

Schottky Barrier Power Rectifiers

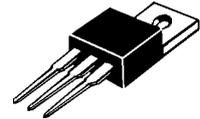
Using the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes.

- * 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
- * ESD: 4KV(Min.) Human-Body Model
- * *In compliance with EU RoHs 2002/95/EC directives*



SCHOTTKY BARRIER RECTIFIERS

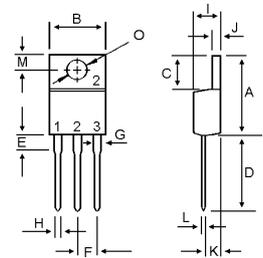
**30 AMPERES
70-100 VOLTS**



TO-220AB

MAXIMUM RATINGS

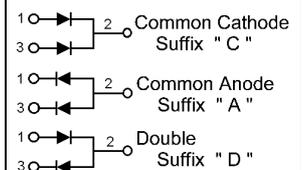
Characteristic	Symbol	S30C70	S30C80	S30C90	S30C100	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	70	80	90	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	49	56	63	70	V
Average Rectifier Forward Current Per diodes Total Device (Rated V_R), $T_C=125$	$I_{F(AV)}$	15 30				A
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz)	I_{FM}	30				A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	I_{FSM}	250				A
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +150				



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

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	S30C70	S30C80	S30C90	S30C100	Unit
Maximum Instantaneous Forward Voltage ($I_F = 15$ Amp $T_C = 25$) ($I_F = 15$ Amp $T_C = 100$)	V_F	0.75 0.69		0.85 0.75		V
Typical Thermal Resistance junction to case	$R_{\theta j-c}$	3.0				/w
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25$) (Rated DC Voltage, $T_C = 125$)	I_R		0.5 30			mA



S30C70 Thru S30C100

FIG-1 FORWARD CURRENT DERATING CURVE

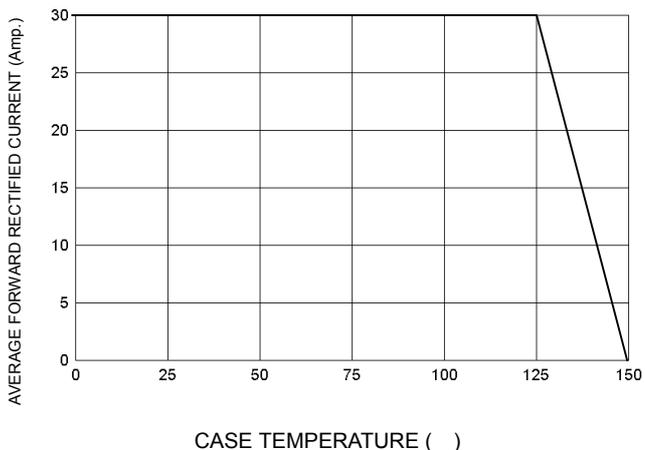


FIG-2 TYPICAL FORWARD CHARACTERISTICS

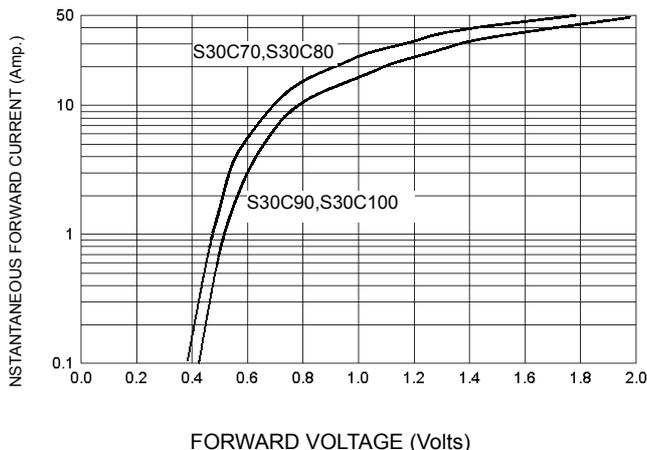


FIG-3 TYPICAL REVERSE CHARACTERISTICS

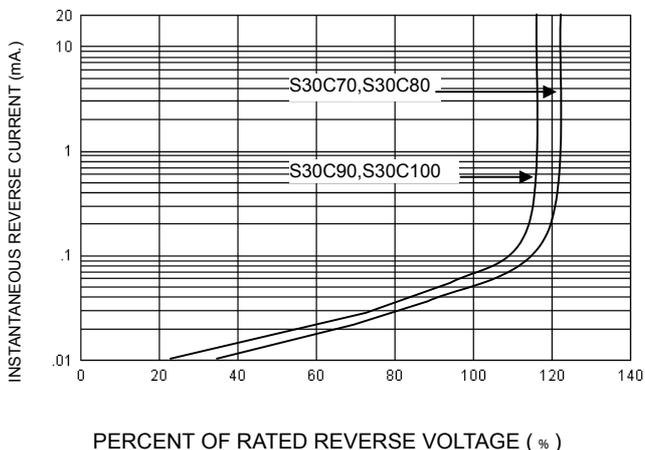


FIG-4 TYPICAL JUNCTION CAPACITANCE

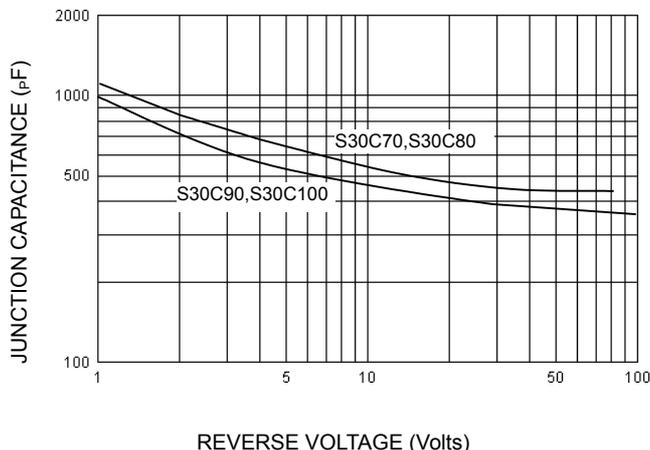
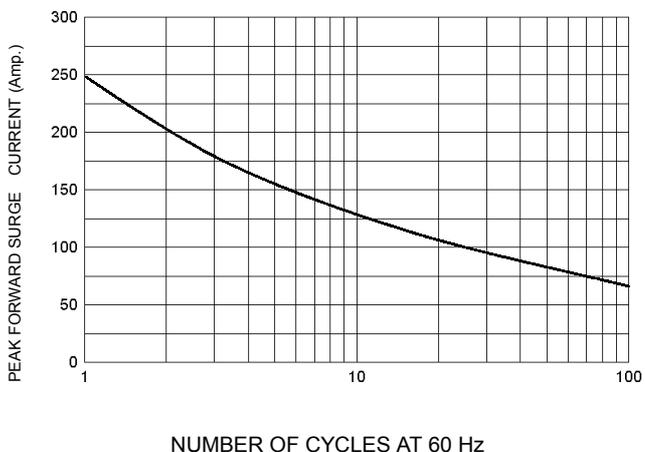


FIG-5 PEAK FORWARD SURGE CURRENT



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