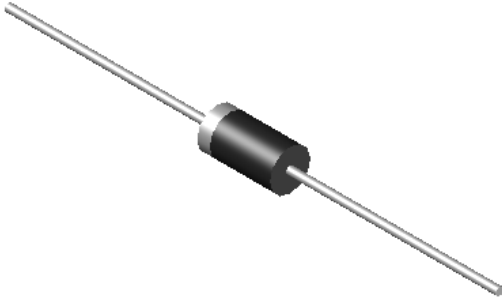


## Schottky Barrier Rectifier

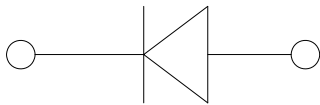


### Features

- Guardring for overvoltage protection
- Very small conduction losses
- Extremely fast switching
- High forward surge capability
- High frequency operation
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.



### Mechanical Data

- **Package:** DO-201AD(DO-27)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes the cathode end

### ■ Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	1N5820	1N5821	1N5822
Device marking code			1N5820	1N5821	1N5822
Repetitive Peak Reverse Voltage	VRRM	V	20	30	40
Average Rectified Output Current @60Hz sine wave, Resistance load, T <sub>a</sub> (FIG.1)	I <sub>O</sub>	A	3.0		
Surge(Non-repetitive)Forward Current @ 60Hz Half-sine wave, 1 cycle, T <sub>a</sub> =25°C	I <sub>FSM</sub>	A	80		
Storage Temperature	T <sub>stg</sub>	°C	-55 ~+150		
Junction Temperature	T <sub>j</sub>	°C	-55 ~+125		

### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	1N5820	1N5821	1N5822
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	IFM=3.0A	0.475	0.5	0.525
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>R</sub>	mA	T <sub>a</sub> =25°C	0.2		
			T <sub>a</sub> =100°C	20		
Typical junction capacitance	C <sub>j</sub>	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	200		



# 1N5820 THRU 1N5822

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	1N5820	1N5821	1N5822
Thermal Resistance	R <sub>θJ-A</sub>	°C/W	25		

## ■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
1N5820~1N5822	D1	Approximate 0.950	1250	1250	12500	Tape
1N5820~1N5822	C1	Approximate 0.950	250	250	12500	Bulk

## ■ Characteristics(Typical)

FIG.1: I<sub>o</sub>-T<sub>a</sub> Curve

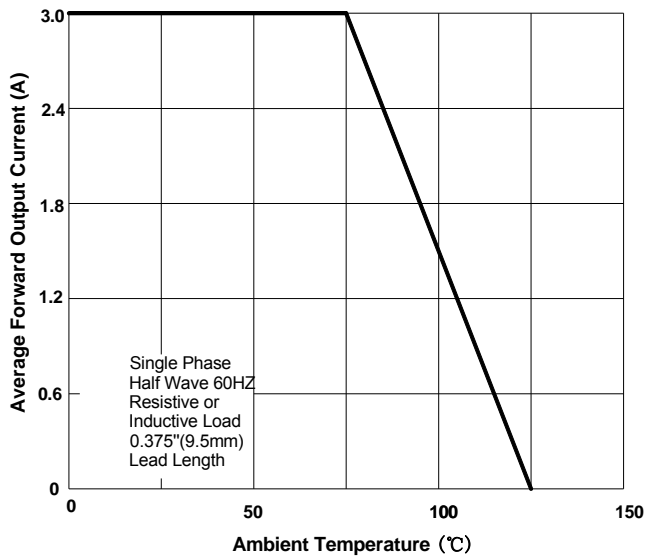


FIG.2: Surge Forward Current Capability

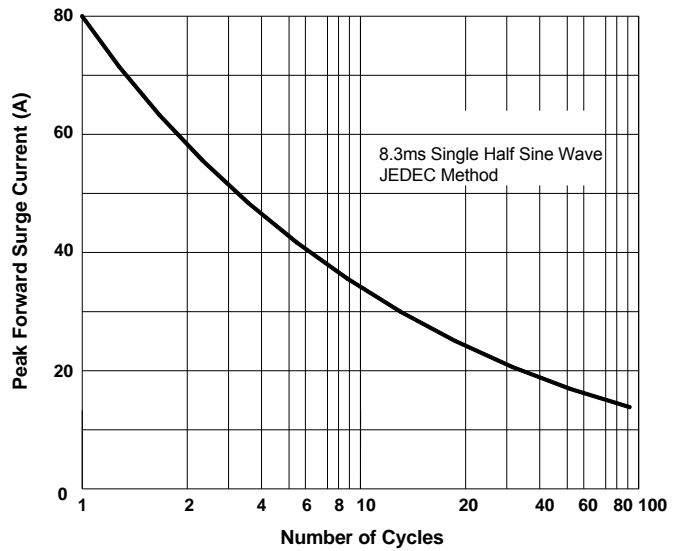


FIG.3: Forward Voltage

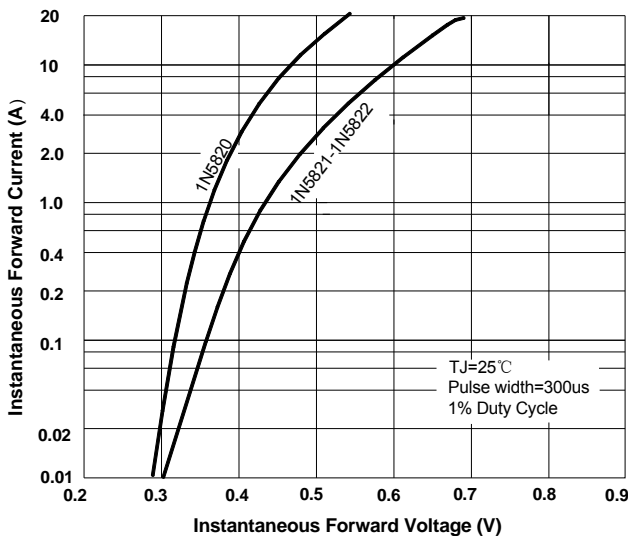
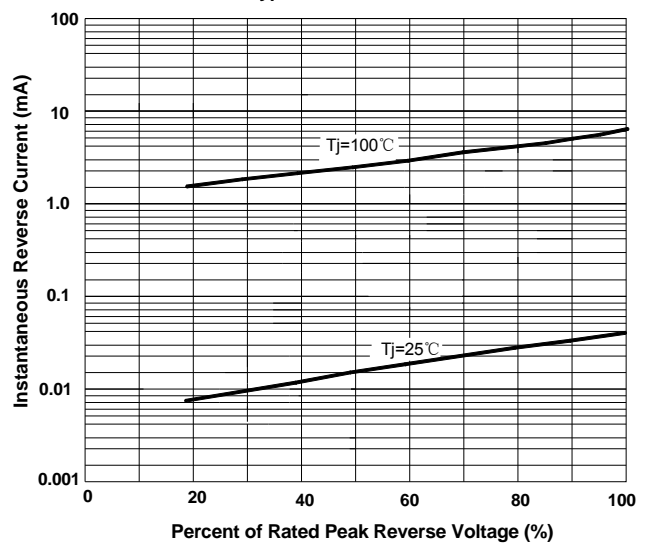
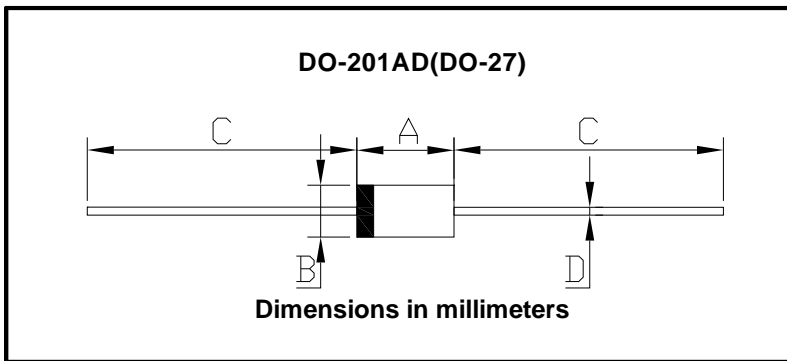


FIG.4: Typical Reverse Characteristics





## ■ Outline Dimensions



DO-201AD(DO-27)		
Dim	Min	Max
A	8.50	9.50
B	5.00	5.60
C	25.4	/
D	1.20	1.30



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