

### SWITCHMODE POWER RECTIFIERS D PAK SURFACE MOUNT POWER PACKAGE

The D 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
- \* 150 Operating Junction Temperature
- \* Lower Stored Charge Majority Carrier Conduction
- \* Similar Size to the industry Standard TO-251 Package
- \* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
- \* Marking: D620-D660
- \* Weight: 0.011 ounce, 0.295 gram

### MAXIMUM RATINGS

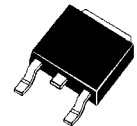
Characteristic	Symbol	SBD					Unit
		620	630	640	650	660	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	20	30	40	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	V
Average Rectifier Forward Current	$I_{F(AV)}$	6.0					A
Peak Repetitive Forward Current (Rate $V_R$ , Square Wave, 20kHz)	$I_{FM}$	6.0					A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	$I_{FSM}$	100					A
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to +150					

### ELECTRIAL CHARACTERISTICS

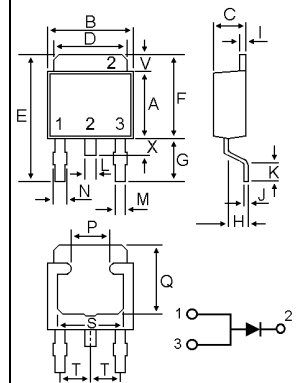
Characteristic	Symbol	SBD					Unit
		620	630	640	650	660	
Maximum Instantaneous Forward Voltage ( I <sub>F</sub> =6.0 Amp, T <sub>C</sub> = 25 )	V <sub>F</sub>	0.55			0.70		V
Maximum Instantaneous Reverse Current ( Rated DC Voltage, T <sub>C</sub> = 25 ) ( Rated DC Voltage, T <sub>C</sub> = 125 )	I <sub>R</sub>	0.5 20					mA

### SCHOTTKY BARRIER RECTIFIERS

**6 AMPERES  
30-60 VOLTS**



**TO-252AA (DPAK)**



DIM	MILLIMETERS	
	MIN	MAX
A	5.40	5.60
B	6.30	6.70
C	2.20	2.40
D	5.20	5.50
E	9.00	10.00
F	6.60	7.00
G	2.40	3.00
H	0.90	1.50
I	0.45	0.55
J	0.45	0.60
K	0.90	1.50
L	0.70	0.90
M	0.50	0.70
N	0.60	0.90
P	2.70	3.10
Q	5.00	5.40
S	4.80	5.20
T	-----	2.30
V	1.20	1.40
X	0.80	1.20

# SBD620 thru SBD660

FIG-1 FORWARD CURRENT DERATING CURVE

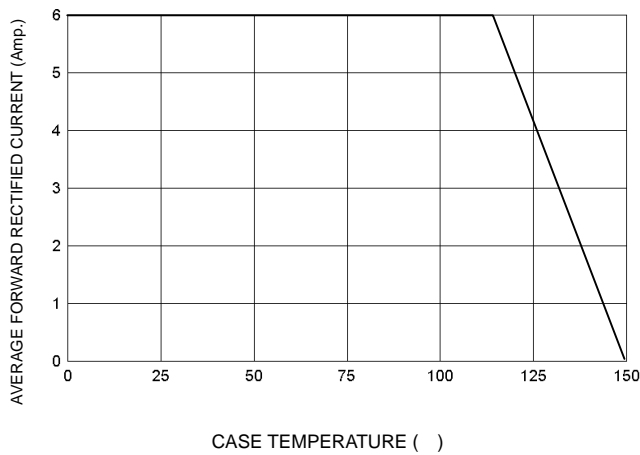


FIG-2 TYPICAL FORWARD CHARACTERISTICS

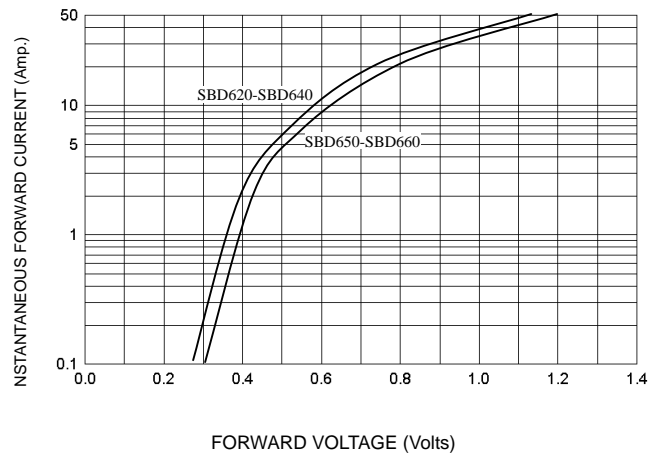


FIG-3 TYPICAL REVERSE CHARACTERISTICS

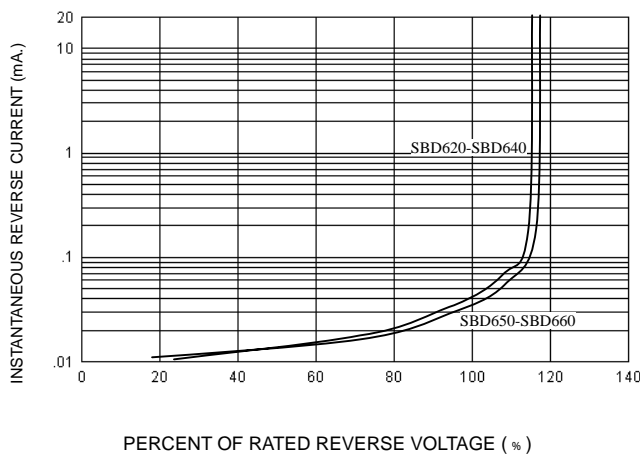


FIG-4 TYPICAL JUNCTION CAPACITANCE

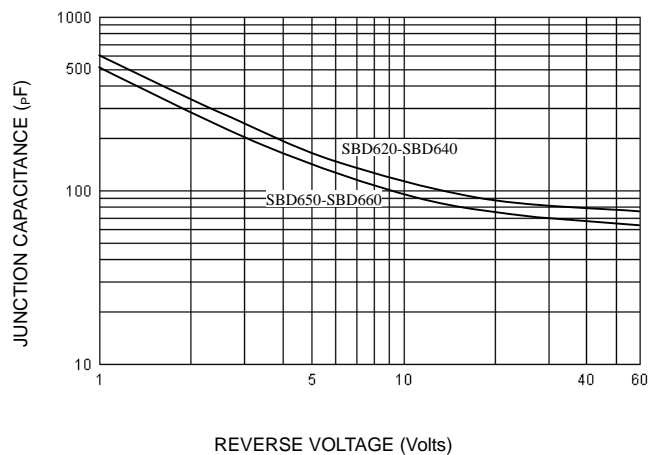
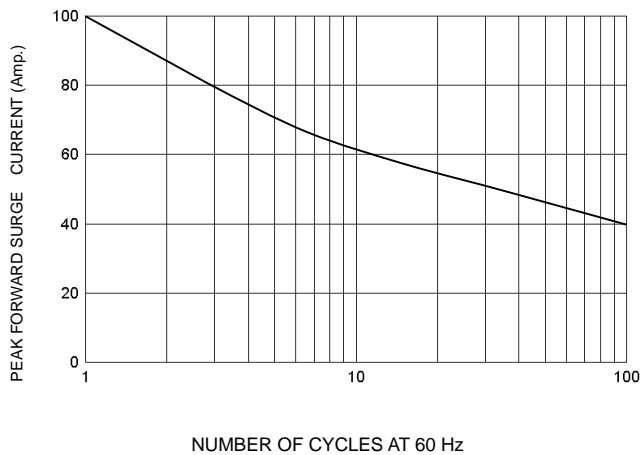


FIG-5 PEAK FORWARD SURGE CURRENT



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