

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

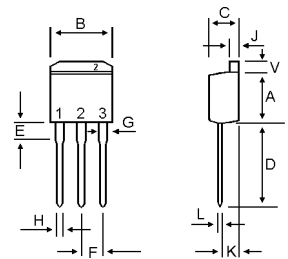
**20 AMPERES
35-60 VOLTS**



TO-262 (I²-PAK)

MAXIMUM RATINGS

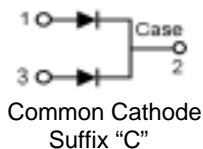
| Characteristic | Symbol | S20S | | | | | | Unit |
|---|--|-------------|------|------|------|------|------|------|
| | | 30CR | 35CR | 40CR | 45CR | 50CR | 60CR | |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 30 | 35 | 40 | 45 | 50 | 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)} | 10 20 | | | | | | 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 half-wave, 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 | 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 | S20S | | | | | | Unit |
|--|----------------|--------------|------|------|--------------|------|------|------|
| | | 30CR | 35CR | 40CR | 45CR | 50CR | 60CR | |
| Maximum Instantaneous Forward Voltage (I _F = 10 Amp T _C = 25) (I _F = 10 Amp T _C = 125) | V _F | 0.55 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 | |



S20S30CR Thru S20S60CR

FIG-1 FORWARD CURRENT DERATING CURVE

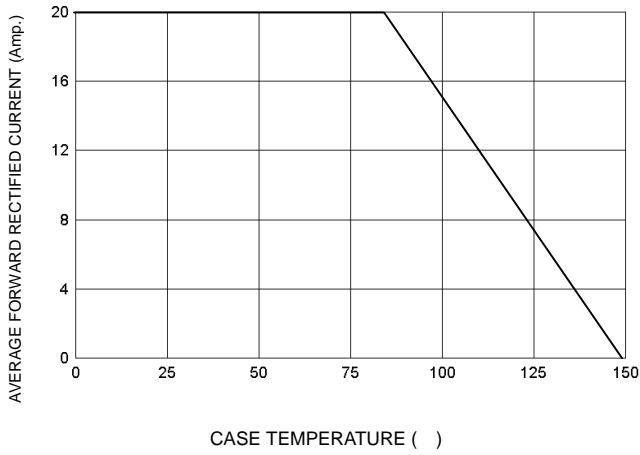


FIG-2 TYPICAL FORWARD CHARACTERISTICS

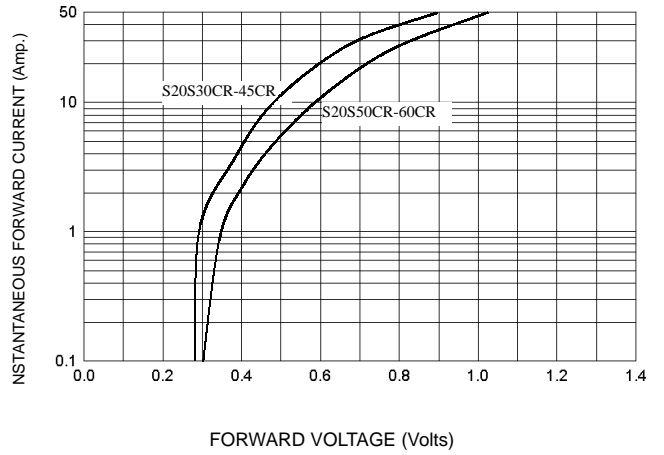


FIG-3 TYPICAL REVERSE CHARACTERISTICS

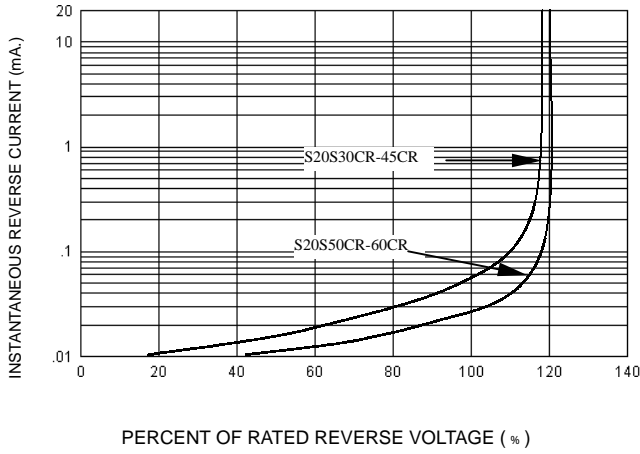


FIG-4 TYPICAL JUNCTION CAPACITANCE

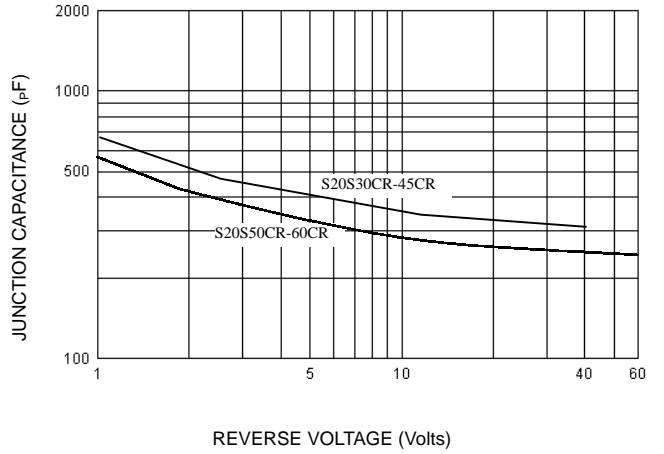


FIG-5 PEAK FORWARD SURGE CURRENT

