

3A,20-40V Schottky Barrier Rectifiers

Features

- Low leakage current
- Schottky barrier diodes
- Low forward voltage drop
- For general purpose applications
- Moisture sensitivity: level 1, per J-STD-020
- For fast switching and low logic level applications
- High temperature soldering guaranteed: 260°C/10 seconds



DO-201AD

Applications

- Small battery charger, Power supplies

Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)					
Parameter	Symbol	1N5820	1N5821	1N5822	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	V
Maximum RMS voltage	V _{RMS}	14	21	28	V
Maximum DC blocking voltage	V _{DC}	20	30	40	V
Maximum average forward rectified current	I _{F(AV)}	3			A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	60			A
Operating junction temperature range	T _J	-55 to +125			°C
Storage temperature range	T _{STG}	-55 to +150			°C

Thermal-Mechanical Specifications (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{θJA}	40	°C/W
Thermal Resistance, Junction to Case	R _{θJC}	23	°C/W
Thermal Resistance, Junction to Lead	R _{θJL}	18	°C/W

Electrical Specifications ($T_A=25^{\circ}\text{C}$ unless otherwise noted)						
Parameter	Symbol	Test Conditions	1N5820	1N5821	1N5822	Unit
Forward Drop Voltage	V_F	$I_F=3\text{A}$	0.45	0.50	0.525	V
Reverse leakage current @ V_R	I_R	$T_J=25^{\circ}\text{C}$	2			mA
		$T_J=100^{\circ}\text{C}$	20			
Typical junction capacitance	C_J	4.0 V 1 MHz	250			pF

Note:

1. Valid provided that leads at a distance of 9.5 mm from case are kept at ambient temperature.

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG.1-MAXIMUM FORWARD CURRENT DERATING CURVE

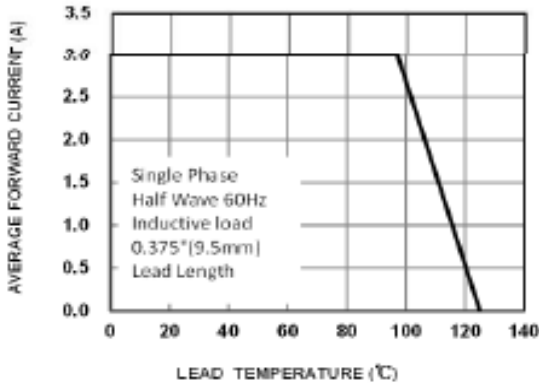


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

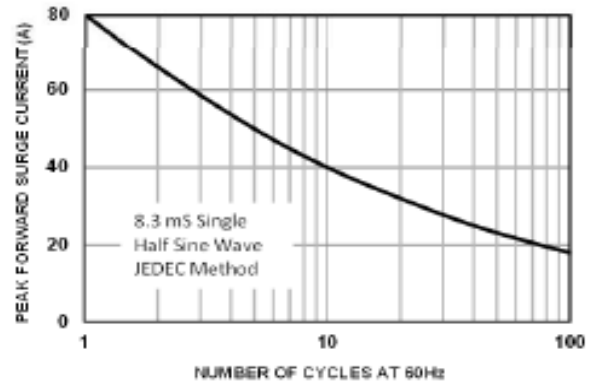


FIG.3-TYPICAL FORWARD CHARACTERISTICS

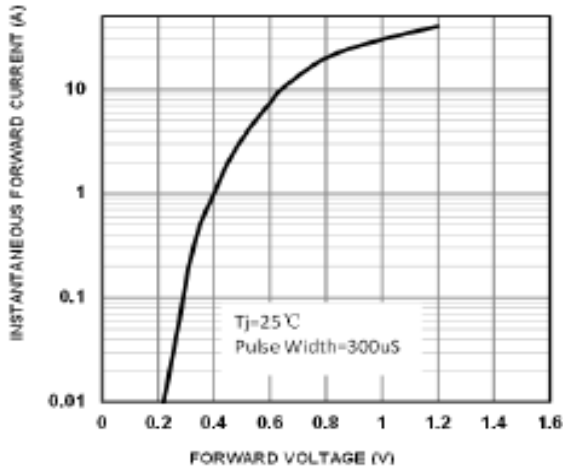


FIG.4-TYPICAL JUNCTION CAPACITANCE

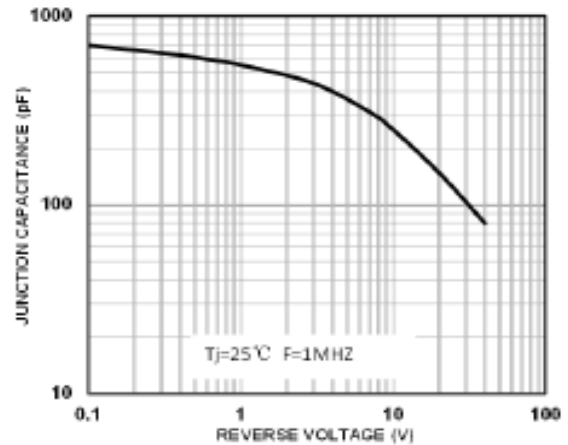
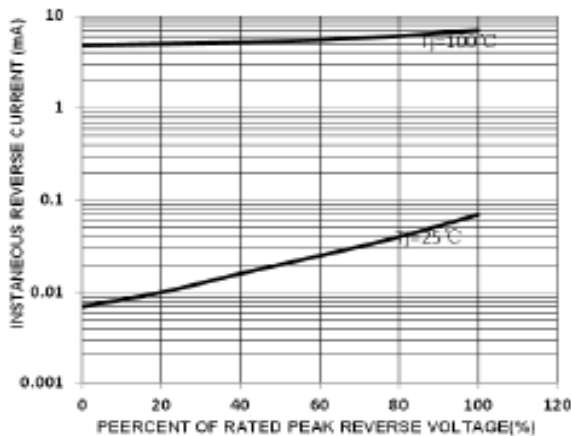


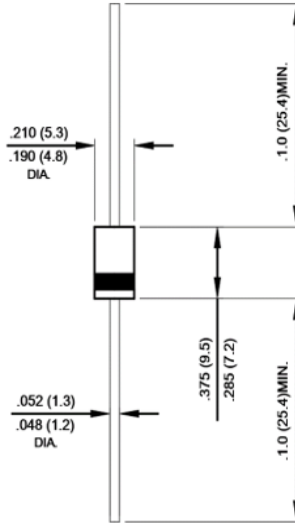
FIG.5-TYPICAL REVERSE CHARACTERISTICS



Package Outline Dimensions

in inches (millimeters)

DO-201AD



Dimensions in inches and (millimeters)

Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.11.13	Modify document format

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