

1N5820 thru 1N5822

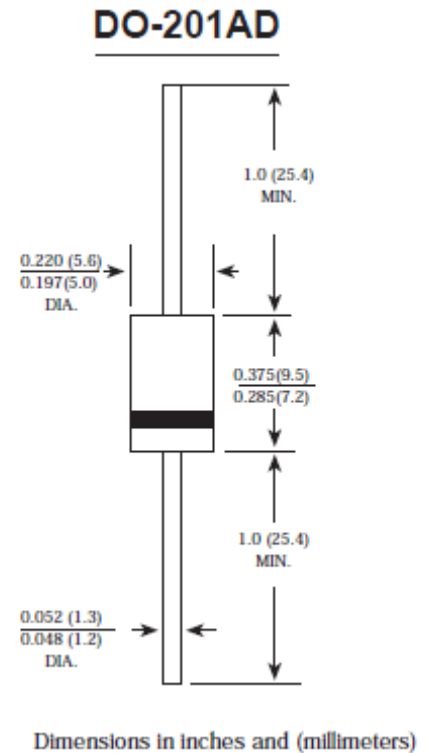
Schottky Barrier Rectifier

◆ Features

- » Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- » Metal silicon junction, majority carrier conduction
- » Guardring for overvoltage protection
- » Low power loss, high efficiency
- » High current capability, low forward voltage drop
- » High surge capability
- » For use in low voltage, high frequency inverters, Free wheeling, and polarity protection applications
- » High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

◆ Mechanical Data

- » **Case:** DO-201AD molded plastic body
- » **Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026
- » **Polarity:** Color band denotes cathode end
- » **Mounting Position:** Any
- » **Weight:** 1.10 grams
- » **Standard Package:** Ammopack



PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	3.0 A
V_{RRM}	20 V to 40 V
I_{FSM} (8.3 ms sine-wave)	80 A
I_R	2.0 μ A
T_J max.	125 °C

◆ Electrical Characteristic

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

PARAMETER	SYMBOL	1N5820	1N5821	1N5822	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	VOLTS
Maximum RMS voltage	V _{RMS}	14	21	28	VOLTS
Maximum DC blocking voltage	V _{DC}	20	30	40	VOLTS
Maximum average forward rectified current 0.375"(9.5mm) lead length at T _L =95°C	I (AV)	3.0			Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	80.0			Amps
Maximum instantaneous forward voltage at 3.0A	V _F	0.475	0.500	0.525	Volts
Maximum DC reverse current at rated DC blocking voltage	I _R	2.0 40.0			mA
Typical junction capacitance (NOTE 1)	C _J	300.0			pF
Typical thermal resistance (NOTE 2)	R _{qJA}	40.0			°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +125			°C

Note:1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2.Thermal resistance from junction to ambient at 0.375" (9.5mm)lead length,P.C.B. mounted

◆ Rating And Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

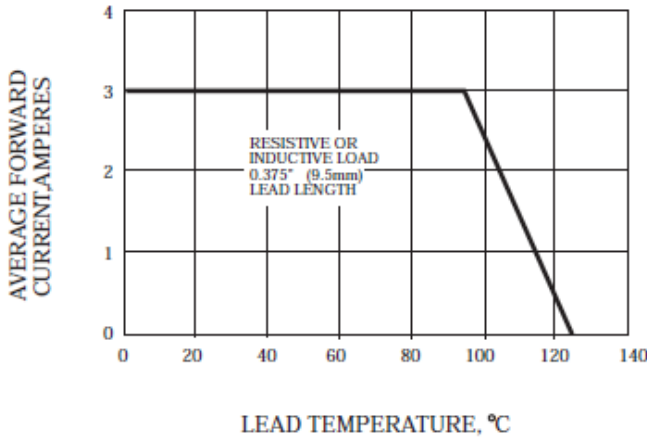


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

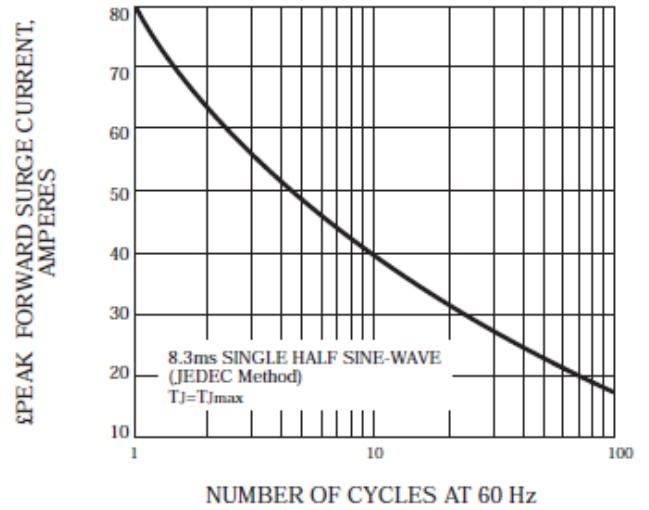


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

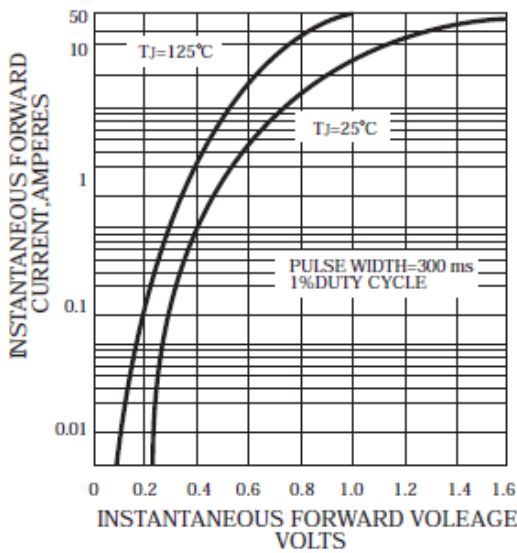


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

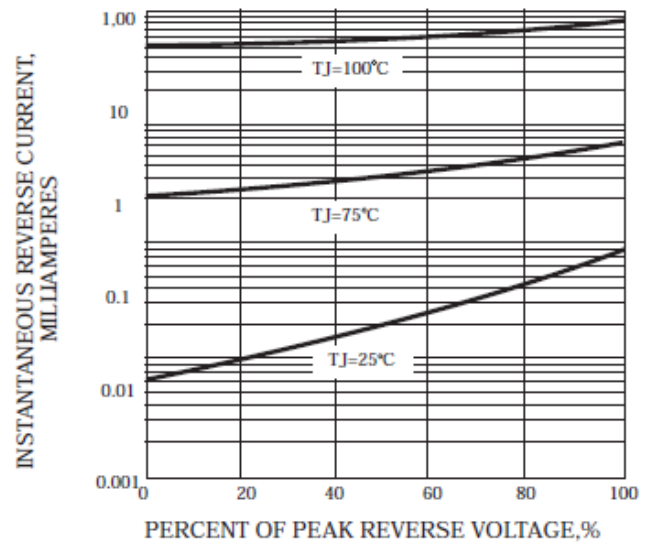


FIG. 5-TYPICAL JUNCTION CAPACITANCE

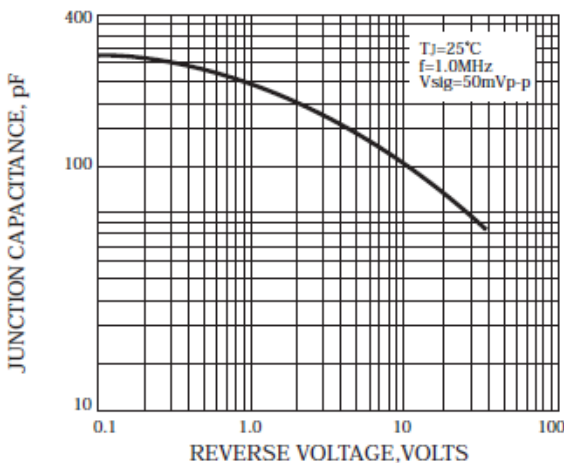


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

