

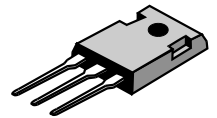
Schottky Barrier Rectifiers

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 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

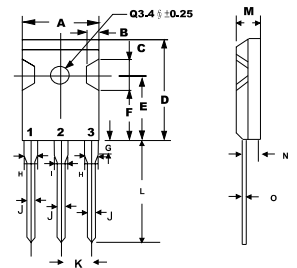
**50 AMPERES
90 -- 100 VOLTS**



TO-247 (3P)

MAXIMUM RATINGS

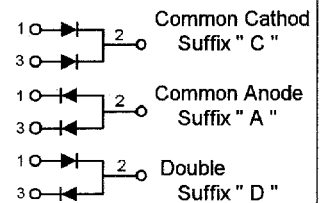
Characteristic	Symbol	S50D90	S50D100	Unit
Peak Repetitive Reverse Voltage	V_{RRM}			
Working Peak Reverse Voltage	V_{RWM}	90	100	V
DC Blocking Voltage	V_R			
RMS Reverse Voltage	$V_{R(RMS)}$	63	70	V
Average Rectifier Forward Current	$I_{F(AV)}$	25		A
Total Device		50		
Peak Repetitive Forward Current	I_{FRM}	50		A
(Rate V_R , Square Wave, 20kHz)				
Non-Repetitive Peak Surge Current	I_{FSM}	350		A
(Surge applied at rate load conditions halfware, single phase, 60Hz)				
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	S50D90	S50D100	Unit
Maximum Instantaneous Forward Voltage	V_F			V
($I_F = 25$ Amp, $T_c = 25$ °C)		0.85		
($I_F = 25$ Amp, $T_c = 100$ °C)		0.76		
Maximum Instantaneous Reverse Current	I_R			mA
(Rated DC Voltage, $T_c = 25$ °C)		5.0		
(Rated DC Voltage, $T_c = 125$ °C)		150		



S50D90 , S50D100

FIG-1 FORWARD CURRENT DERATING CURVE

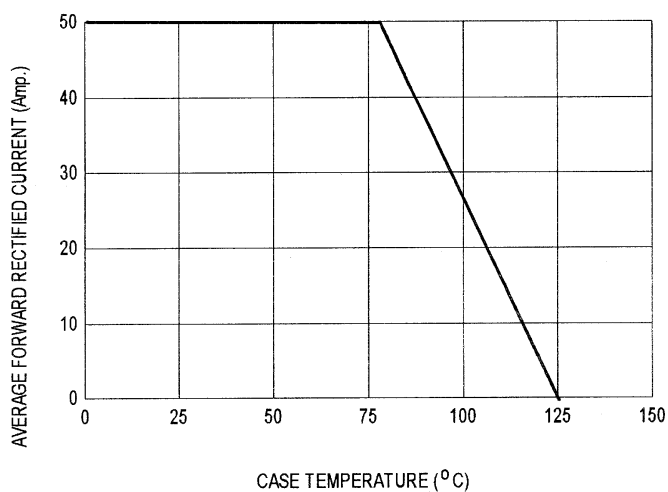


FIG-2 TYPICAL FORWARD CHARACTERISTICS

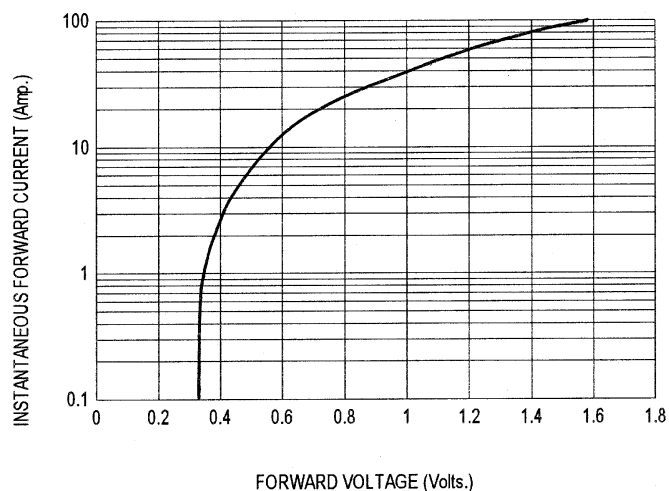


FIG-3 TYPICAL REVERSE CHARACTERISTICS

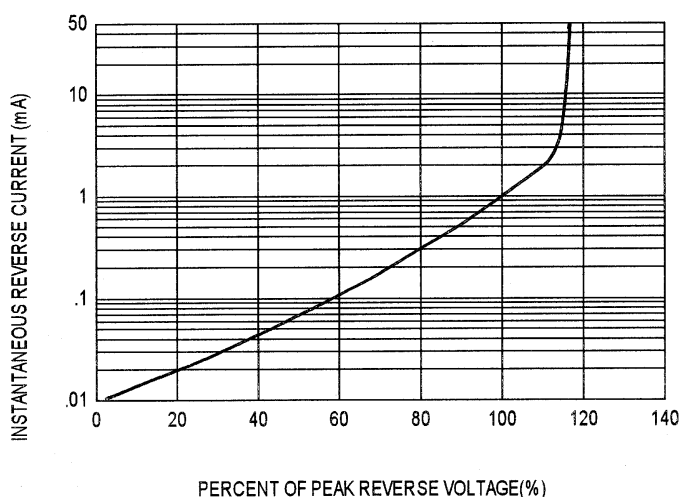


FIG-4 TYPICAL JUNCTION CAPACITANCE

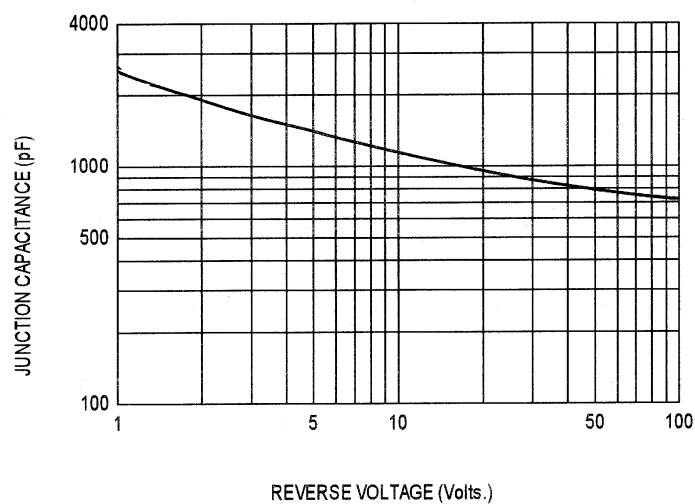


FIG-5 PEAK FORWARD SURGE CURRENT

