

## 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 junction temperature. Typical application are in switching Mode Power Supplies such as adaptators, DC/DC convertes, 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 Operating Junction Temperature
- \* Low Stored Charge Majority Carrier Conduction.
- \* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O



Plating pb free is indicated by box

## MAXIMUM RATINGS

Characteristic	Symbol	S10C200C	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	140	V
Average Rectifier Forward Current Total Device (Rated $V_R$ ), $T_C=100$	$I_{F(AV)}$	5.0 10	A
Peak Repetitive Forward Current (Rate $V_R$ , Square Wave, 20kHz)	$I_{FM}$	10	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	$I_{FSM}$	125	A
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to +150	

## THERMAL RESISTANCES

Typical Thermal Resistance junction to case	$R_{\theta j-c}$		
Per diode		4.2	/w
Total		3.2	
Coupling	$R_{\theta c}$	3.0	

Where the diodes 1 and 2 are used simultaneously:

$$T_J(\text{diode 1}) = P(\text{diode 1}) \times R_{\theta(j-c)}(\text{Per diode}) + P(\text{ diode 2}) \times R_{\theta c}$$

## ELECTRIAL CHARACTERISTICS

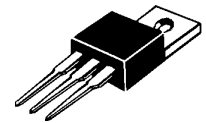
Characteristic	Symbol	S10C200C	Unit
Maximum Instantaneous Forward Voltage ( $I_F = 5.0$ Amp $T_C = 25$ ) ( $I_F = 5.0$ Amp $T_C = 125$ )	$V_F$	0.95 0.85	V
Maximum Instantaneous Reverse Current ( Rated DC Voltage, $T_C = 25$ ) ( Rated DC Voltage, $T_C = 125$ )	$I_R$	0.5 5.0	mA

To evaluation the conduction losses use the following equation:

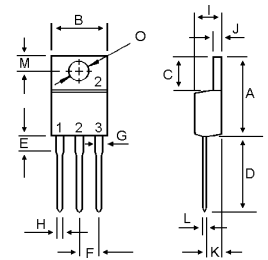
$$P = 0.72 \times I_{F(AV)} + 0.017 \times I_{F(RMS)}^2$$

## SCHOTTKY BARRIER RECTIFIERS

**10 AMPERES  
200 VOLTS**



TO-220AB



DIM	MILLIMETERS	
	MIN	MAX
A	14.68	15.32
B	9.78	10.42
C	5.02	6.52
D	13.06	14.62
E	3.57	4.07
F	2.42	2.66
G	1.12	1.36
H	0.72	0.96
I	4.22	4.98
J	1.14	1.38
K	2.20	2.98
L	0.33	0.55
M	2.48	2.98
O	3.70	3.90



Common Cathode  
Suffix "C"

# S10C200C

FIG-1 FORWARD CURRENT DERATING CURVE

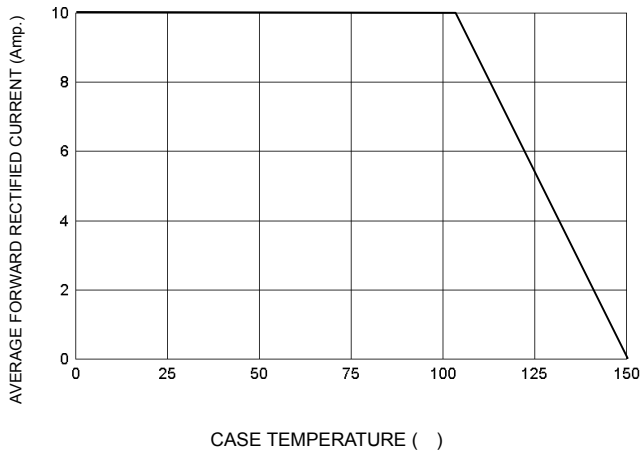


FIG-2 TYPICAL FORWARD CHARACTERISTICS

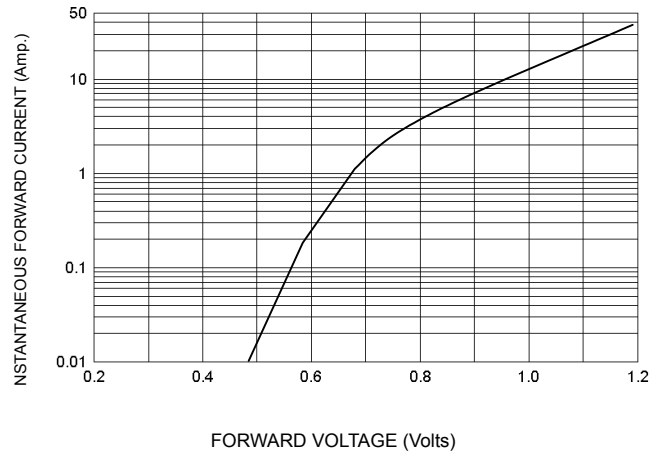


FIG-3 TYPICAL REVERSE CHARACTERISTICS

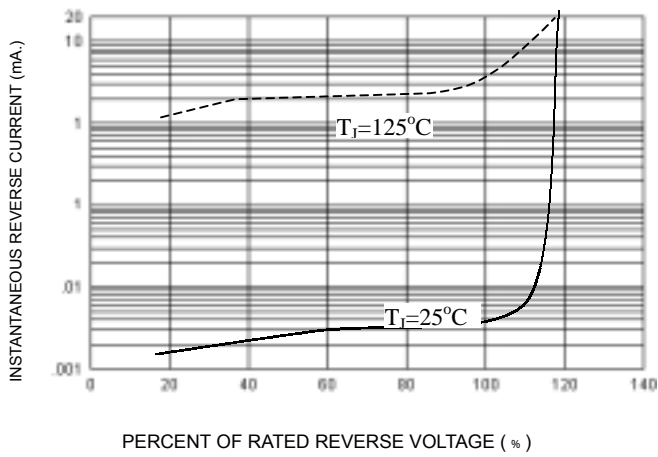


FIG-4 TYPICAL JUNCTION CAPACITANCE

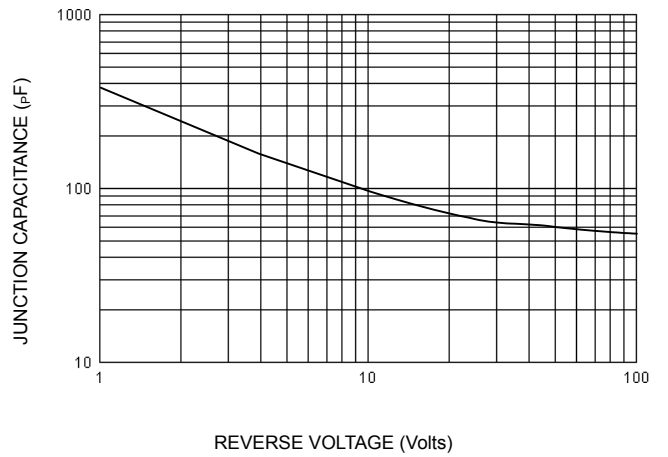


FIG-5 PEAK FORWARD SURGE CURRENT

