

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

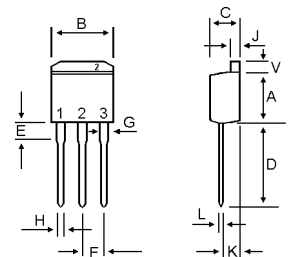
**30 AMPERES
120 VOLTS**



TO-262 (I²-PAK)

MAXIMUM RATINGS

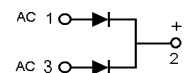
Characteristic	Symbol	S30S120CR	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	120	V
RMS Reverse Voltage	$V_{R(RMS)}$	84	V
Average Rectifier Forward Current Total Device (Rated V_R), $T_C=100$	$I_{F(AV)}$	15 30	A
Peak Repetitive Forward Current (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	S30S120CR	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	0.5 30	mA



Common Cathode
Suffix "C"

S30S120CR

FIG-1 FORWARD CURRENT DERATING CURVE

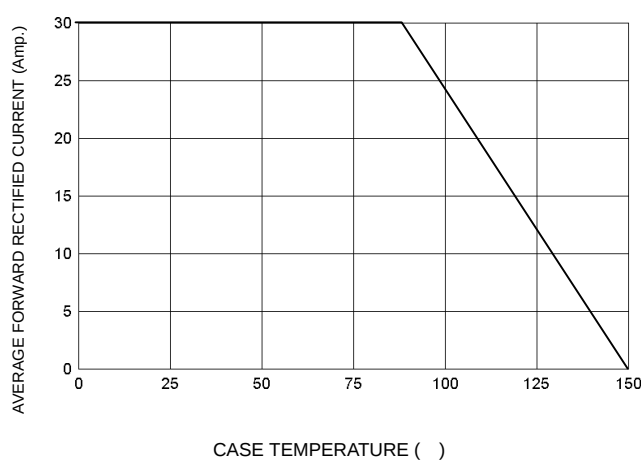


FIG-2 TYPICAL FORWARD CHARACTERISTICS

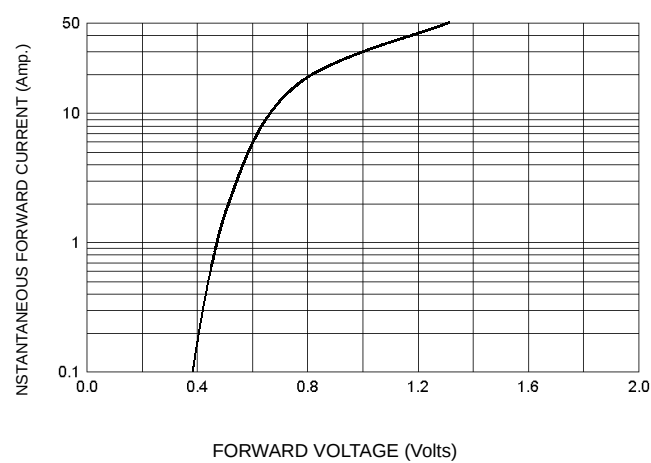


FIG-3 TYPICAL REVERSE CHARACTERISTICS

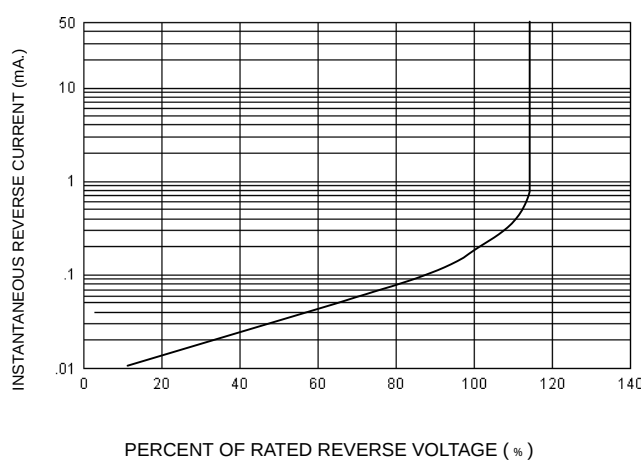


FIG-4 TYPICAL JUNCTION CAPACITANCE

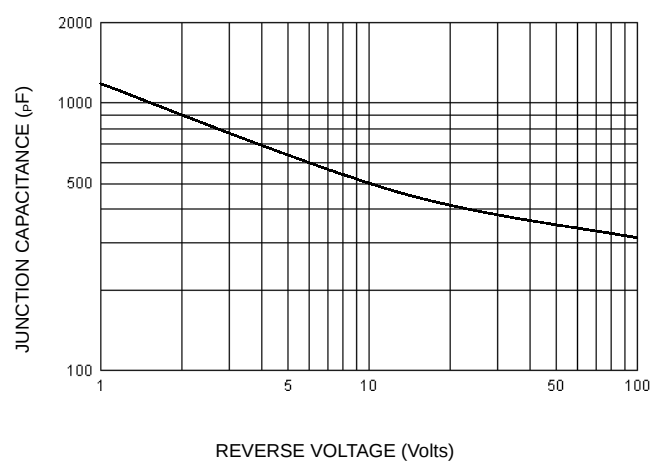


FIG-5 PEAK FORWARD SURGE CURRENT

