MOSPEC

S30S30 Thru S30S60

SWITCHMODE POWER RECTIFIERS
D^2 PAK SURFACE MOUNT POWER PACKAGE

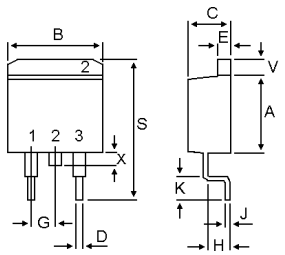
The D^2 PAK Power rectifier employs the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes.

- ＊Low Forward Voltage.
- ＊Low Switching noise.
- ＊High Current Capacity
- ＊Guarantee Reverse Avalanche.
- ＊Guard-Ring for Stress Protection.
- ＊Low Power Loss & High efficiency.
- ＊125℃ Operating Junction Temperature
- ＊Low Stored Charge Majority Carrier Conduction.
- ＊Similar Size to the industry Standard TO-220 Package
- ＊Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

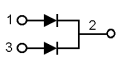
SCHOTTKY BARRIER RECTIFIERS

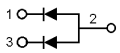
30 AMPERES
30-60 VOLTS

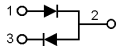
TO-263 (D2-PAK)



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


Common Cathode
Suffix " C "


Common Anode
Suffix " A "


Double
Suffix " D "

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 Total Device (Rated V_R),T_C=100℃	$I_{F(AV)}$	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 halfware, single phase, 60Hz)	I_{FSM}	250						A
Operating and Storage Junction Temperature Range	T_J , T_{STG}	-65 to +125						℃

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 0.45				0.65 0.56		V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	1.0 30						mA

S30S30 Thru S30S60

FIG-1 FORWARD CURRENT DERATING CURVE

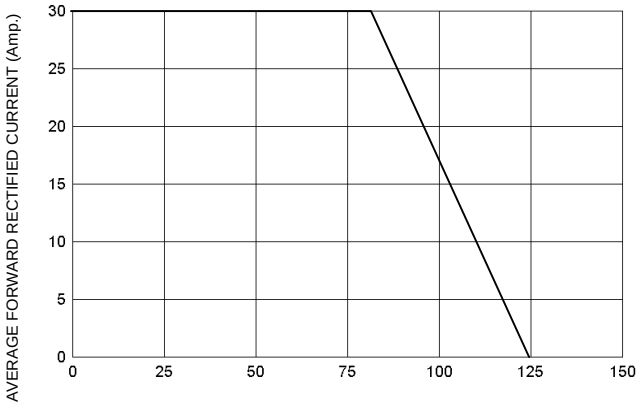


FIG-2 TYPICAL FORWARD CHARACTERISITICS

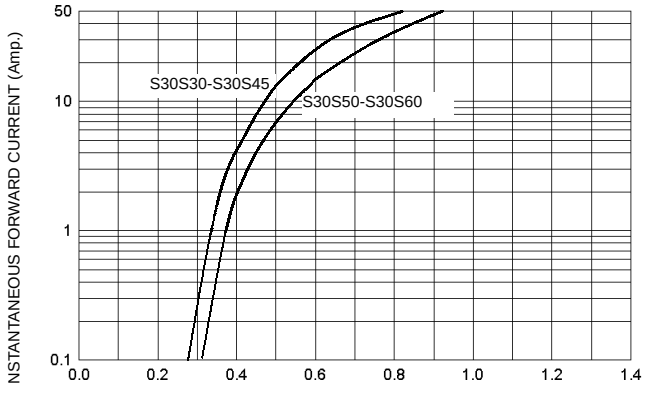


FIG-3 TYPICAL REVERSE CHARACTERISTICS

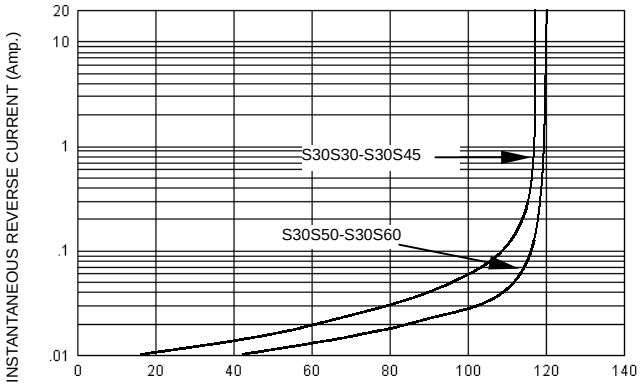


FIG-4 TYPICAL JUNCTION CAPACITANCE

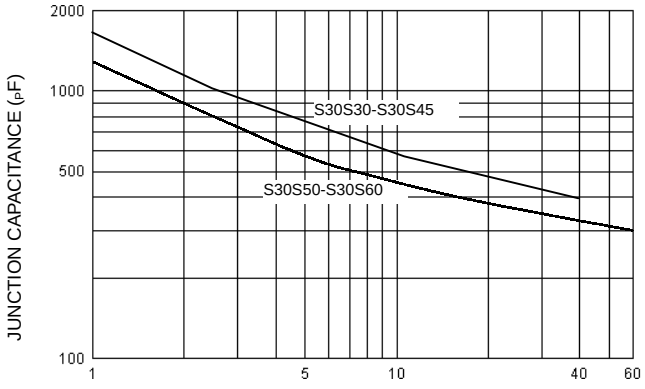


FIG-5 PEAK FORWARD SURGE CURRENT