

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.

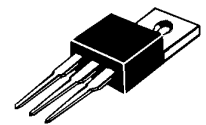
Features

- * 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
- * *In compliance with EU RoHs 2002/95/EC directives*
- * Mounting Torque: 5 in-lbs.Max

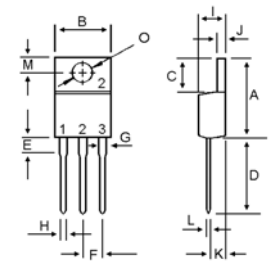


SCHOTTKY BARRIER RECTIFIERS

**30 AMPERES
100 VOLTS**



TO-220AB



DIM	MILLIMETERS	
	MIN	MAX
A	14.68	16
B	9.78	10.42
C	5.02	6.6
D	13	14.62
E	3.1	4.19
F	2.42	2.66
G	1.1	1.5
H	0.7	0.96
I	4.22	4.98
J	1.14	1.4
K	2.2	3.3
L	0.279	0.55
M	2.48	3
O	3.5	4

MAXIMUM RATINGS

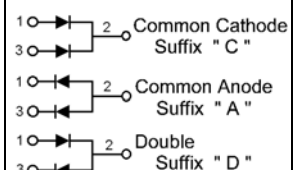
Characteristic	Symbol	S30T100C	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectifier Forward Current (per diode)	$I_{F(AV)}$	15	A
Total Device (Rated V_R),		30	
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	I_{FSM}	320	A
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150	°C

THERMAL RESISTANCES

Typical Thermal Resistance junction to case (per device)	$R_{\theta j-c}$	5.4	°C/w
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ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage (per diode) ($I_F = 15$ Amp $T_C = 25^\circ C$) ($I_F = 15$ Amp $T_C = 125^\circ C$)	V_F	---	0.68	0.73	V
		---	0.68	--	
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ C$) (Rated DC Voltage, $T_C = 125^\circ C$)	I_R	---	0.03	0.05	mA
		---	30	--	



S30T100C

FIG-1 FORWARD CURRENT DERATING CURVE

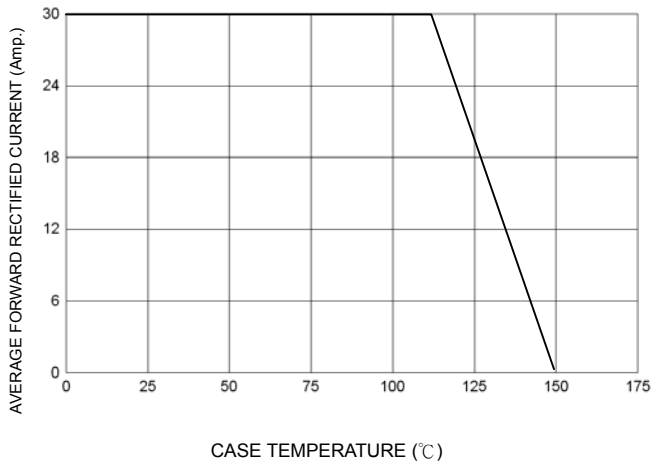


FIG-2 TYPICAL FORWARD CHARACTERISTICS

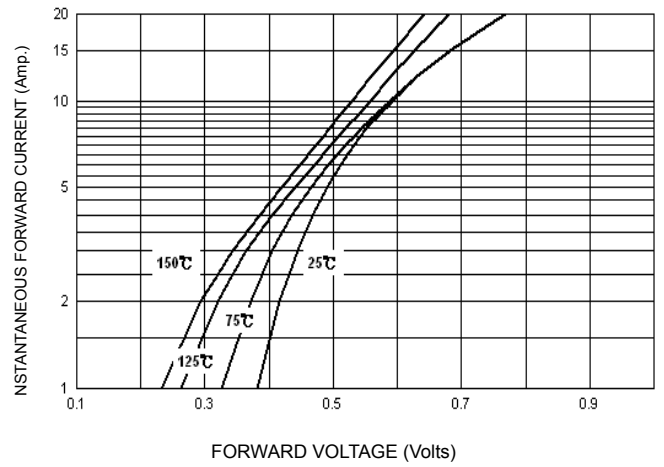


FIG-3 TYPICAL REVERSE CHARACTERISTICS

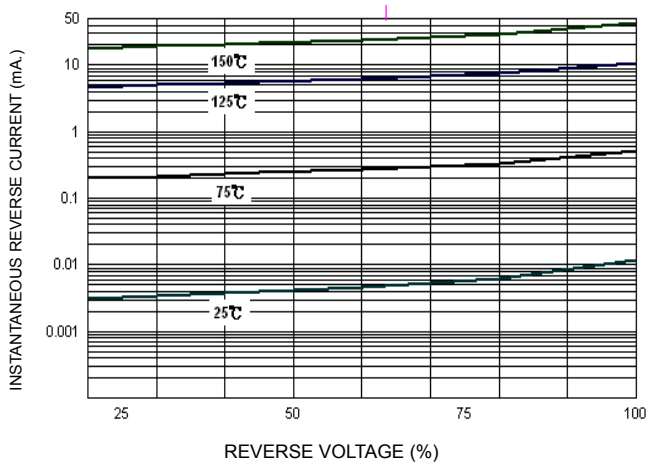


FIG-4 TYPICAL JUNCTION CAPACITANCE

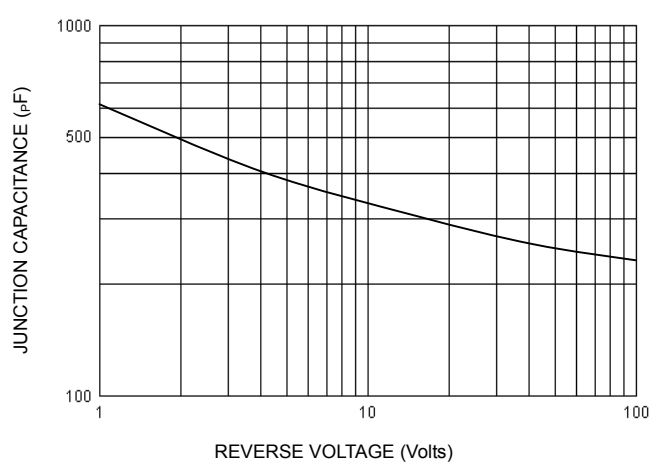
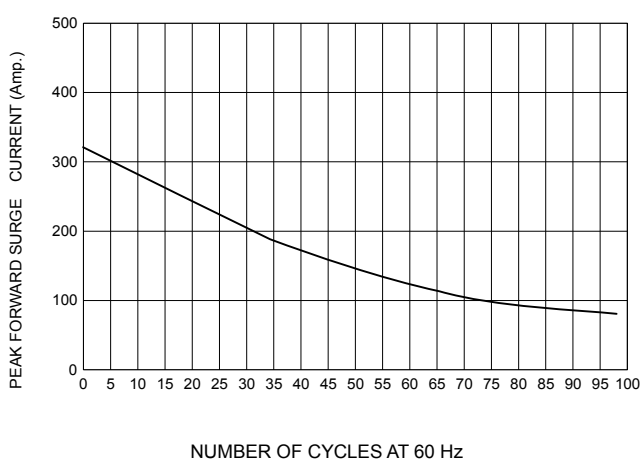


FIG-5 PEAK FORWARD SURGE CURRENT



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