

Schottky Barrier 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.

Features

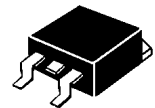
- * Low Forward Voltage.
- * Low Switching noise.
- * High Current Capacity
- * Guarantee Reverse Avalanche.
- * Guard-Ring for Stress Protection.
- * Low Power Loss & High efficiency.
- * 150 Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction.
- * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O



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

SCHOTTKY BARRIER RECTIFIERS

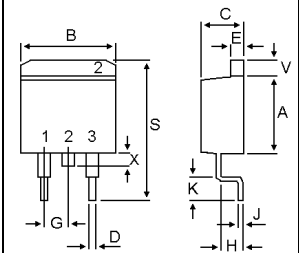
**30 AMPERES
30-60 VOLTS**



TO-263 (D2-PAK)

MAXIMUM RATINGS

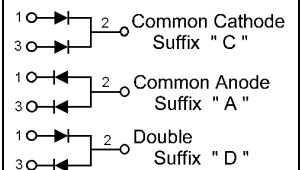
Characteristic	Symbol	S30S						Unit
		30	35	40	45	50	60	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	35	40	45	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	25	28	32	35	42	V
Average Rectifier Forward Current (per diode) Total Device (Rated V_R), $T_C=125$	$I_{F(AV)}$	15 30						A
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz)	I_{FM}	20						A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	I_{FSM}	200						A
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150						



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

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	S30S						Unit
		30	35	40	45	50	60	
Maximum Instantaneous Forward Voltage ($I_F = 15$ Amp $T_C = 25$) ($I_F = 15$ Amp $T_C = 100$)	V_F	0.55 0.48			0.70 0.61		V	
Typical Thermal Resistance junction to case	$R_{\theta j-c}$	4.2						/w
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25$) (Rated DC Voltage, $T_C = 125$)	I_R	0.5 30						mA



S30S30 Thru S30S60

FIG-1 FORWARD CURRENT DERATING CURVE

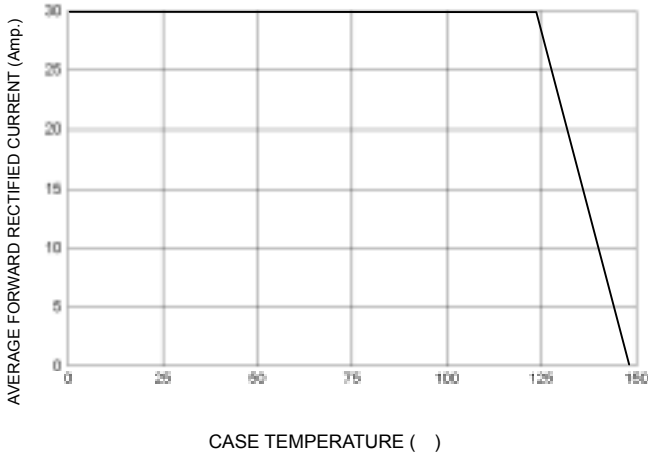


FIG-2 TYPICAL FORWARD CHARACTERISTICS

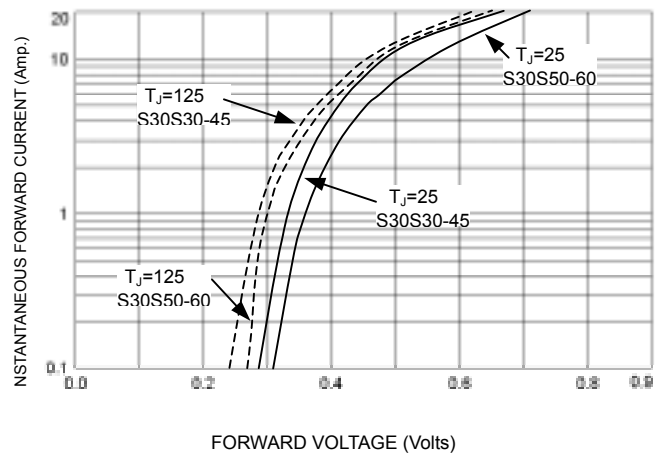


FIG-3 TYPICAL REVERSE CHARACTERISTICS

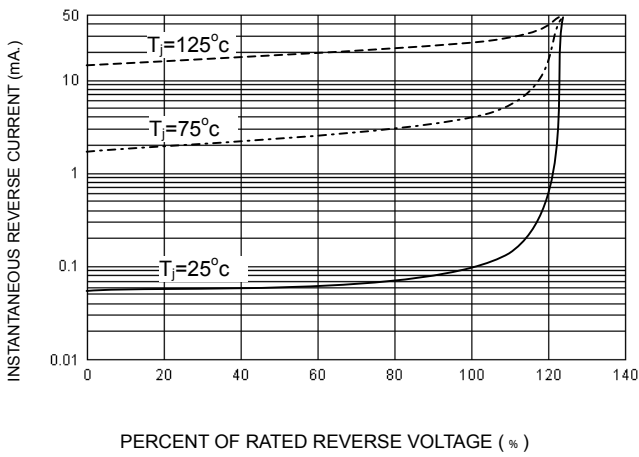


FIG-4 TYPICAL JUNCTION CAPACITANCE

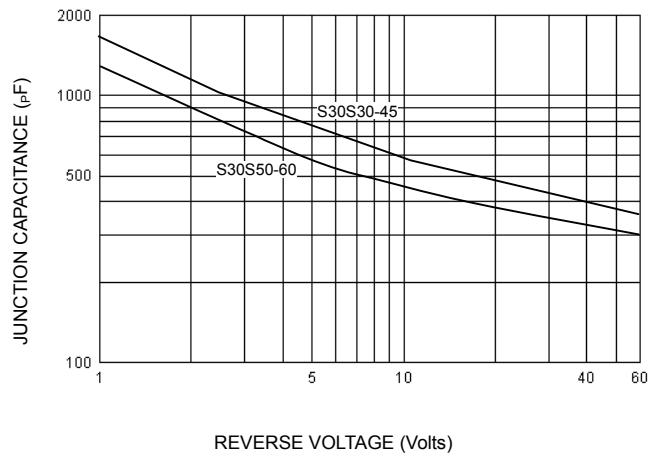
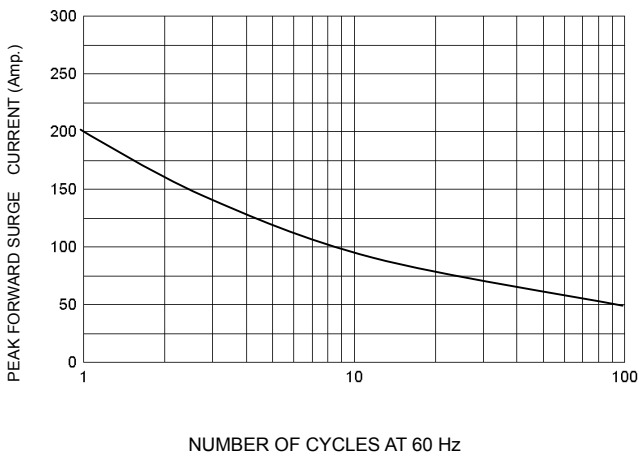


FIG-5 PEAK FORWARD SURGE CURRENT



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