

1N5820 THRU 1N5822

Schottky Barrier Rectifier

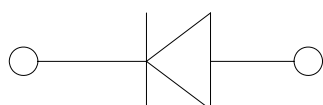


Features

- Guardring for overvoltage protection
- Low power loss
- Extremely fast switching
- High forward surge capability
- High frequency operation
- Solder dip 275°C max. 7s, per JESD22-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 (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	1N5820	1N5821	1N5822
Device marking code			1N5820	1N5821	1N5822
Repetitive Peak Reverse Voltage	V _{RRM}	V	20	30	40
Average Rectified Output Current @ 60 Hz sine wave, Resistive load, Ta (FIG. 1)	I _O	A	3.0		
Forward Surge Current (Non-repetitive) @ 60 Hz Half-sine wave, 1 cycle, Ta=25°C	I _{FSM}	A	80		
Storage Temperature	T _{stg}	°C	-55 ~ +150		
Junction Temperature	T _j	°C	-55 ~ +125		

■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	1N5820	1N5821	1N5822
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =3.0A	0.475	0.5	0.525
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	mA	Ta=25°C	0.2		
			Ta=100°C	20		
Typical junction capacitance	C _j	pF	Measured at 1 MHz and Applied Reverse Voltage of 4.0 V.D.C.	180		

Note 1: Pulse test: 300 μs pulse width, 1% duty cycle

Note 2: Pulse test: pulse width 40 ms

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■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	1N5820	1N5821	1N5822
ThermalResistance	R _{θJ-A}	°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_o-T_a Curve

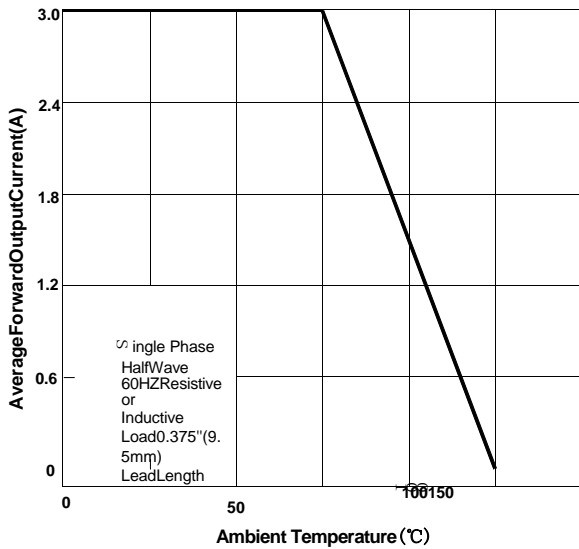


FIG.2: Forward Surge Current Capability

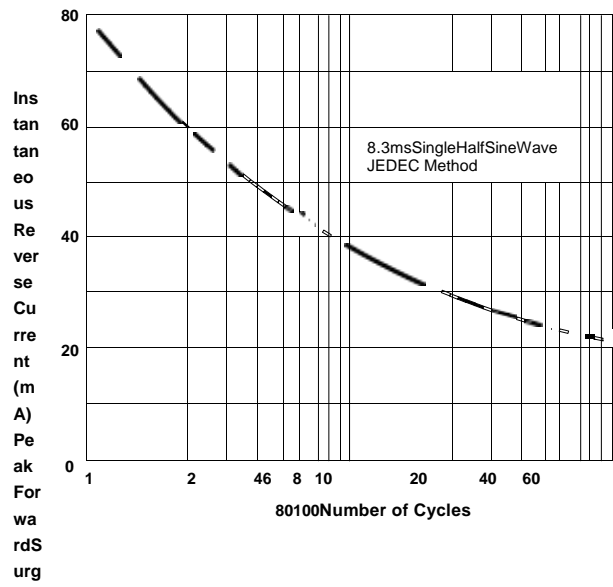


FIG.3: Forward Voltage

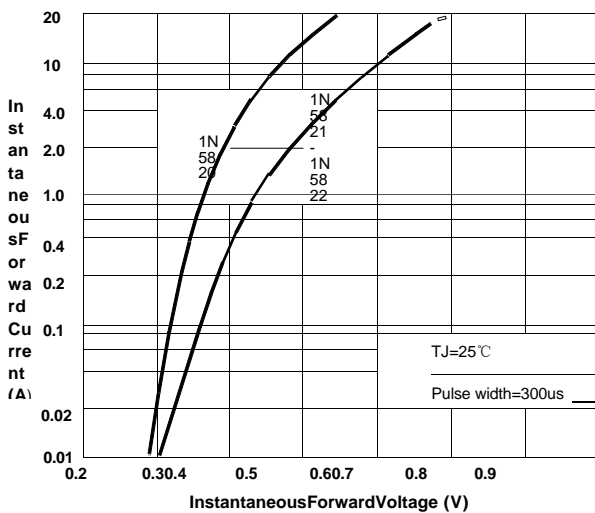
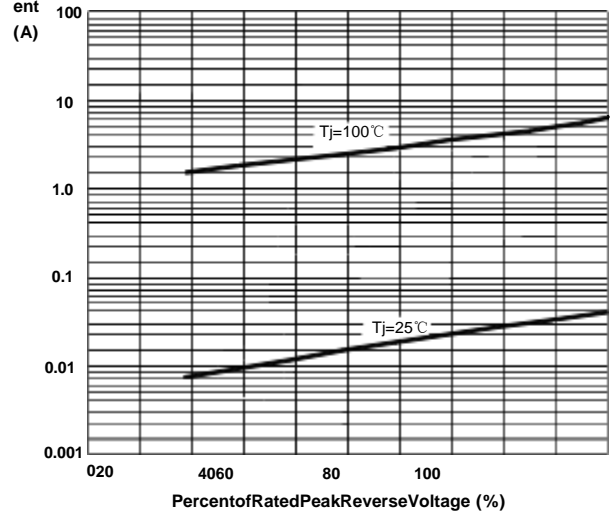
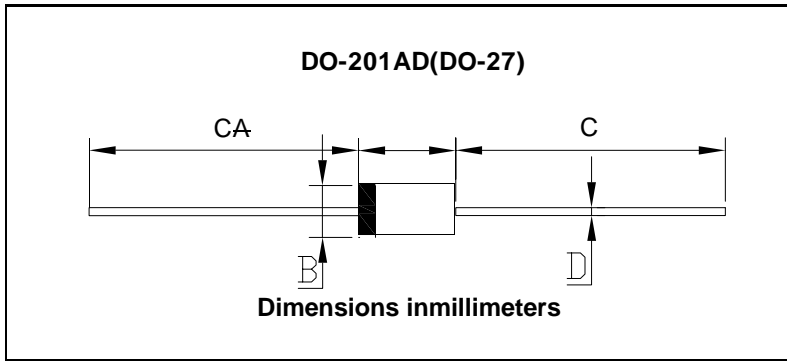


FIG.4: Typical Reverse Characteristics



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■ OutlineDimensions



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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