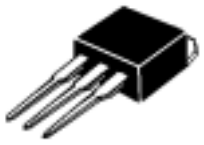
Switchmode Power Rectifiers
I^2 PAK surface Mount Power Package

The **I^2 PAK** Power rectifier employs the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art devices have the following features:

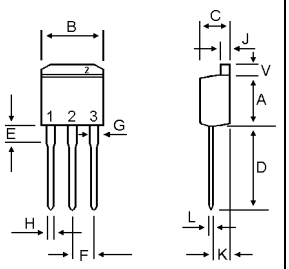
* Low Forward Voltage.
* Low Switching noise.
* High Current Capacity
* Guarantee Reverse Avalanche.
* Guard-Ring for Stress Protection.
* Low Power Loss & High efficiency.
* 150℃ Operating Junction Temperature
* Low Stored Charge Majority Carrier Conduction.
* Plastic Material used Carries Underwriters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

SCHOTTKY BARRIER RECTIFIERS

30 AMPERES
35-60 VOLTS



TO-262 (I^2-PAK)



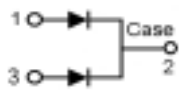
MAXIMUM RATINGS

Characteristic	Symbol	S30S						Unit
		30CR	35CR	40CR	45CR	50CR	60CR	
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 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	8.12	9.00
B	9.78	10.42
C	4.22	4.98
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
J	1.14	1.38
K	2.20	2.98
L	0.33	0.55
V	1.57	1.83

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	S30S						Unit
		30CR	35CR	40CR	45CR	50CR	60CR	
Maximum Instantaneous Forward Voltage (I_F =15 Amp T_C = 25℃) (I_F =15 Amp T_C = 125℃)	V_F	0.57 0.48				0.65 0.57		V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	0.5 30						mA



Common Cathode
Suffix “C”

S30S30CR Thru S30S60CR

FIG-1 FORWARD CURRENT DERATING CURVE

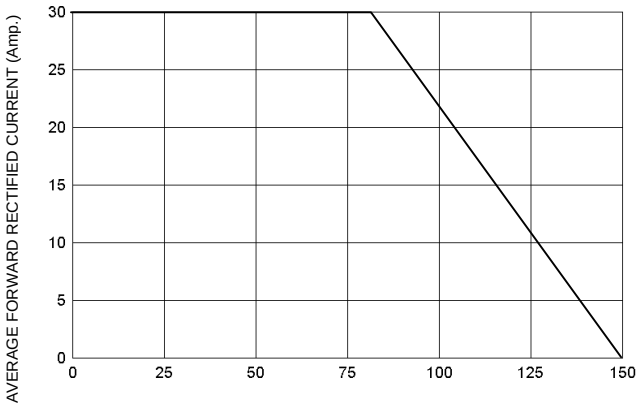


FIG-2 TYPICAL FORWARD CHARACTERISITICS

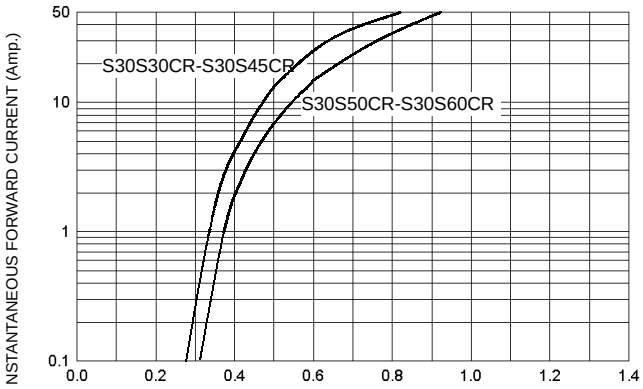


FIG-3 TYPICAL REVERSE CHARACTERISTICS

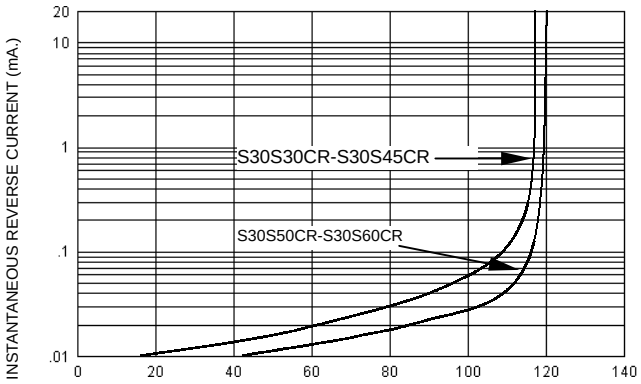


FIG-4 TYPICAL JUNCTION CAPACITANCE

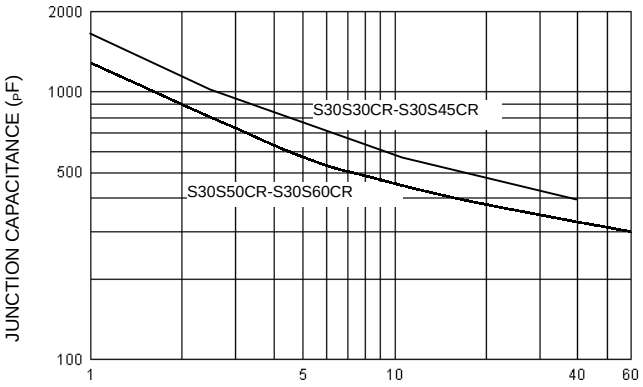


FIG-5 PEAK FORWARD SURGE CURRENT