

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 convertes, 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
- * "G" Green product
- * The green product before is indicated by the date code "XMY" with alphabet "G" XMY

MAXIMUM RATINGS

Characteristic	Symbol	S30S100	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 , $T_C=125^\circ\text{C}$)		30	
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	$^\circ\text{C}$

THERMAL RESISTANCES

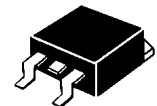
Typical Thermal Resistance junction to case	$R_{\theta j-c}$	4.0	$^\circ\text{C}/\text{W}$
Per diode		3.6	
Total		3.2	
Coupling	$R_{\theta c}$		

ELECTRIAL CHARACTERISTICS

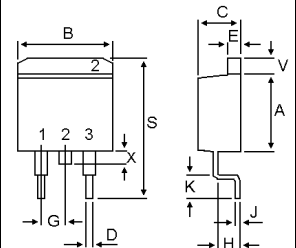
Characteristic	Symbol	S30S100	Unit
Maximum Instantaneous Forward Voltage ($I_F=15\text{ Amp } T_C=25^\circ\text{C}$)	V_F	0.85	V
($I_F=15\text{ Amp } T_C=125^\circ\text{C}$)		0.75	
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C=25^\circ\text{C}$)	I_R	0.2	mA
(Rated DC Voltage, $T_C=125^\circ\text{C}$)		30	

SCHOTTKY BARRIER RECTIFIERS

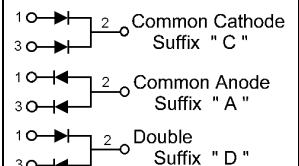
30 AMPERES
100 VOLTS



TO-263 (D2-PAK)



DIM	MILLIMETERS	
	MIN	MAX
A	8.12	8.92
B	9.90	10.30
C	4.23	4.83
D	0.51	0.89
E	1.27	1.53
G	2.54	BSC
H	2.03	2.79
J	0.31	0.51
K	2.29	2.79
S	14.60	15.88
V	1.57	1.83
X	---	1.40



S30S100

FIG-1 FORWARD CURRENT DERATING CURVE

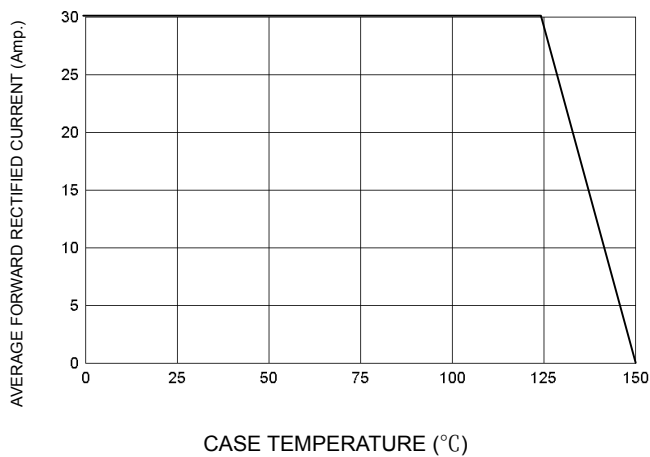


FIG-2 TYPICAL FORWARD CHARACTERISTICS

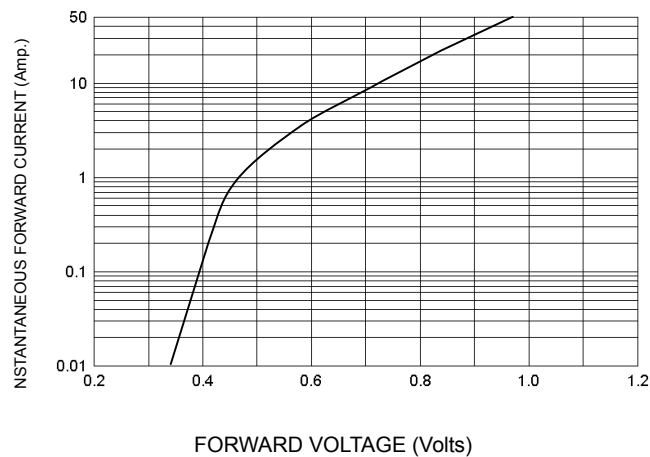


FIG-3 TYPICAL REVERSE CHARACTERISTICS

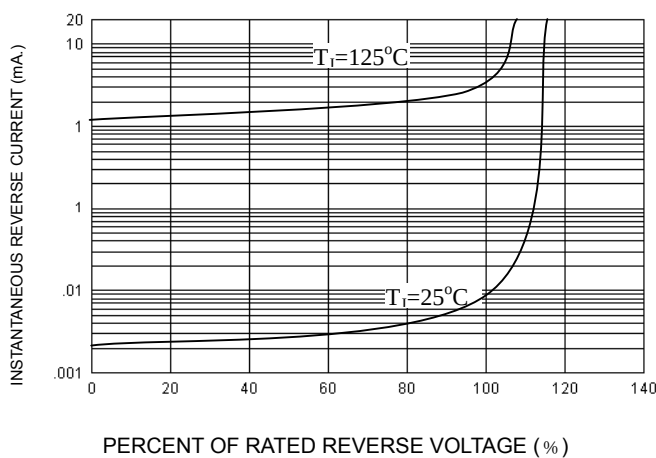


FIG-4 TYPICAL JUNCTION CAPACITANCE

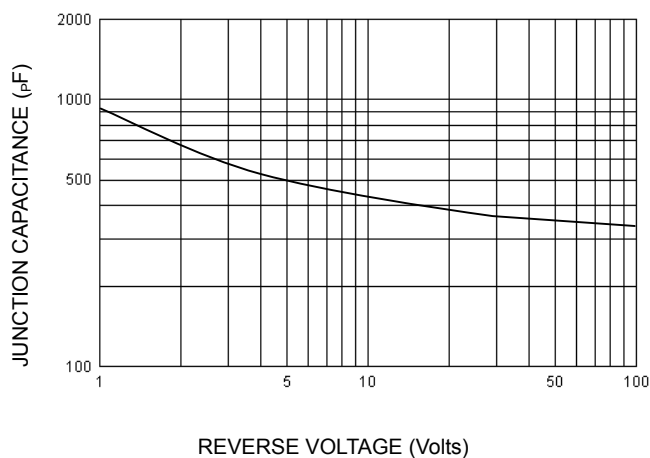
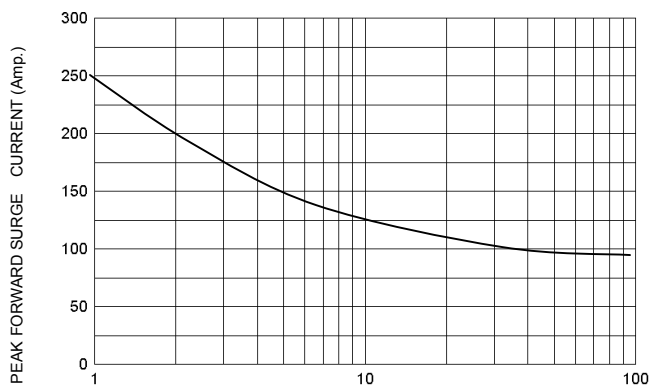


FIG-5 PEAK FORWARD SURGE CURRENT



REMARK: Green product is indicated by carton “ Halogen-free”