

Schottky Barrier Rectifiers

Using the Schottky Barrier principle with a Refractory metal capable of high temperature operation metal. The proprietary barrier technology allows for reliable operation up to 150°C junction temperature. Typical application are in switching Mode Power Supplies such as adaptors, DC/DC converters, free-wheeling and polarity protection diodes.

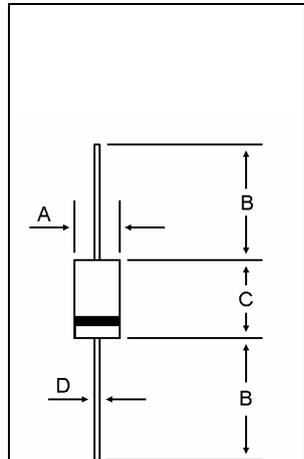
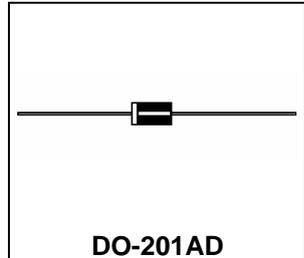
- * Low Forward Voltage.
- * Low Switching noise.
- * High Current Capacity
- * Guarantee Reverse Avalanche.
- * Guard-Ring for Stress Protection.
- * Low Power Loss & High efficiency.
- * 150°C Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction.
- * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- * Moisture Sensitivity Level: MSL-1



* In compliance with EU RoHs 2002/95/EC directives

SCHOTTKY BARRIER RECTIFIERS

3.0 AMPERES
100 VOLTS



MAXIMUM RATINGS

Characteristic	Symbol	SRT3100M	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectifier Forward Current	I_O	3.0	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	I_{FSM}	75	A
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +150	°C

DIM	MILLIMETERS	
	MIN	MAX
A	5.00	5.60
B	25.40	---
C	8.50	9.50
D	1.20	1.30

THERMAL RESISTANCES

Typical Thermal Resistance junction to case	$R_{\theta j-c}$	5.5	°C/w
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ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	SRT3100M			Unit
		Min	Typ	Max	
Maximum Instantaneous Forward Voltage ($I_F = 0.1$ Amp $T_C = 25^\circ C$) ($I_F = 3.0$ Amp $T_C = 25^\circ C$)	V_F	---	0.34 0.56	0.36 0.58	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ C$) (Rated DC Voltage, $T_C = 125^\circ C$)	I_R	---	0.08 10	0.1 12	mA

CASE---
Transfer molded plastic

POLARITY---
Cathode indicated polarity band

SRT3100M

FIG-1 FORWARD CURRENT DERATING CURVE

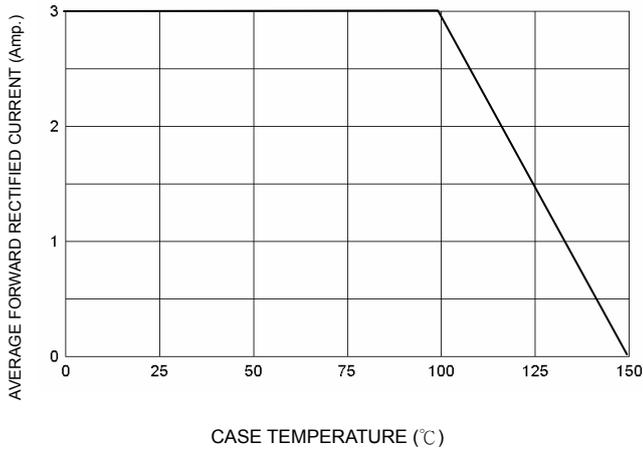


FIG-2 TYPICAL FORWARD CHARACTERISTICS

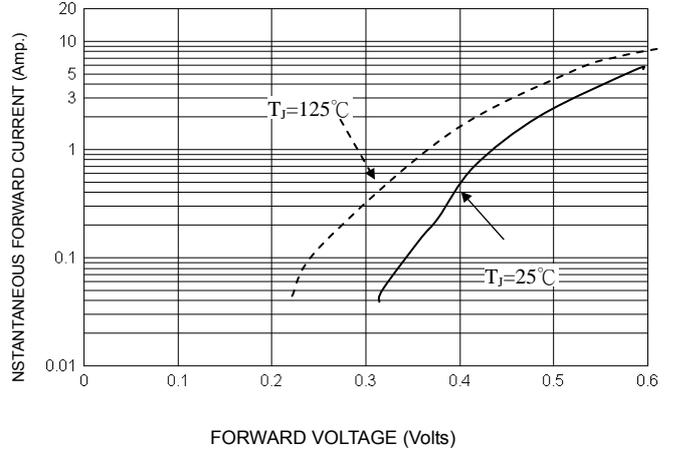


FIG-3 TYPICAL REVERSE CHARACTERISTICS

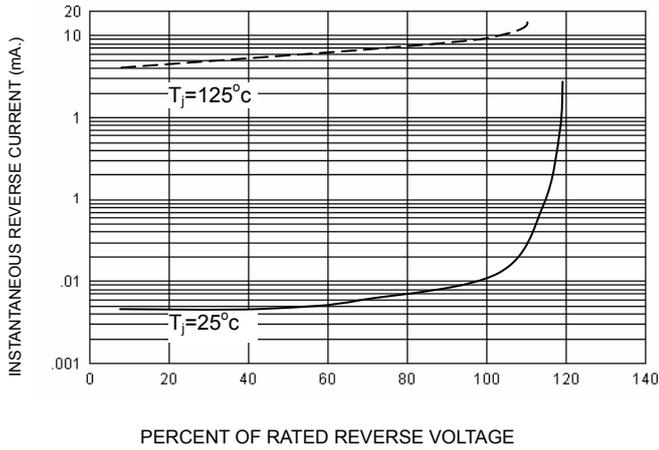


FIG-4 TYPICAL JUNCTION CAPACITANCE

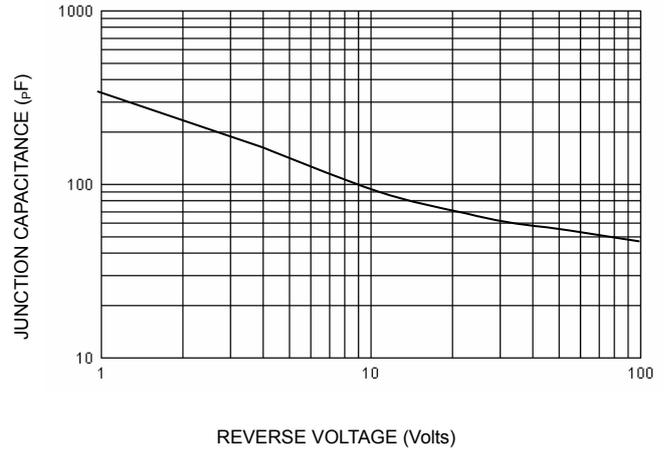


FIG-5 PEAK FORWARD SURGE CURRENT

