

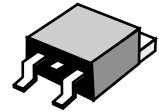
## SWITCHMODE POWER RECTIFIERS D2 PAK SURFACE MOUNT POWER PACKAGE

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 Avalance
- \* 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

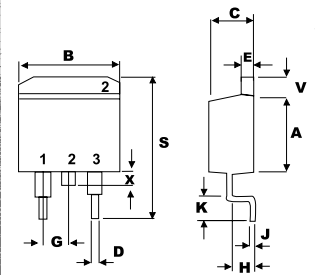
**20 AMPERES  
70 – 100 VOLTS**



TO-263 (D2-PAK)

### MAXIMUM RATINGS

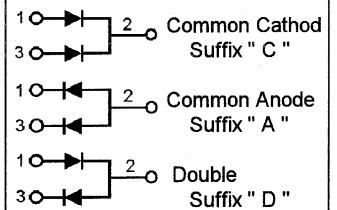
Characteristic	Symbol	S20S				Unit
		70	80	90	100	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	70	80	90	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	49	56	63	70	V
Average Rectifier Forward Current Total Device	$I_{F(AV)}$	10 20				A
Peak Repetitive Forward Current ( Rate $V_R$ , Square Wave, 20kHz )	$I_{FRM}$	20				A
Non-Repetitive Peak Surge Current ( Surge applied at rate load conditions halfware, single phase, 60Hz )	$I_{FSM}$	200				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	S20S				Unit
		70	80	90	100	
Maximum Instantaneous Forward Voltage ( $I_F=10$ Amp, $T_C = 25$ °C ) ( $I_F=10$ Amp, $T_C = 100$ °C )	$V_F$	0.75 0.66		0.85 0.74		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



# S20S70 , S20S80

FIG-1 FORWARD CURRENT DERATING CURVE

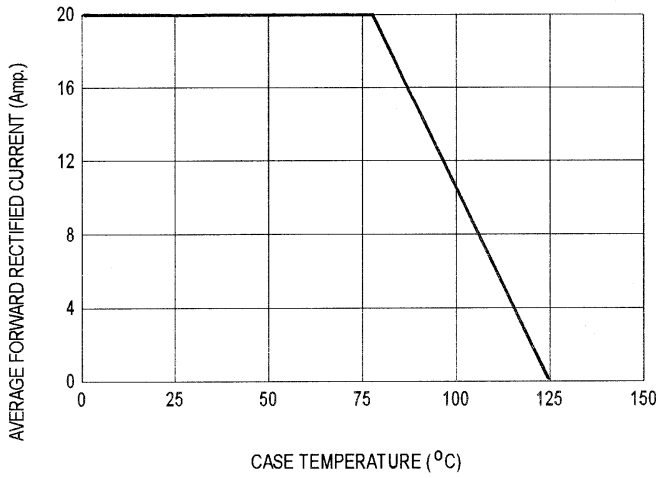


FIG-2 TYPICAL FORWARD CHARACTERISTICS

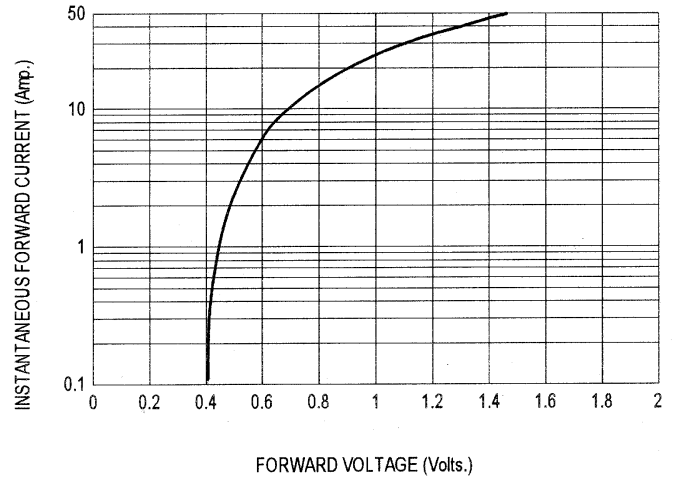


FIG-3 TYPICAL REVERSE CHARACTERISTICS

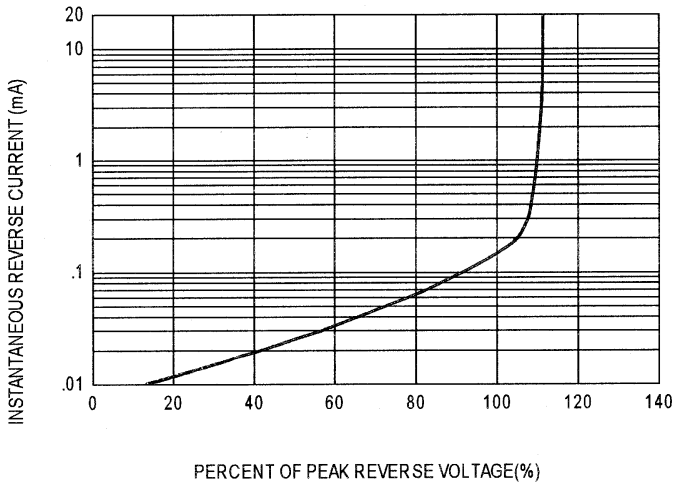


FIG-4 TYPICAL JUNCTION CAPACITANCE

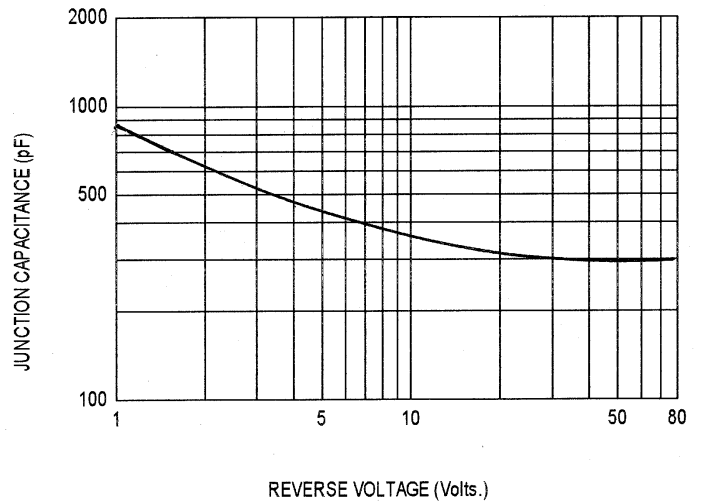
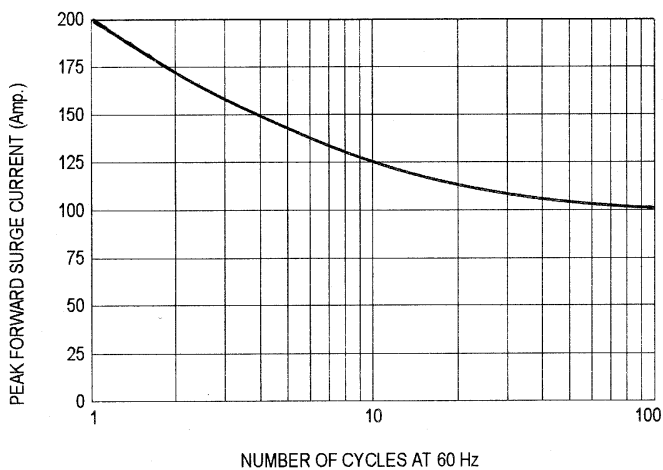


FIG-5 PEAK FORWARD SURGE CURRENT



# S20S90 , S20S100

FIG-1 FORWARD CURRENT DERATING CURVE

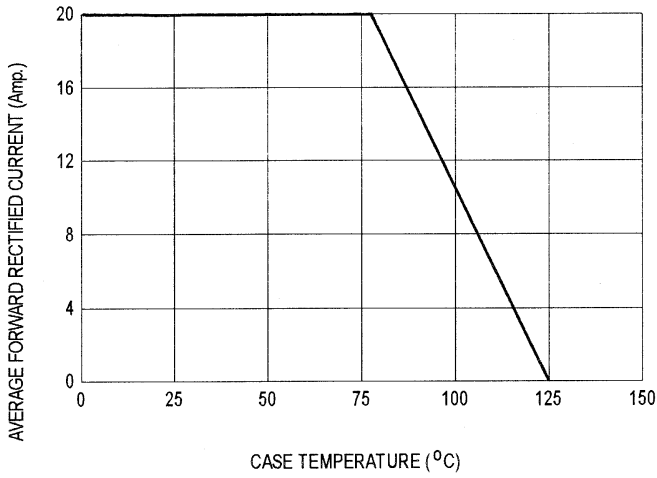


FIG-2 TYPICAL FORWARD CHARACTERISTICS

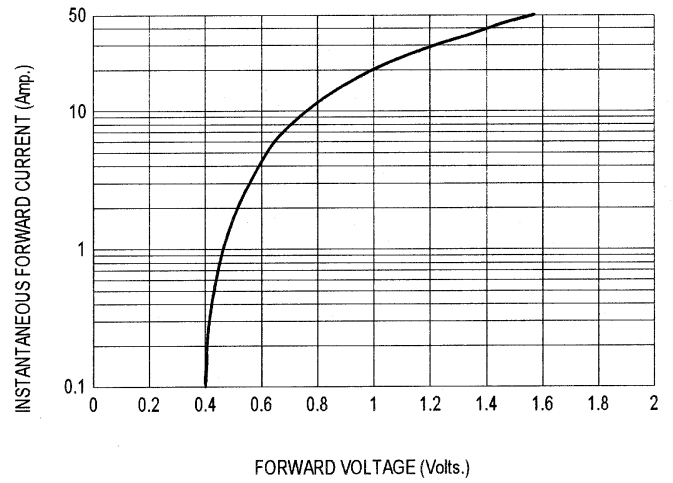


FIG-3 TYPICAL REVERSE CHARACTERISTICS

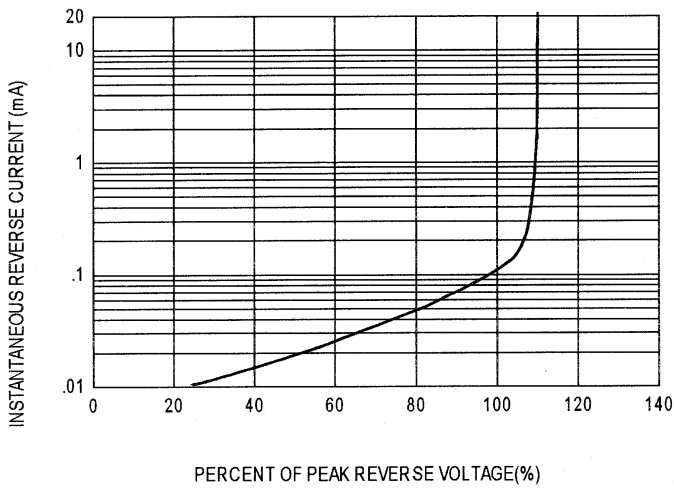


FIG-4 TYPICAL JUNCTION CAPACITANCE

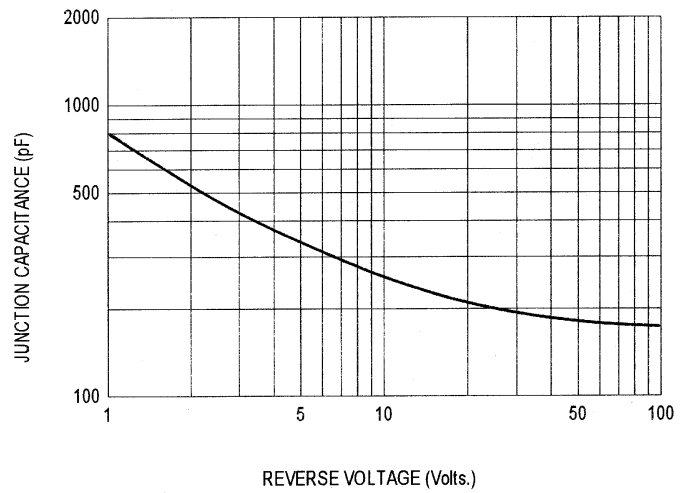


FIG-5 PEAK FORWARD SURGE CURRENT

