

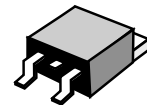
SWITCHMODE POWER RECTIFIERS D2 PAK SURFACE MOUNT POWER PACKAGE

The D2 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 Surge Capacity
- * Guarantee Reverse Avalanche
- * Guard-Ring for Stress Protection
- * Lower Power Loss & High efficiency
- * 125 °C Operating Junction Temperature
- * Lower 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

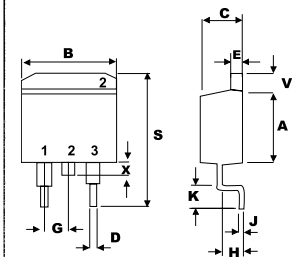
**16 AMPERES
70 -- 100 VOLTS**



TO-263 (D2-PAK)

MAXIMUM RATINGS

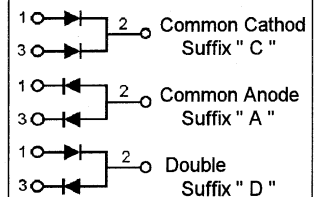
| Characteristic | Symbol | S16S | | | | Unit |
|---|---------------------------------|---------------|----|----|-----|------|
| | | 70 | 80 | 90 | 100 | |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 70 | 80 | 90 | 100 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 49 | 56 | 63 | 70 | V |
| Average Rectifier Forward Current Total Device | $I_{F(AV)}$ | 8.0 16 | | | | A |
| Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz) | I_{FRM} | 16 | | | | A |
| Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz) | I_{FSM} | 150 | | | | A |
| Operating and Storage Junction Temperature Range | T_J, T_{stg} | - 65 to + 125 | | | | °C |



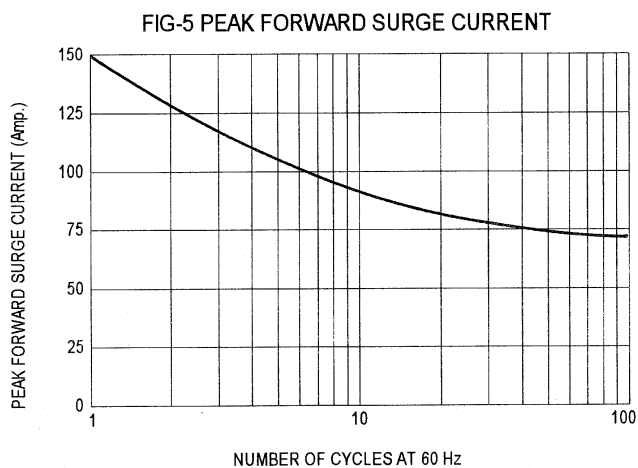
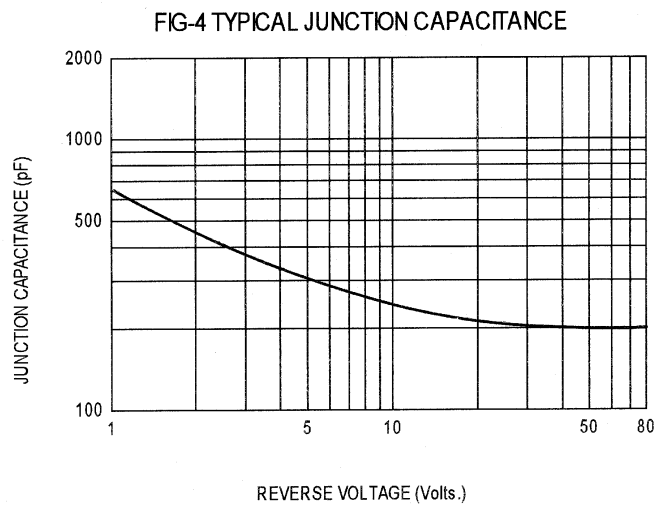
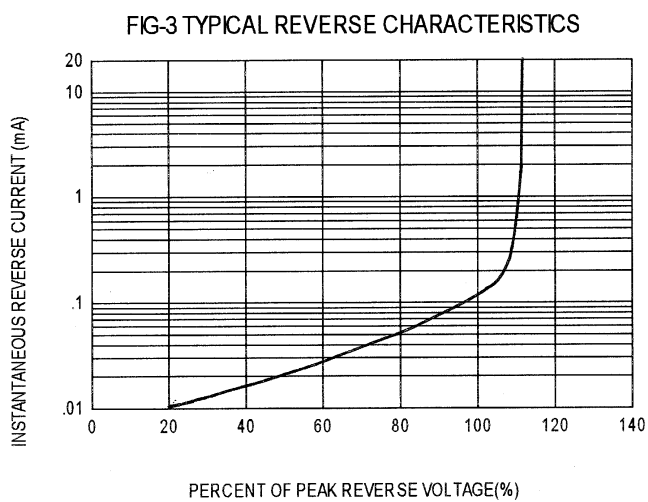
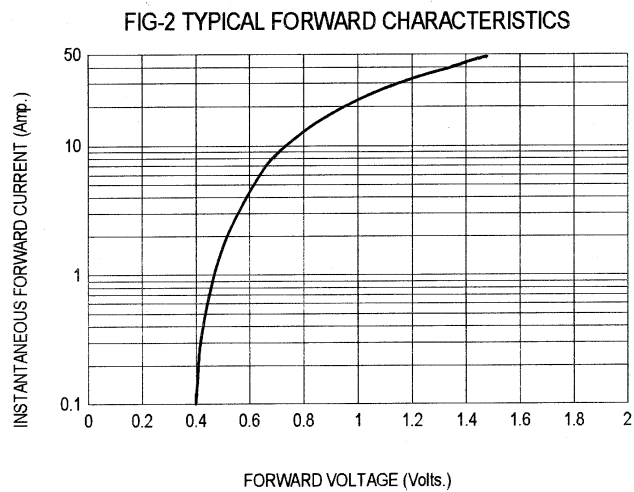
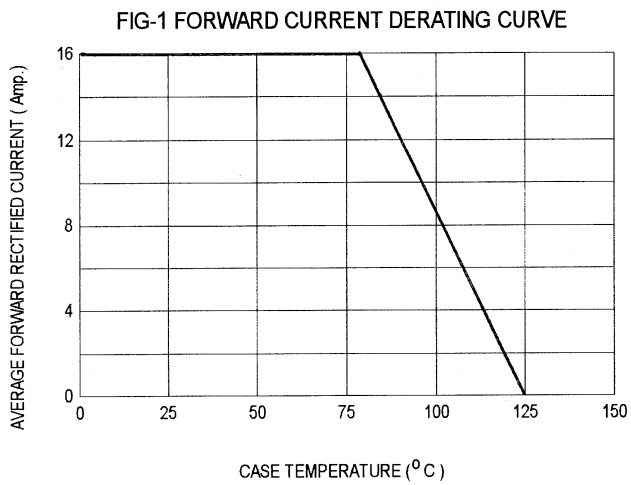
| DIM | MILLMETERS | |
|-----|------------|-------|
| | MIN | MAX |
| A | 8.12 | 9.00 |
| B | 9.70 | 10.30 |
| C | 4.23 | 4.90 |
| D | 0.51 | 1.15 |
| E | 1.10 | 1.50 |
| G | 2.54 BSC | |
| H | 2.03 | 2.79 |
| J | 0.30 | 0.50 |
| K | 2.29 | 2.90 |
| S | 14.60 | 16.00 |
| V | 1.40 | 1.83 |
| X | ---- | 1.70 |

ELECTRICAL CHARACTERISTICS

| Characteristic | Symbol | S16S | | | | Unit |
|--|--------|--------------|----|--------------|-----|------|
| | | 70 | 80 | 90 | 100 | |
| Maximum Instantaneous Forward Voltage ($I_F = 8.0$ Amp, $T_C = 25$ °C) ($I_F = 8.0$ Amp, $T_C = 100$ °C) | V_F | 0.75 0.68 | | 0.85 0.76 | | V |
| Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25$ °C) (Rated DC Voltage, $T_C = 100$ °C) | I_R | 5.0 50 | | | | mA |



S16S70 , S16S80



S16S90 , S16S100

FIG-1 FORWARD CURRENT DERATING CURVE

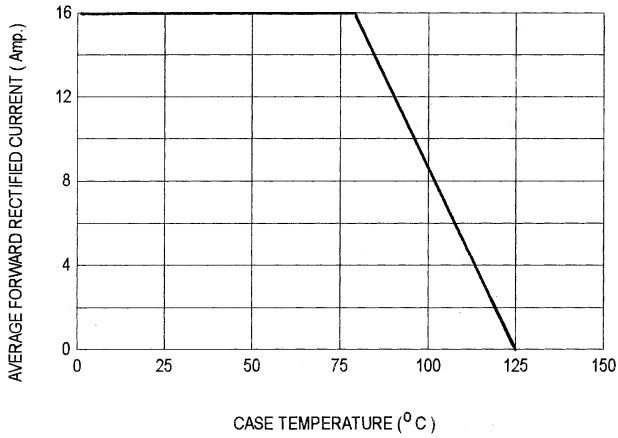


FIG-2 TYPICAL FORWARD CHARACTERISTICS

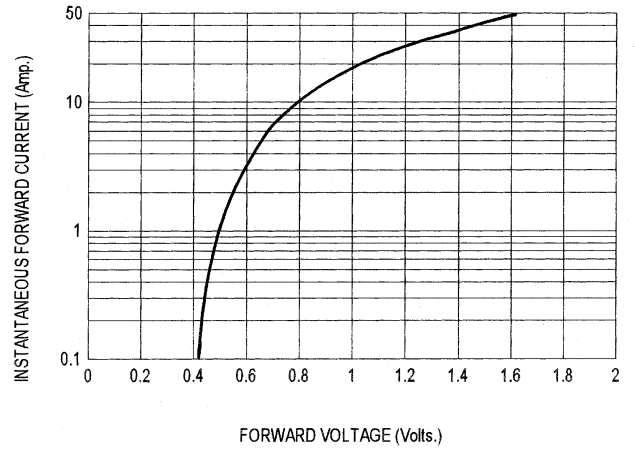


FIG-3 TYPICAL REVERSE CHARACTERISTICS

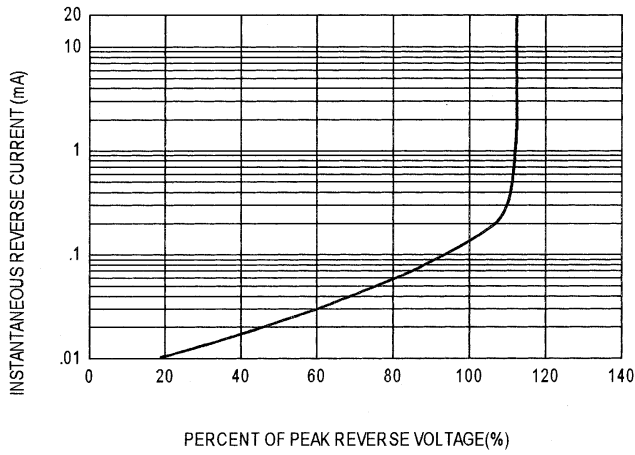


FIG-4 TYPICAL JUNCTION CAPACITANCE

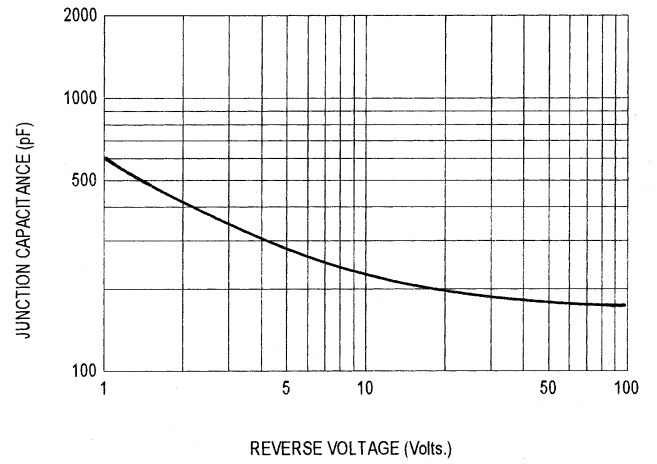


FIG-5 PEAK FORWARD SURGE CURRENT

