

## 3A, 20V - 40V Schottky Barrier Rectifiers

### FEATURES

- Low forward voltage drop
- Guardring for overvoltage protection
- High surge current capability
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

### MECHANICAL DATA

**Case:** DO-201AD

Molding compound, UL flammability classification rating 94V-0

Part no. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

**Terminal:** Pure tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

**Polarity:** Indicated by cathode band

**Weight:** 1.10g (approximately)



**DO-201AD**



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)					
PARAMETER	SYMBOL	1N5820	1N5821	1N5822	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	V
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	3			A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	70			A
Maximum instantaneous forward voltage (Note 1) @ 3 A	V <sub>F</sub>	0.475	0.500	0.525	V
Maximum reverse current @ rated V <sub>R</sub> T <sub>J</sub> =25°C T <sub>J</sub> =100°C	I <sub>R</sub>	0.5 10			mA
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	200			pF
Typical thermal resistance	R <sub>θJA</sub>	40			°C/W
Operating junction temperature range	T <sub>J</sub>	- 55 to +125			°C
Storage temperature range	T <sub>STG</sub>	- 55 to +125			°C

Note 1: Pulse test with PW=300 μs, 1% duty cycle

Note 2: Measure at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
1N582x (Note 1)	H	A0	G	DO-201AD	500 / Ammo box
		R0		DO-201AD	1,250 / 13" Paper reel
		B0		DO-201AD	500 / Bulk packing
		X0		DO-201AD	Forming

Note 1: "x" defines voltage from 20V (1N5820) to 40V (1N5822)

\*: Optional available

EXAMPLE					
PREFERRED P/N	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
1N5820HA0G	1N5820	H	A0	G	AEC-Q101 qualified Green compound

## RATINGS AND CHARACTERISTICS CURVES

(T<sub>A</sub>=25°C unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

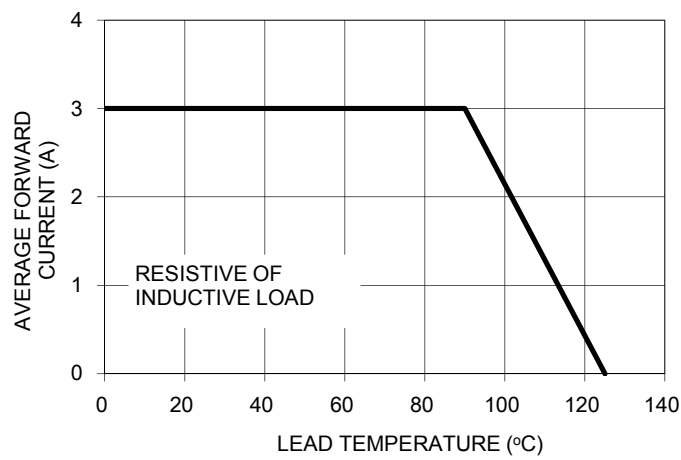


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

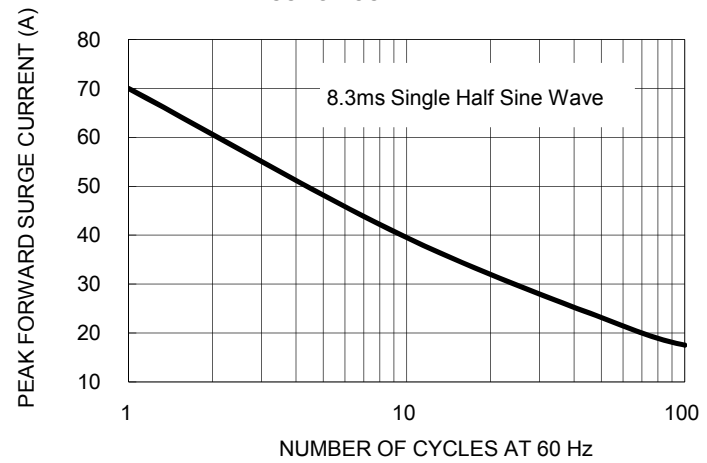


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

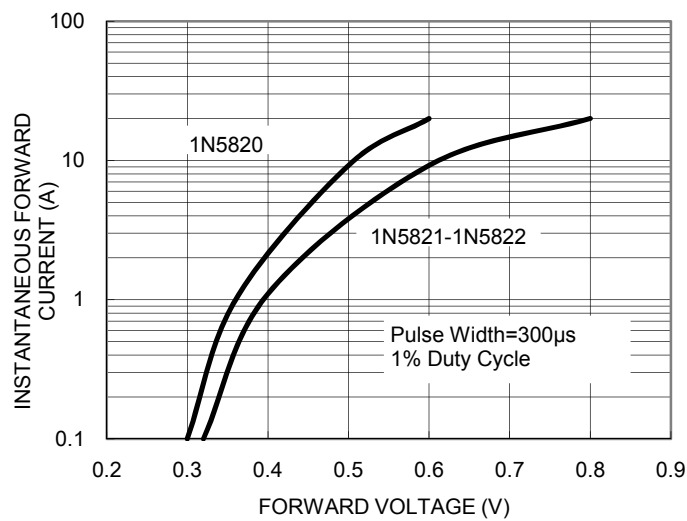


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

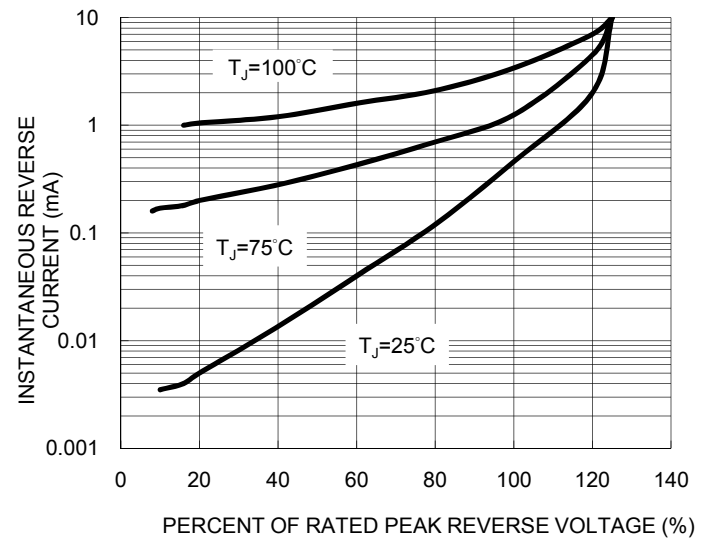


FIG. 5- TYPICAL JUNCTION CAPACITANCE

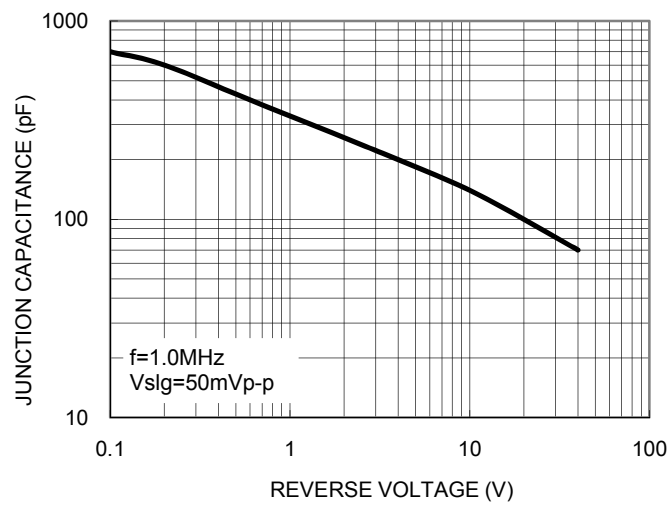
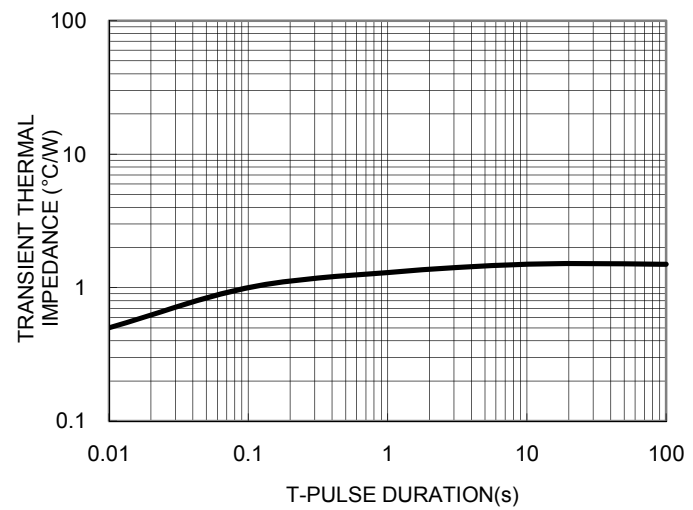
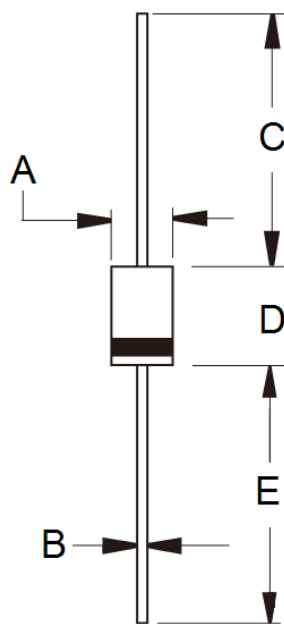


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE



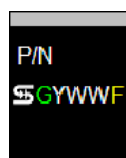
## DIMENSIONS

### DO-201AD



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	5.00	5.60	0.197	0.220
B	1.20	1.30	0.048	0.052
C	25.40	-	1.000	-
D	8.50	9.50	0.335	0.375
E	25.40	-	1.000	-

## MARKING DIAGRAM



P/N = Specific Device Code  
G = Green Compound  
YWW = Date Code  
F = Factory Code

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