

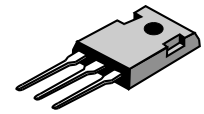
Schottky Barrier Rectifiers

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

SCHOTTKY BARRIER RECTIFIERS

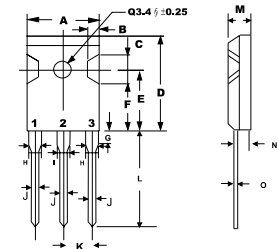
**50 AMPERES
30 -- 60 VOLTS**



TO-247 (3P)

MAXIMUM RATINGS

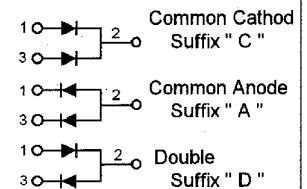
Characteristic	Symbol	S50D						Unit
		30	35	40	45	50	60	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	35	40	45	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	24	28	31	35	42	V
Average Rectifier Forward Current Total Device	$I_{F(AV)}$	25 50						A
Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz)	I_{FRM}	50						A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz)	I_{FSM}	400						A
Operating and Storage Junction Temperature Range	T_J, T_{stg}	- 65 to + 125						°C



DIM	MILLIMETERS	
	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	S50D						Unit	
		30	35	40	45	50	60		
Maximum Instantaneous Forward Voltage ($I_F = 25$ Amp, $T_C = 25$ °C) ($I_F = 25$ Amp, $T_C = 100$ °C)	V_F	0.60 0.49						0.70 0.60	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25$ °C) (Rated DC Voltage, $T_C = 125$ °C)	I_R	3.0 120							mA



S50D30 thru S50D45

FIG-1 FORWARD CURRENT DERATING CURVE

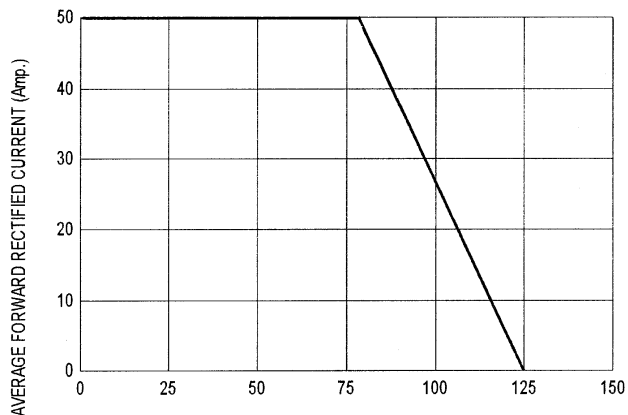
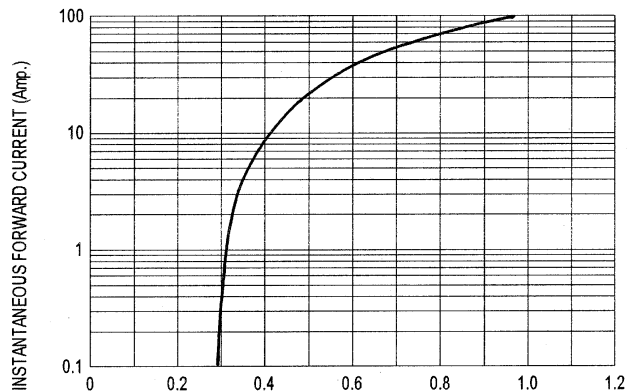
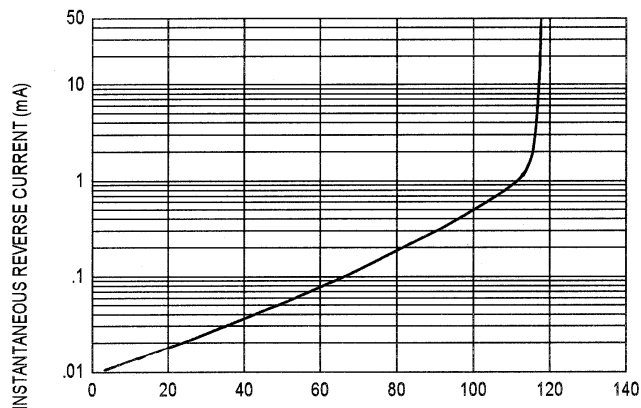


FIG-2 TYPICAL FORWARD CHARACTERISTICS



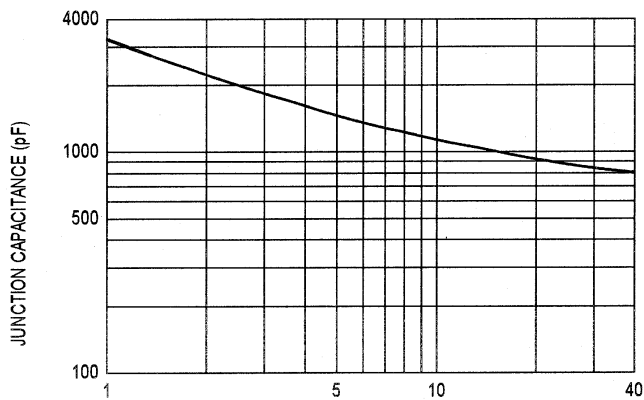
CASE TEMPERATURE (°C)

FIG-3 TYPICAL REVERSE CHARACTERISTICS



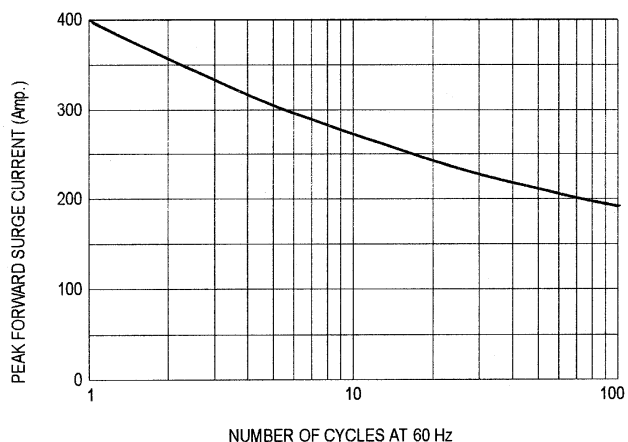
FORWARD VOLTAGE (Volts.)

FIG-4 TYPICAL JUNCTION CAPACITANCE



PERCENT OF PEAK REVERSE VOLTAGE(%)

FIG-5 PEAK FORWARD SURGE CURRENT



REVERSE VOLTAGE (Volts.)

NUMBER OF CYCLES AT 60 Hz

S50D50 , S50D60

FIG-1 FORWARD CURRENT DERATING CURVE

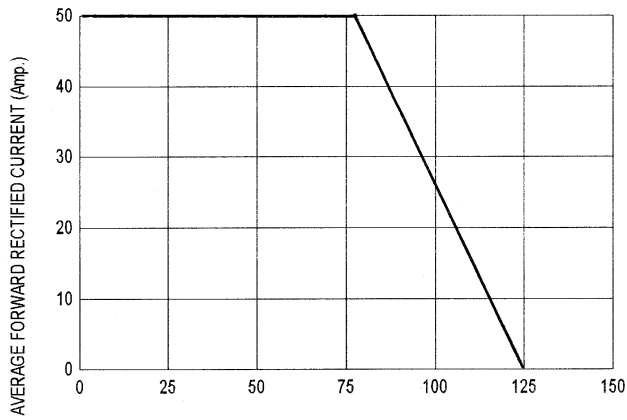


FIG-2 TYPICAL FORWARD CHARACTERISTICS

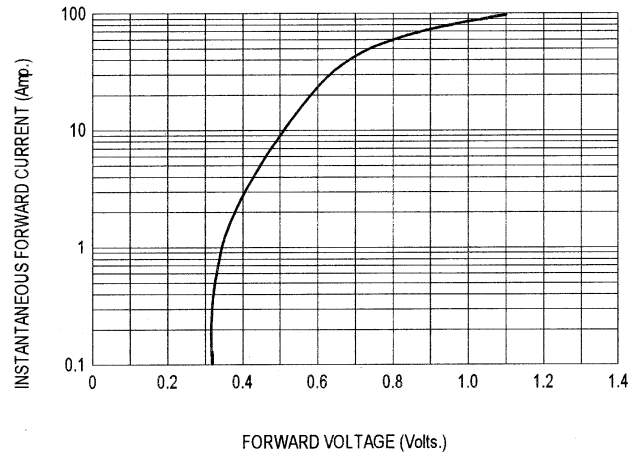


FIG-3 TYPICAL REVERSE CHARACTERISTICS

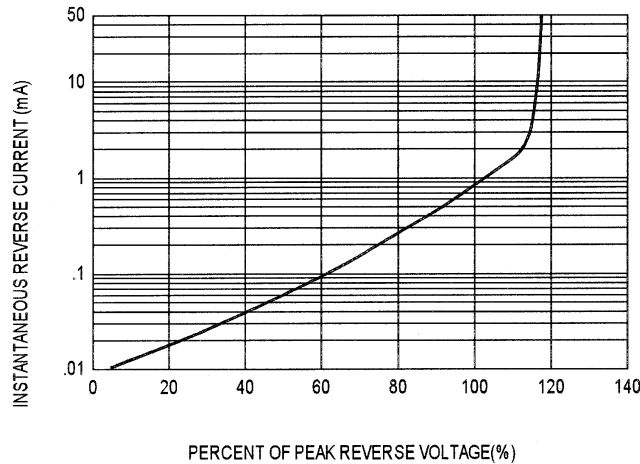


FIG-4 TYPICAL JUNCTION CAPACITANCE

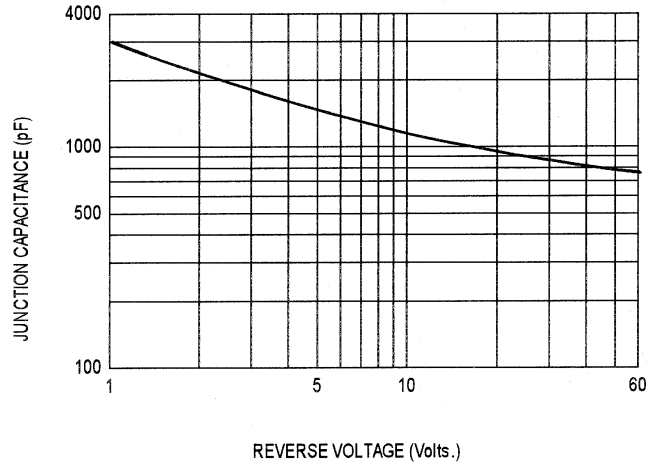


FIG-5 PEAK FORWARD SURGE CURRENT

