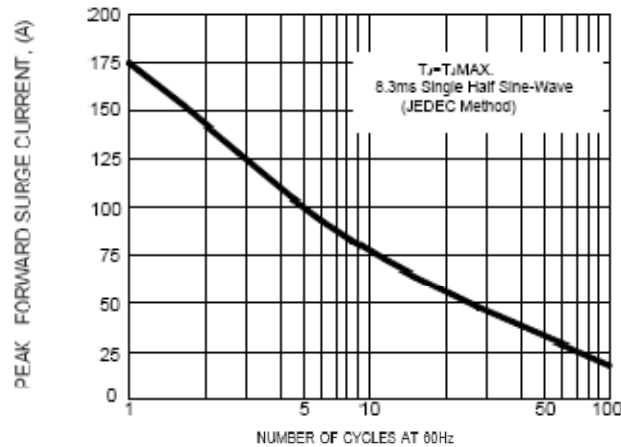


FIG. 5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT