MOSPEC

S20D30 Thru S20D60

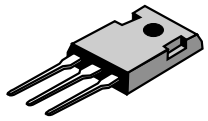
Schottky Barrier Rectifiers

Using the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes.

* Low Forward Voltag.
* Low Switching noise.
* High Current Capacity
* Guarantee Reverse Avalance.
* Guard-Ring for Stress Protection.
* Low Power Loss & High efficiency.
* 125 °C Operating Junction Temperature
* Low Stored Charge Majority Carrier Cnduction.
* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

SCHOTTKY BARRIER RECTIFIERS

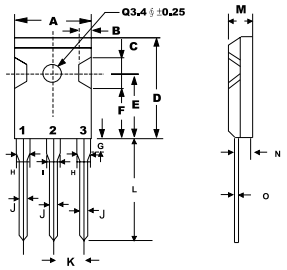
20 AMPERES
30 -- 60 VOLTS



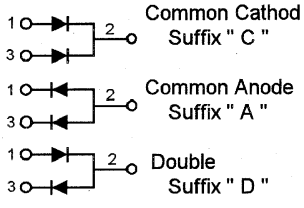
TO-247 (3P)

MAXIMUM RATINGS

Characteristic	Symbol	S20D						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	24	28	31	35	42	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}	225						A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	- 65 to + 125						°C



DIM	MILLMETERS	
	MIN	MAX
A	--	16.2
B	1.7	2.7
C	5.0	6.0
D	--	23.0
E	14.8	15.2
F	11.7	12.7
G	--	4.5
H	--	2.5
I	--	3.5
J	1.1	1.4
K	5.25	5.65
L	19	--
M	4.7	5.3
N	2.8	3.2
O	0.45	0.85



ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	S20D						Unit
		30	35	40	45	50	60	
Maximum Instantaneous Forward Voltage (I_F=10 Amp, T_C = 25 °C) (I_F=10 Amp, T_C = 100 °C)	V_F	0.55 0.46				0.65 0.57		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

S20D30 thru S20D45

FIG-1 FORWARD CURRENT DERATING CURVE

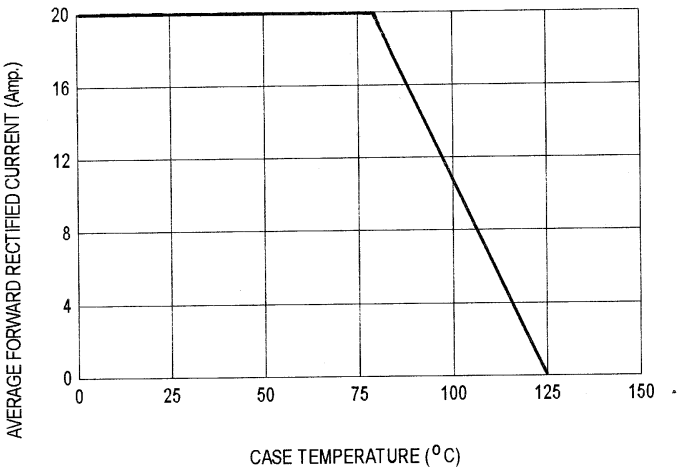


FIG-2 TYPICAL FORWARD CHARACTERISTICS

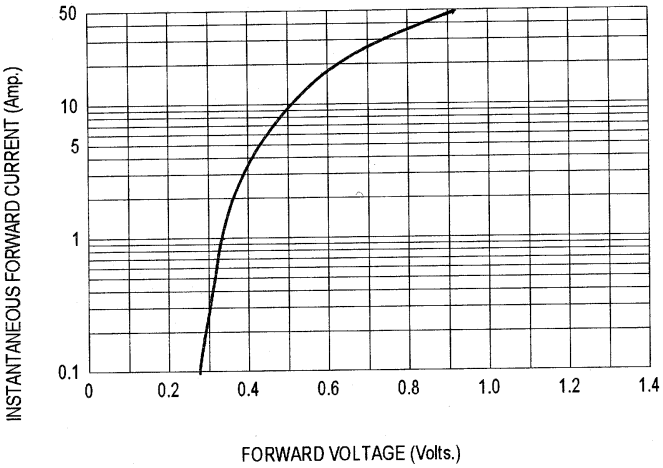


FIG-3 TYPICAL REVERSE CHARACTERISTICS

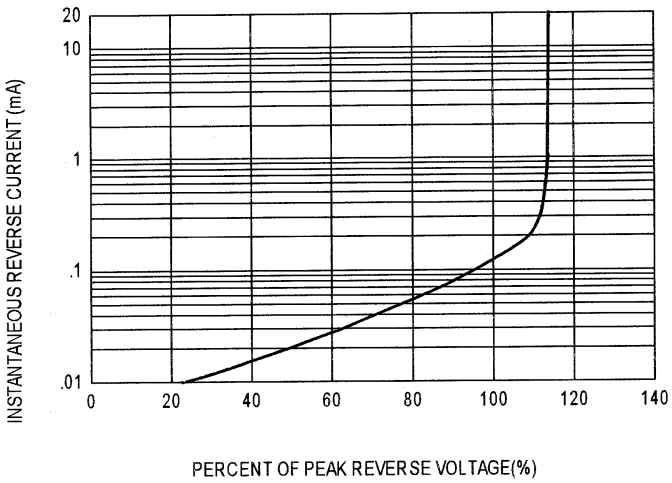


FIG-4 TYPICAL JUNCTION CAPACITANCE

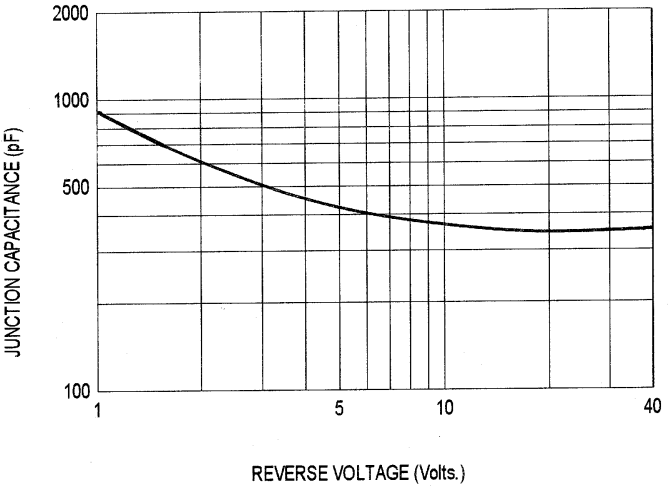
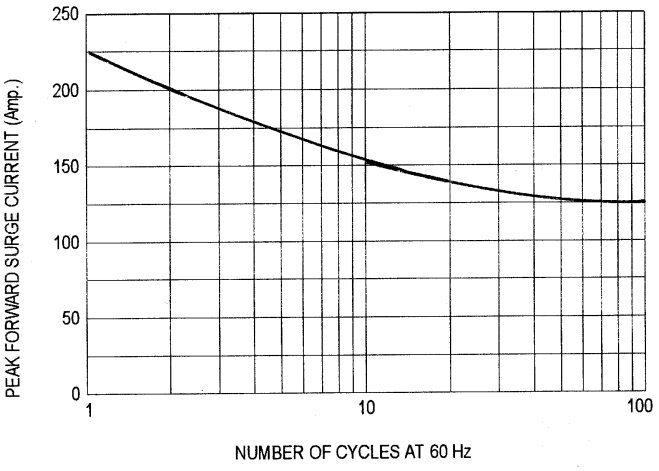


FIG-5 PEAK FORWARD SURGE CURRENT



S20D30 thru S20D45

FIG-1 FORWARD CURRENT DERATING CURVE

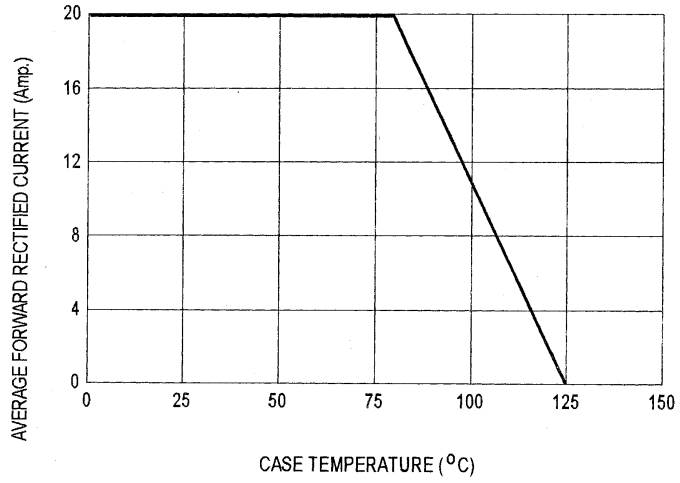


FIG-2 TYPICAL FORWARD CHARACTERISTICS

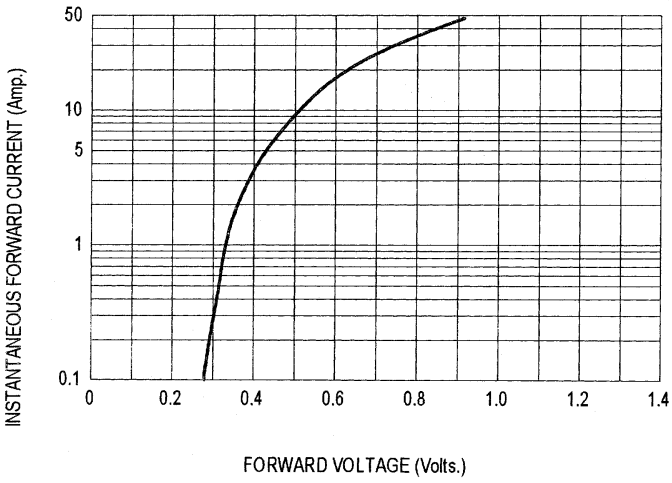


FIG-3 TYPICAL REVERSE CHARACTERISTICS

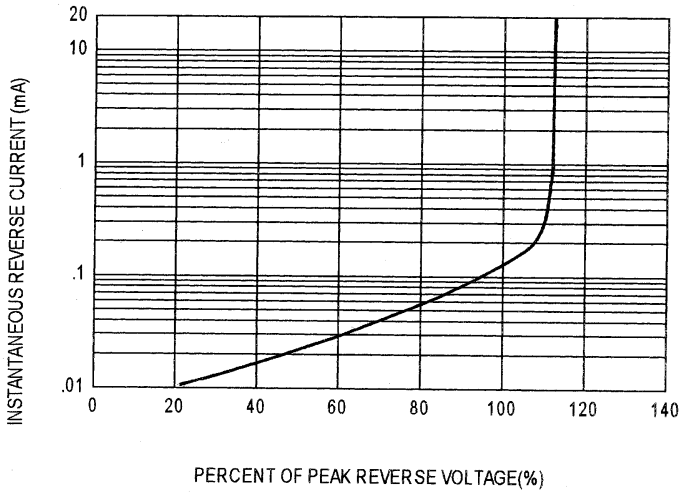


FIG-4 TYPICAL JUNCTION CAPACITANCE

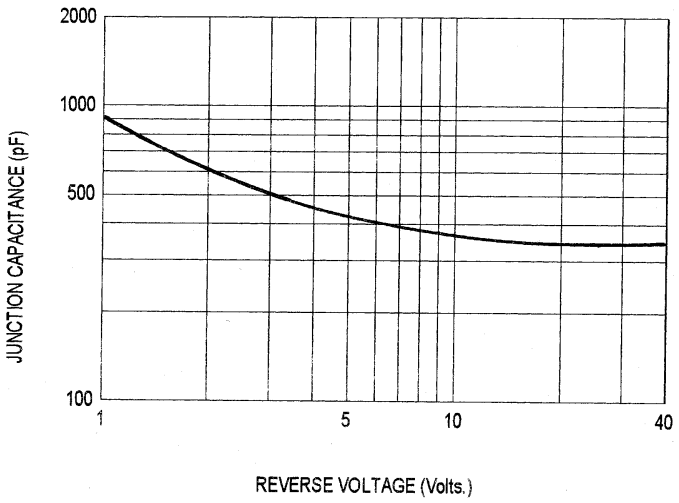
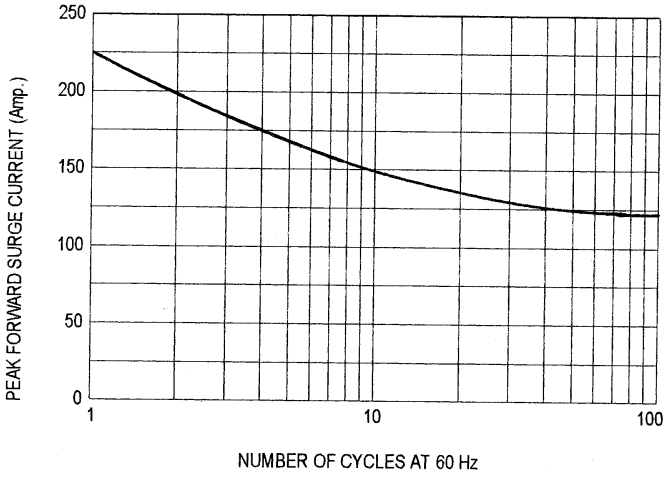


FIG-5 PEAK FORWARD SURGE CURRENT



S20D50 , S20D60

FIG-1 FORWARD CURRENT DERATING CURVE

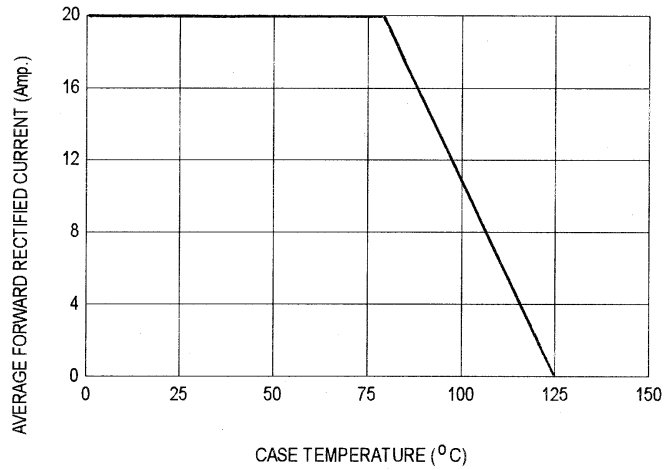


FIG-2 TYPICAL FORWARD CHARACTERISTICS

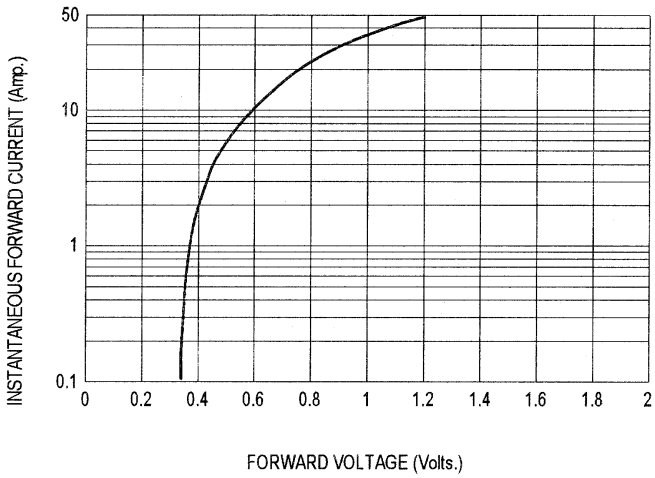


FIG-3 TYPICAL REVERSE CHARACTERISTICS

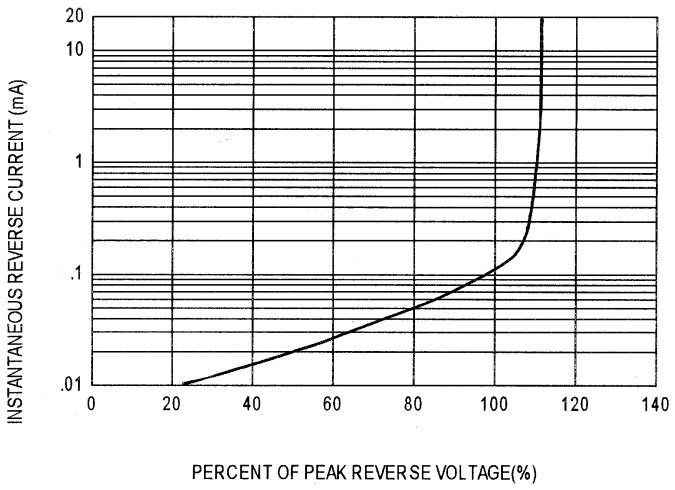
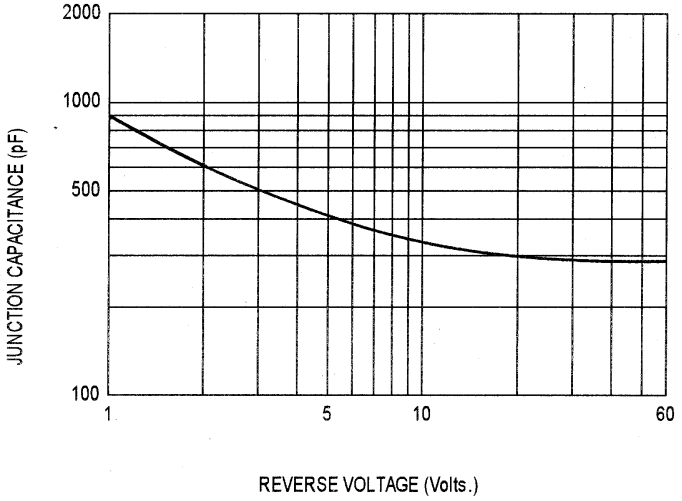


FIG-4 TYPICAL JUNCTION CAPACITANCE



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