MOSPEC

S30S100

Schottky Barrier Rectifiers

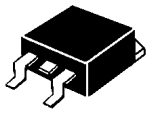
Using the Schottky Barrier principle with a Refractory metal capable of high temperature operation metal.The properietary barrier technology allows for reliable operation up to 150℃ junction temperature. Typical application are in switching Mode Power Supplies such as adaptators, DC/DC convertes,free-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

SCHOTTKY BARRIER RECTIFIERS

30 AMPERES
100 VOLTS

Featureas.

- ∗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

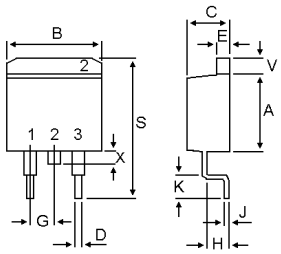


TO-263 (D2-PAK)

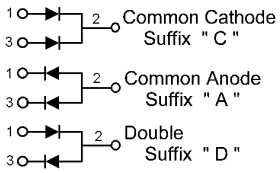
∗ *In compliance with EU RoHs 2002/95/EC directives*

∗*"G" Green product*

The green product before is indicated by the date code" XMY" with alphabet "G"XMY



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



MAXIMUM RATINGS

Characteristic	Symbol	S30S100	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Average Rectifier Forward Current (Per diode) 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	℃

THERMAL RESISTANCES

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

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	S30S100	Unit
Maximum Instantaneous Forward Voltage (I_F =15 Amp T_C = 25℃) (I_F =15 Amp T_C = 125℃)	V_F	0.85 0.75	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	0.2 30	mA

S30S100

FIG-1 FORWARD CURRENT DERATING CURVE

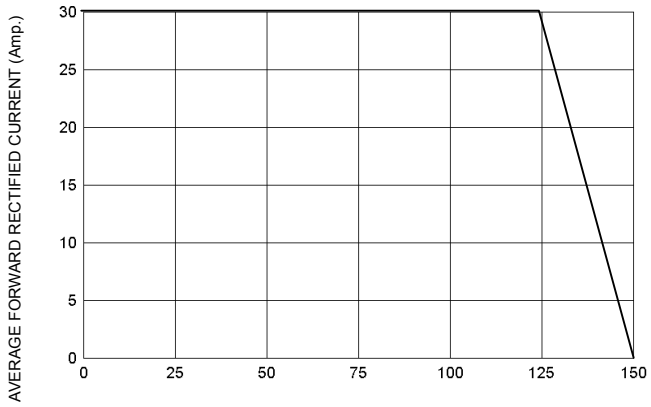


FIG-2 TYPICAL FORWARD CHARACTERISITICS

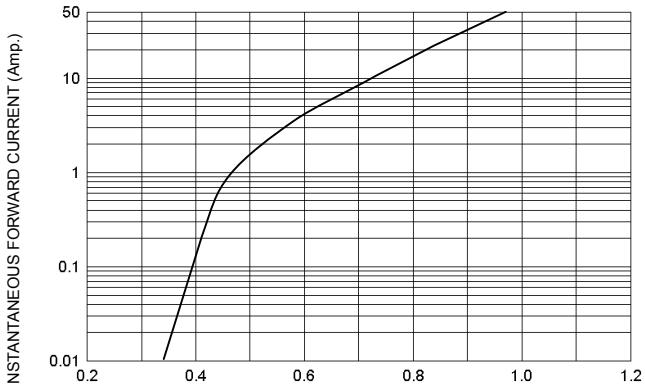


FIG-3 TYPICAL REVERSE CHARACTERISTICS

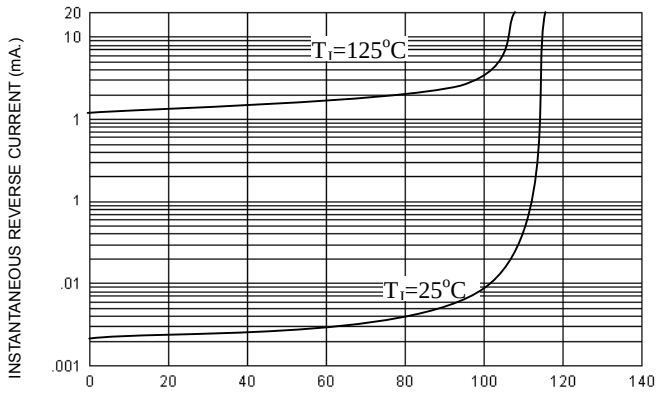


FIG-4 TYPICAL JUNCTION CAPACITANCE

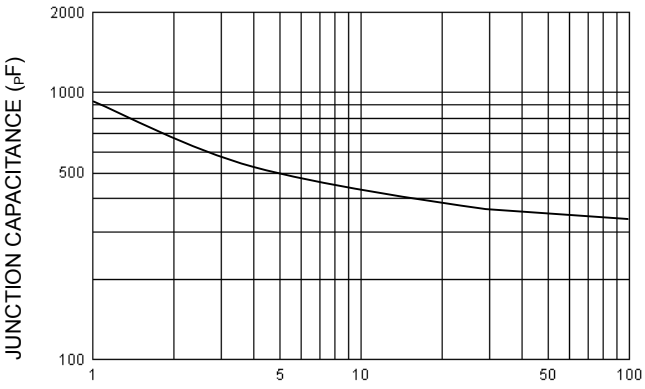
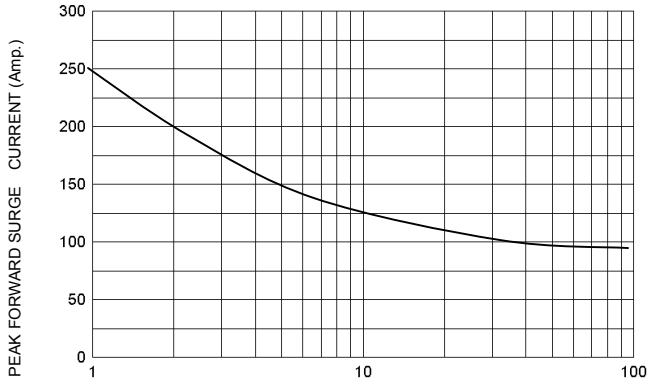


FIG-5 PEAK FORWARD SURGE CURRENT



REMARK: Green product is indicated by carton " Halogen-free"