

Switchmode Power Rectifiers I² PAK surface Mount Power Package

The I² 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

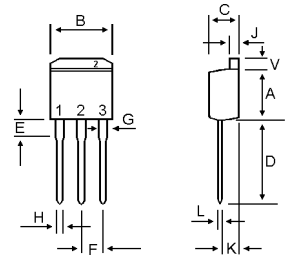
**30 AMPERES
35-60 VOLTS**



TO-262 (I²-PAK)

MAXIMUM RATINGS

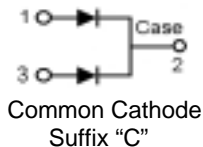
Characteristic	Symbol	S30S						Unit
		30CR	35CR	40CR	45CR	50CR	60CR	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	30	35	40	45	50	60	V
RMS Reverse Voltage	V _{R(RMS)}	21	25	28	32	35	42	V
Average Rectifier Forward Current Total Device (Rated V _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	



S30S30CR Thru S30S60CR

FIG-1 FORWARD CURRENT DERATING CURVE

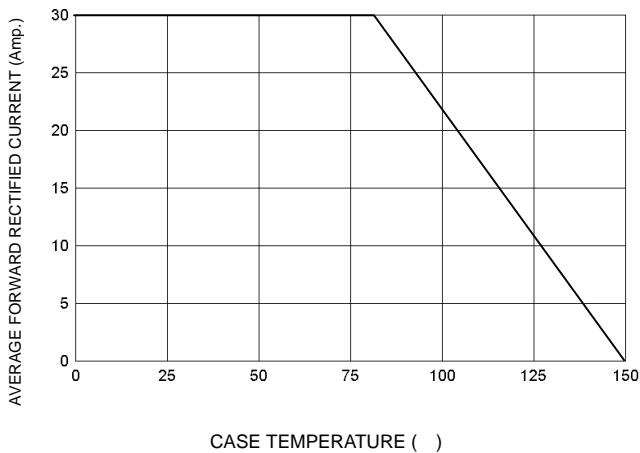


FIG-2 TYPICAL FORWARD CHARACTERISTICS

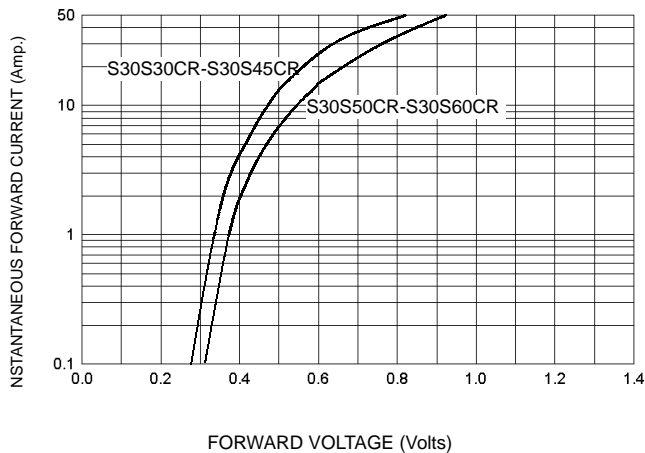


FIG-3 TYPICAL REVERSE CHARACTERISTICS

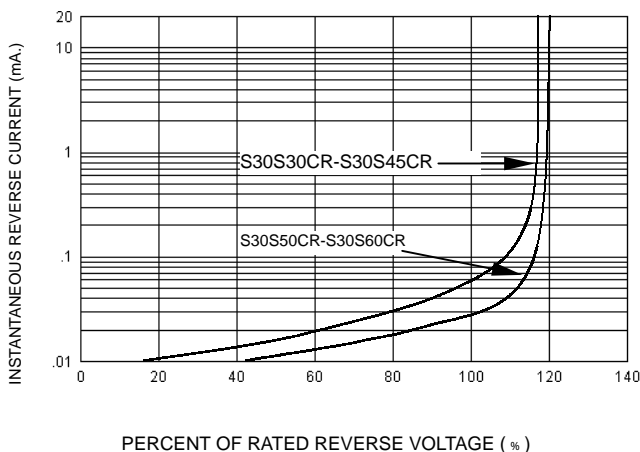


FIG-4 TYPICAL JUNCTION CAPACITANCE

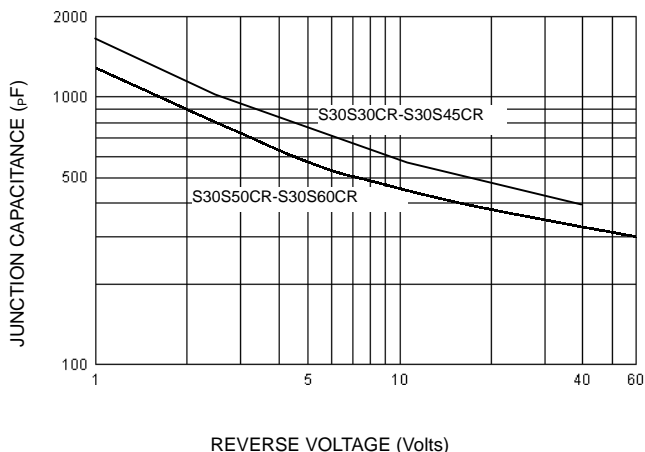


FIG-5 PEAK FORWARD SURGE CURRENT

