

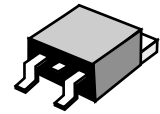
SWITCHMODE POWER RECTIFIERS D² PAK SURFACE MOUNT POWER PACKAGE

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-0

SCHOTTKY BARRIER RECTIFIERS

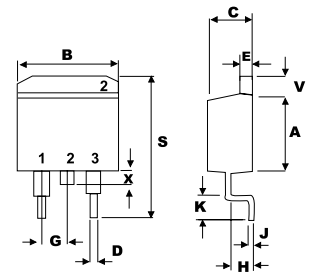
**20 AMPERES
30 – 60 VOLTS**



TO-263 (D2-PAK)

MAXIMUM RATINGS

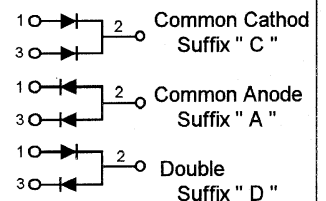
Characteristic	Symbol	S20S						Unit
		30	35	40	45	50	60	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	35	40	45	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	25	28	32	35	42	V
Average Rectifier Forward Current Total Device (Rated V_R , $T_c=100^\circ\text{C}$)	$I_{F(AV)}$	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
		30	35	40	45	50	60	
Maximum Instantaneous Forward Voltage ($I_F = 10$ Amp, $T_c = 25^\circ\text{C}$) ($I_F = 10$ Amp, $T_c = 100^\circ\text{C}$)	V_F	0.55 0.46			0.65 0.57			V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_c = 25^\circ\text{C}$) (Rated DC Voltage, $T_c = 100^\circ\text{C}$)	I_R	5.0 50						mA



S20S30 thru S20S45

FIG-1 FORWARD CURRENT DERATING CURVE

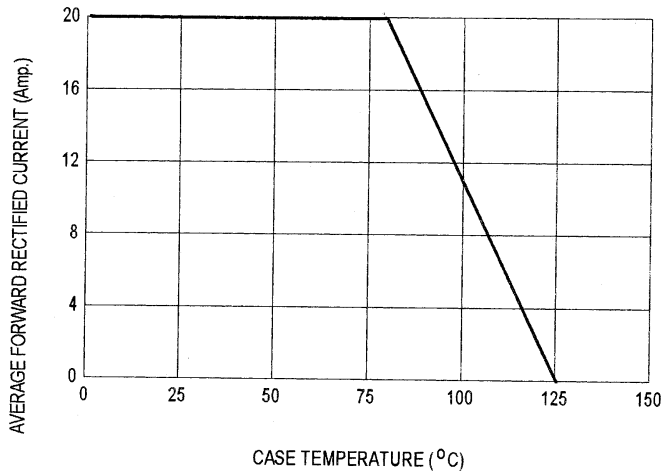


FIG-2 TYPICAL FORWARD CHARACTERISTICS

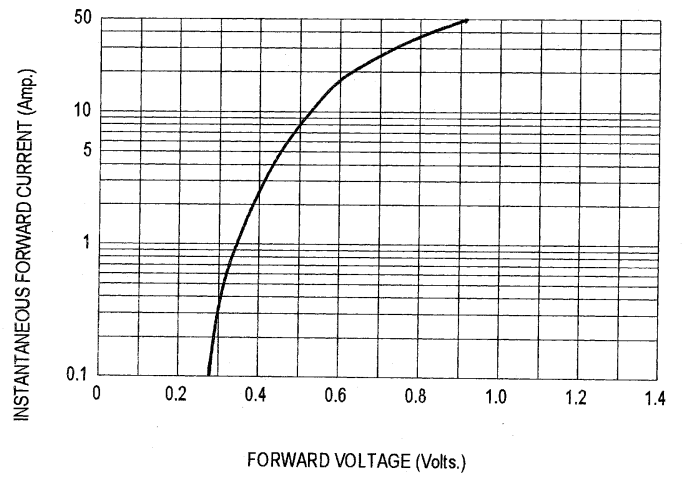


FIG-3 TYPICAL REVERSE CHARACTERISTICS

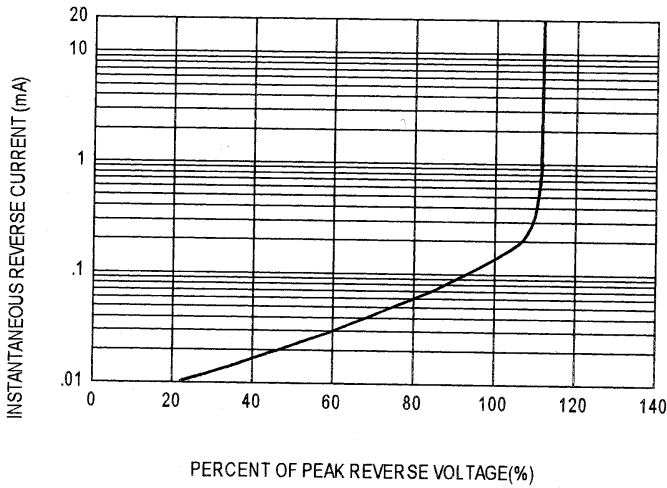


FIG-4 TYPICAL JUNCTION CAPACITANCE

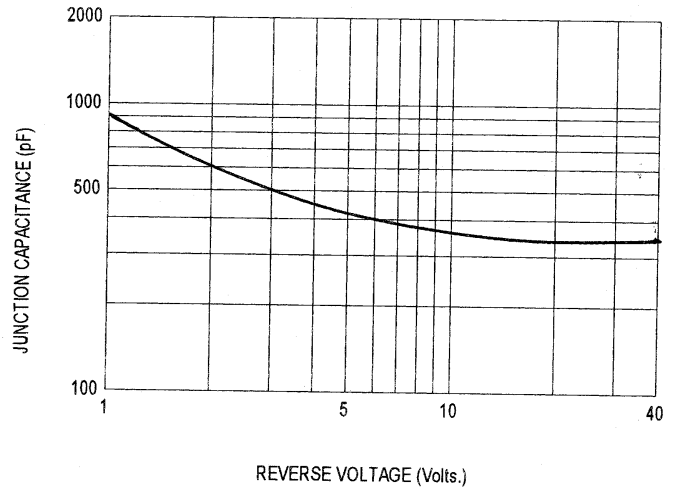
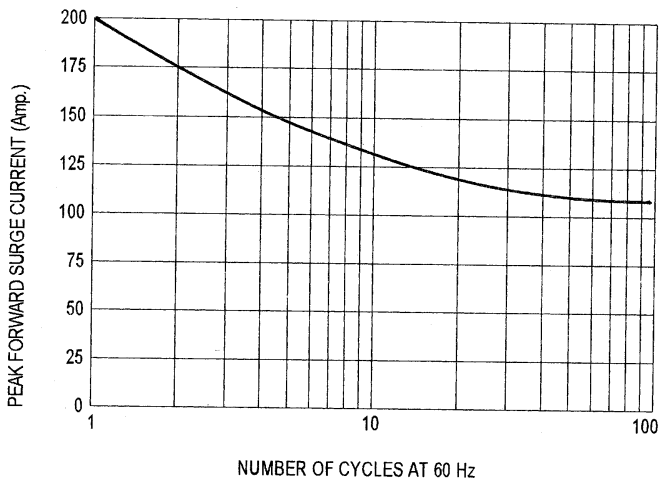


FIG-5 PEAK FORWARD SURGE CURRENT



S20S50 , S20S60

FIG-1 FORWARD CURRENT DERATING CURVE

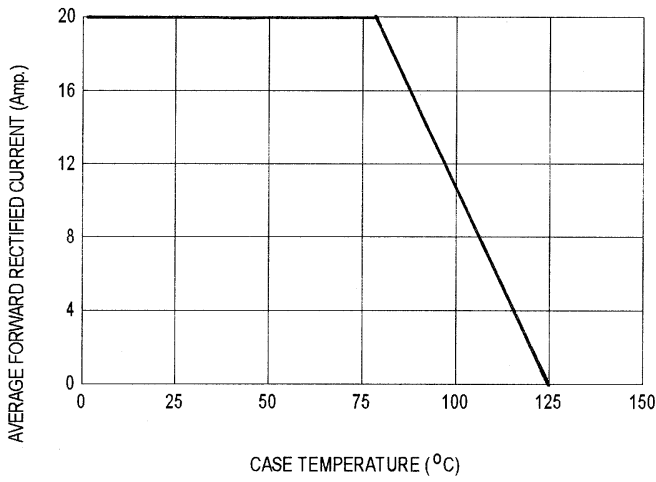


FIG-2 TYPICAL FORWARD CHARACTERISTICS

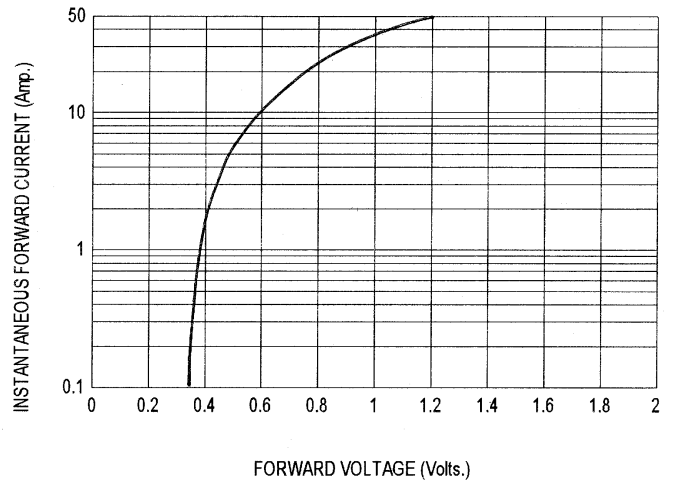


FIG-3 TYPICAL REVERSE CHARACTERISTICS

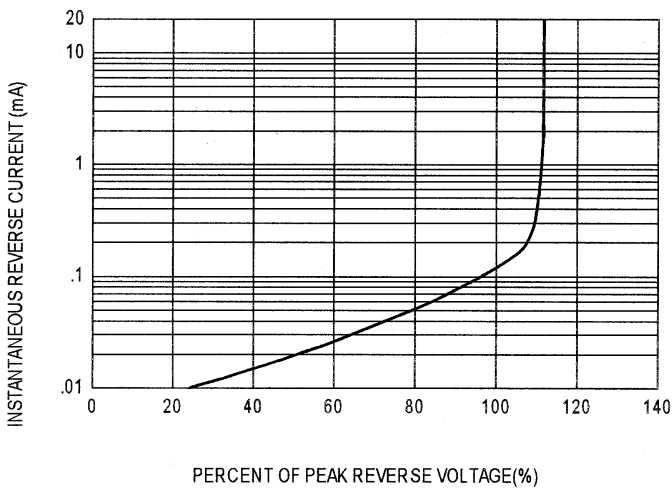


FIG-4 TYPICAL JUNCTION CAPACITANCE

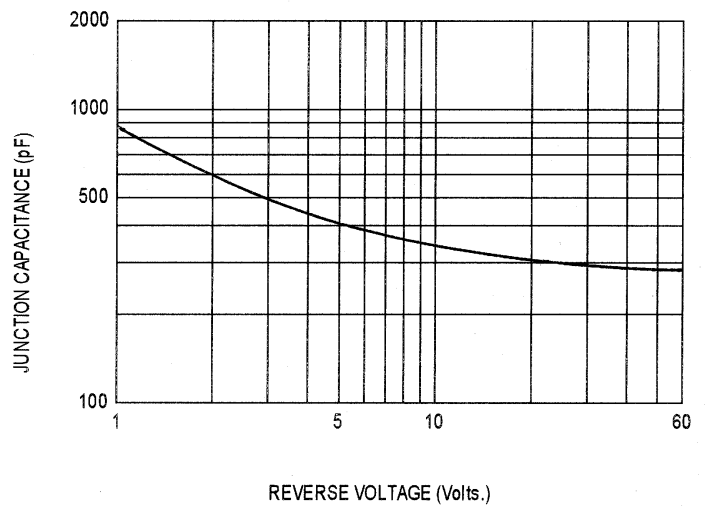


FIG-5 PEAK FORWARD SURGE CURRENT

