

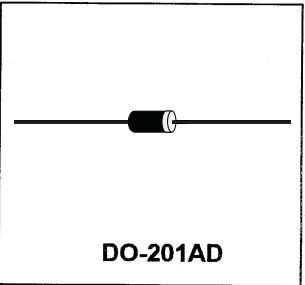
### Schottky Barrier Rectifiers

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

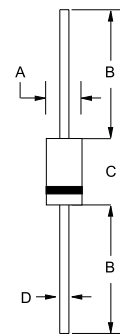
#### SCHOTTKY BARRIER RECTIFIERS

**3.0 AMPERES  
20-40 VOLTS**



#### MAXIMUM RATINGS

Characteristic	Symbol	1N5820	1N5821	1N5822	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	20	30	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectifier Forward Current	$I_o$	3.0			A
Non-Repetitive Peak Surge Current ( Surge applied at rate load conditions halfware, single phase, 60Hz )	$I_{FSM}$	80			A
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	- 65 to + 125			°C



DIM	MILLMETERS	
	MIN	MAX
A	5.00	5.60
B	25.40	—
C	8.50	9.50
D	1.20	1.30

#### ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	1N5820	1N5821	1N5822	Unit
Maximum Instantaneous Forward Voltage ( $I_F=3.0$ Amp ) ( $I_F=9.0$ Amp )	$V_F$	0.475 0.850	0.500 0.900	0.525 0.950	V
Maximum Instantaneous Reverse Current ( Rated DC Voltage, $T_C = 25$ °C ) ( Rated DC Voltage, $T_C = 100$ °C )	$I_R$	2.0 20			mA
Typical Junction Capacitance ( Reverse Voltage of 4 volts & $f=1$ MHz)	$C_p$	220			pF

CASE---  
Transfer molded plastic

POLARITY---  
Cathode indicated polarity band

FIG-1 FORWARD CURRENT DERATING CURVE

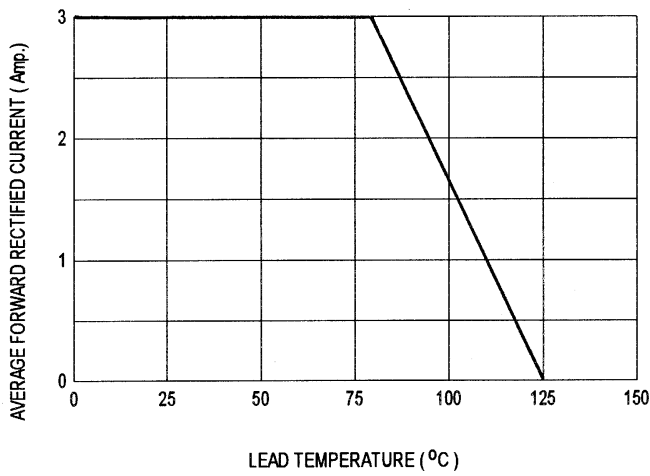


FIG-2 TYPICAL FORWARD CHARACTERISTICS

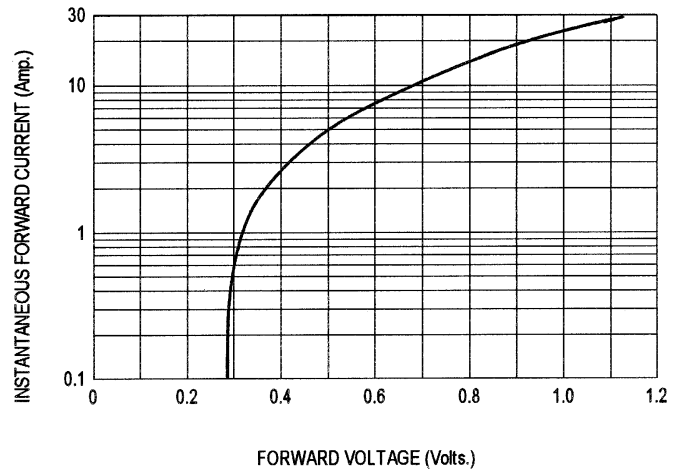


FIG-3 TYPICAL REVERSE CHARACTERISTICS

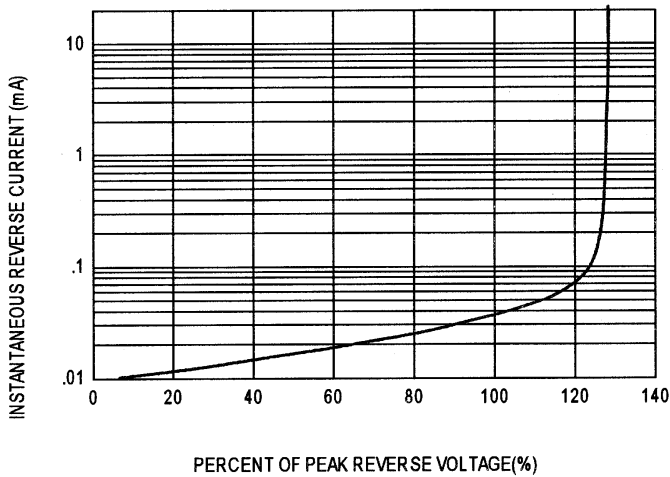


FIG-4 TYPICAL JUNCTION CAPACITANCE

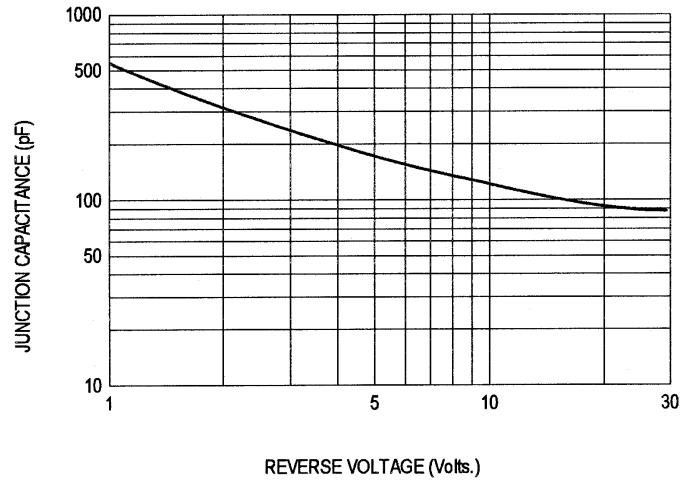
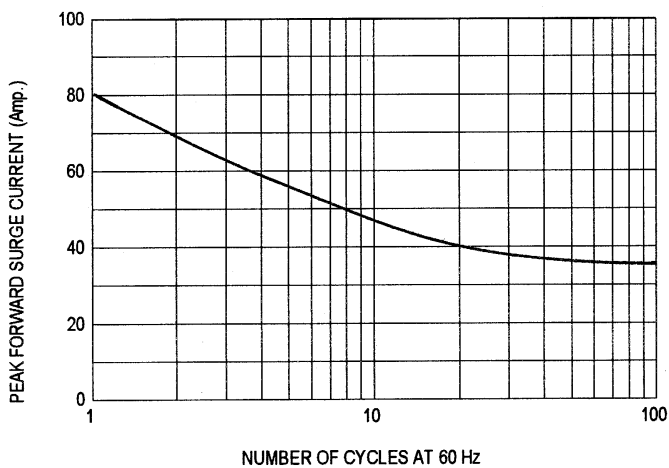


FIG-5 PEAK FORWARD SURGE CURRENT



# 1N5821, 1N5822

FIG-1 FORWARD CURRENT DERATING CURVE

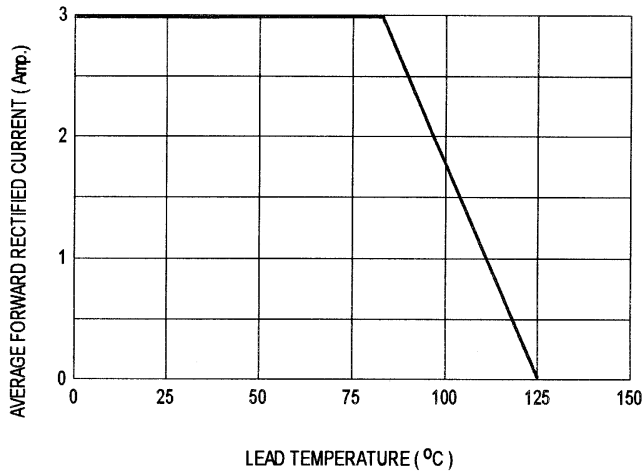


FIG-2 TYPICAL FORWARD CHARACTERISTICS

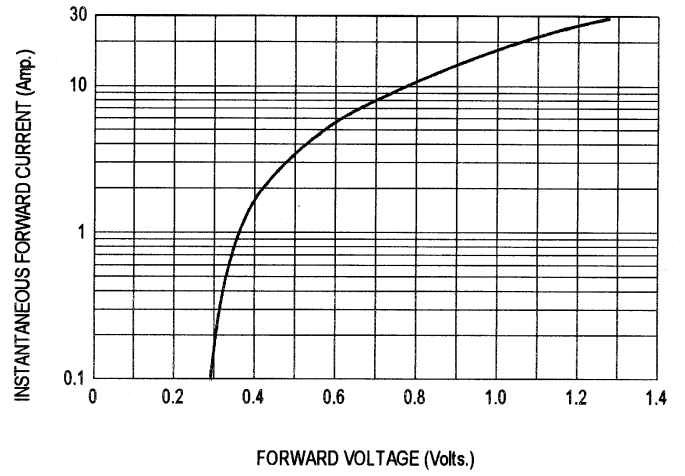


FIG-3 TYPICAL REVERSE CHARACTERISTICS

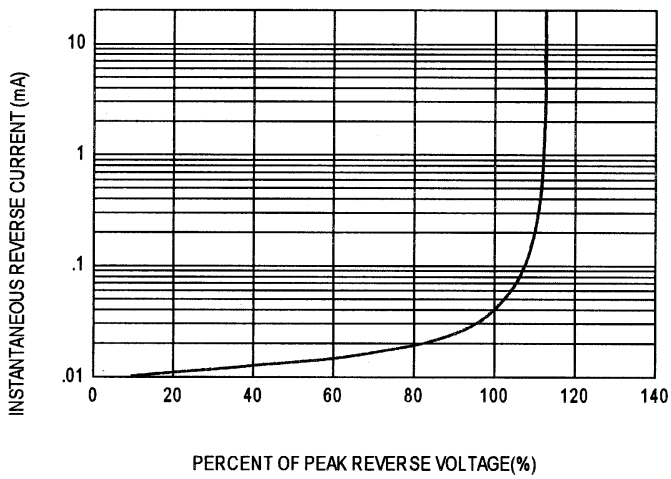


FIG-4 TYPICAL JUNCTION CAPACITANCE

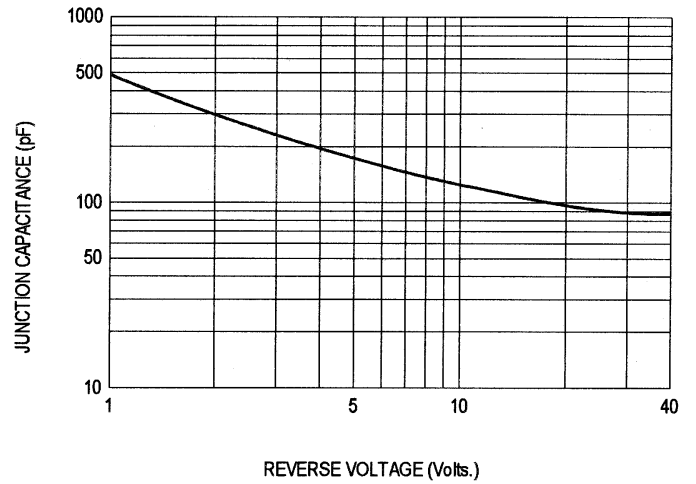
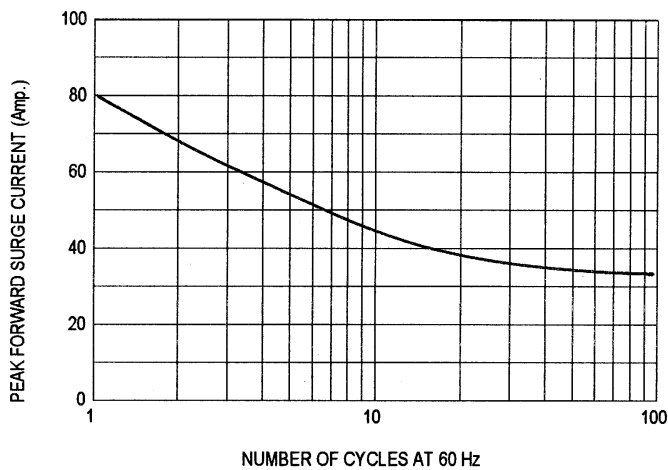


FIG-5 PEAK FORWARD SURGE CURRENT



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