



# S60D90 Thru S60D100

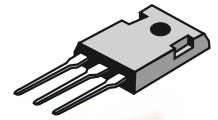
## Schottky Barrier Rectifiers

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

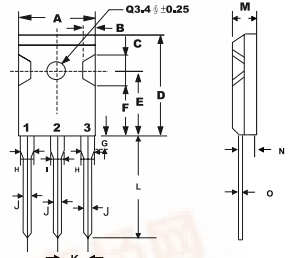
**60 AMPERES  
90 -- 100 VOLTS**



TO-247 (3P)

### MAXIMUM RATINGS

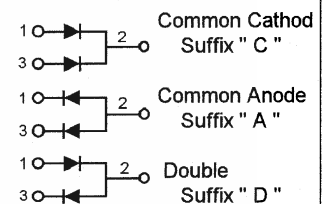
Characteristic	Symbol	S60D90	S60D100	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$			V
Working Peak Reverse Voltage	$V_{RWM}$	90	100	V
DC Blocking Voltage	$V_R$			V
RMS Reverse Voltage	$V_{R(RMS)}$	63	70	V
Average Rectifier Forward Current	$I_{F(AV)}$		30	A
Total Device			60	A
Peak Repetitive Forward Current ( Rate $V_R$ , Square Wave, 20kHz )	$I_{FRM}$		60	A
Non-Repetitive Peak Surge Current ( Surge applied at rate load conditions halfware, single phase, 60Hz )	$I_{FSM}$		450	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	S60D90	S60D100	Unit
Maximum Instantaneous Forward Voltage ( $I_F = 30$ Amp, $T_C = 25$ °C ) ( $I_F = 30$ Amp, $T_C = 100$ °C )	$V_F$	0.90 0.78		V
Maximum Instantaneous Reverse Current ( Rated DC Voltage, $T_C = 25$ °C ) ( Rated DC Voltage, $T_C = 100$ °C )	$I_R$	20 200		mA



# S60D90 , S60D100

FIG-1 FORWARD CURRENT DERATING CURVE

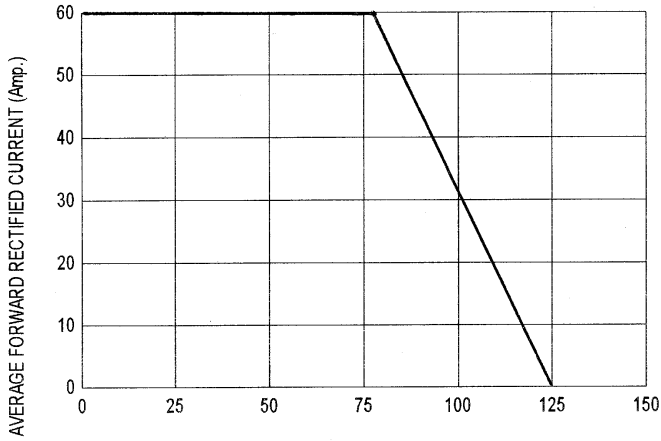
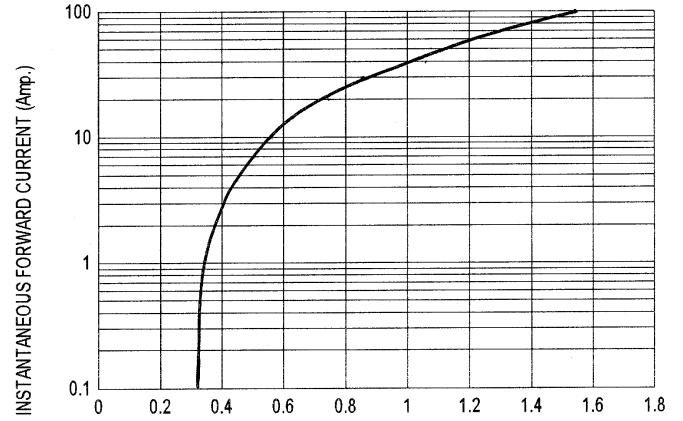
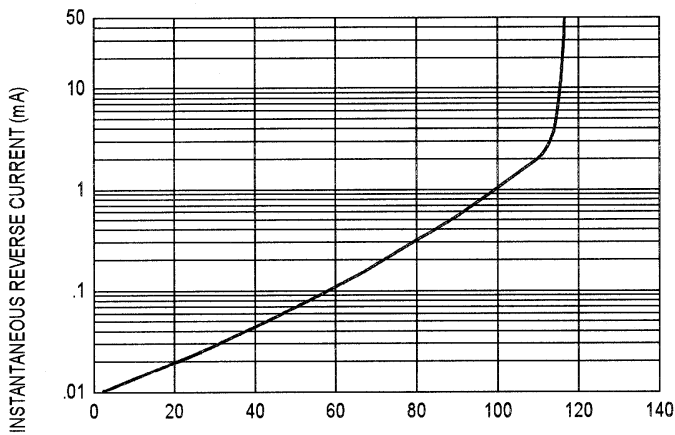


FIG-2 TYPICAL FORWARD CHARACTERISTICS



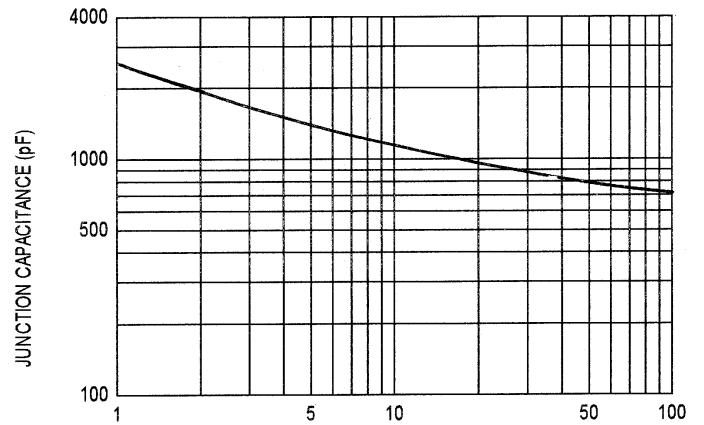
CASE TEMPERATURE (°C)

FIG-3 TYPICAL REVERSE CHARACTERISTICS



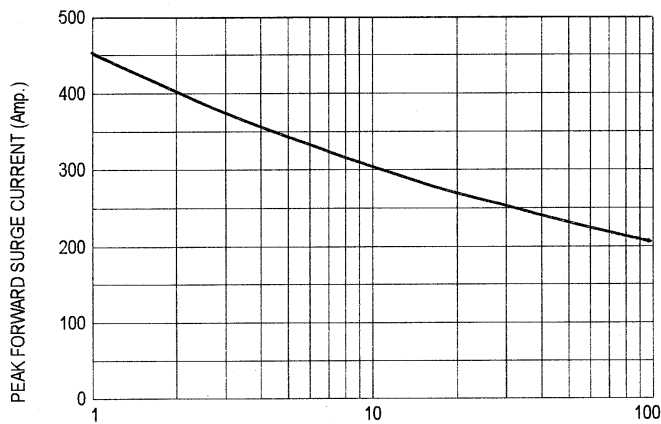
FORWARD VOLTAGE (Volts.)

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