Schottky Rectifier

Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

Mechanical Data:

Case	: Moulded plastic DO-201AD
Lead	: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
Polarity	: Colour band denotes cathode end
High Temperatures Soldering Guaranteed	: 260°C / 10 seconds / 0.375 inches (9.5mm) lead lengths at 5 lbs., (2.3 kg) tension

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

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	
Maximum DC Blocking Voltage	V_{DC}	20	30	40	
Maximum Average Forward Rectified Current 0.375 Inches (9.5 mm) Lead Length at T_L = 90°C	$I_{(AV)}$	3			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	80			
Maximum Instantaneous Forward Voltage at 3A	V_F	0.475	0.5	0.525	V
Maximum Instantaneous Forward Voltage at 9A		0.85	0.9	0.95	
Maximum DC Reverse Current at T_A = 25°C at Rated DC Blocking Voltage at T_A = 100°C	I_R	2 20			mA
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	40			°C/W
Typical Junction Capacitance (Note 2)	C_J	200			pF
Operating Temperature Range	T_J	-65 to + 125			°C
Storage Temperature Range	T_{STG}				

Notes:

1. Mount on Cu-Pad Size 16 × 16 mm on PCB
2. Measured at 1 MHz and applied reverse voltage of 4 V DC

Specification Table

$I_{F(av)}$ Maximum (A)	V_{RRM} Maximum (V)	V_F (V) at I_F = 1A	I_{FSM} (A)	Length	Diameter	Package	Part Number
3	20	0.47	80	9.5	5.6	DO-201AD	1N5820+
	30	0.5					1N5821+
	40	0.52					1N5822+

Dimensions : Millimetres

Ratings and Characteristic Curves

Figure 1 Maximum Forward Current Derating Curve

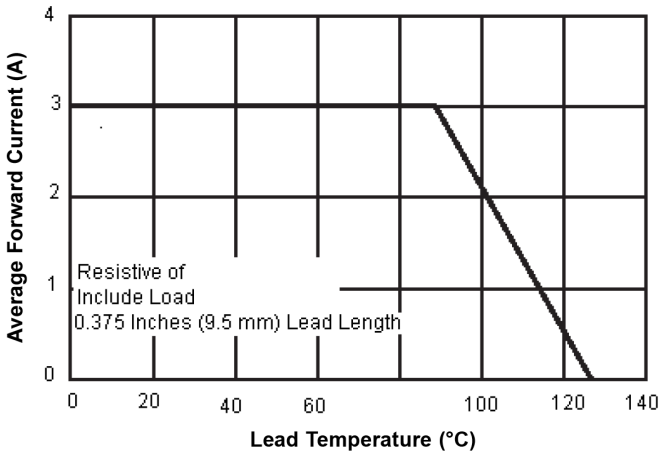


Figure 2 Typical Reverse Characteristics

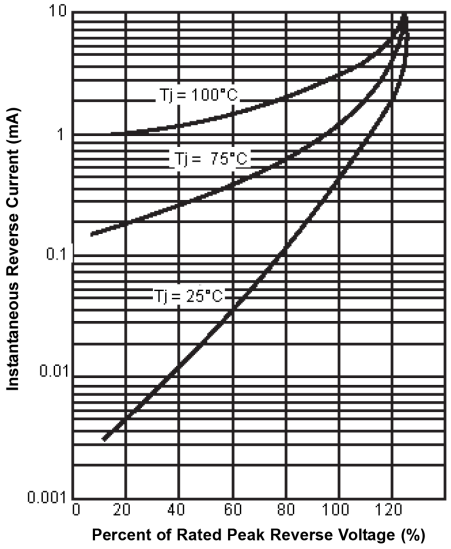


Figure 3 Maximum Non-Repetitive Forward Surge Current

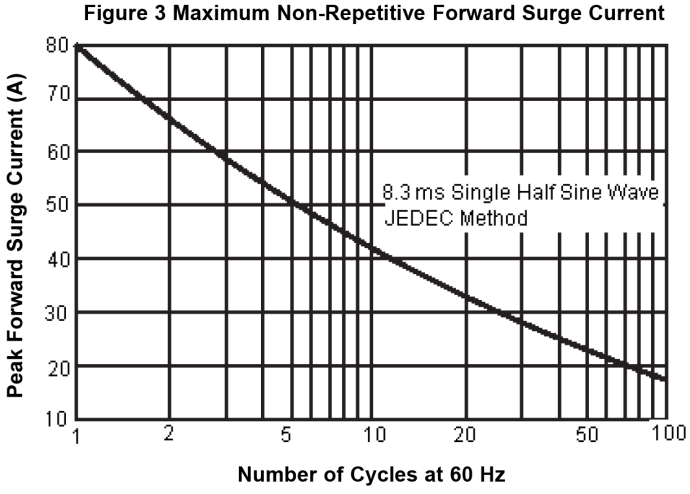


Figure 4 Typical Forward Characteristics

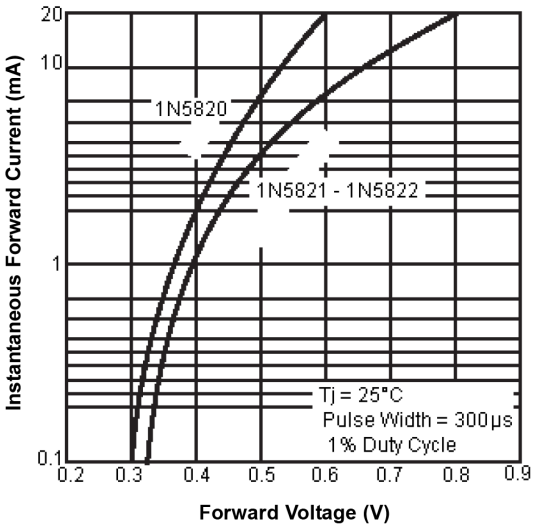
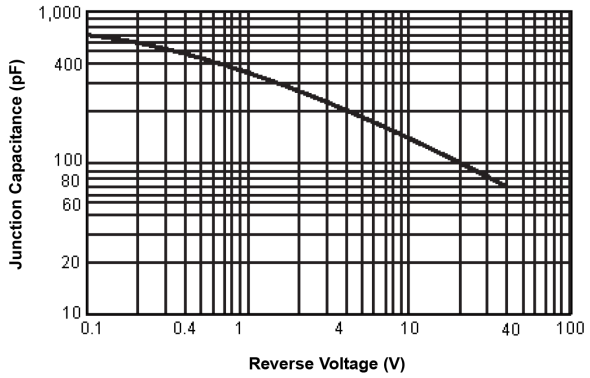
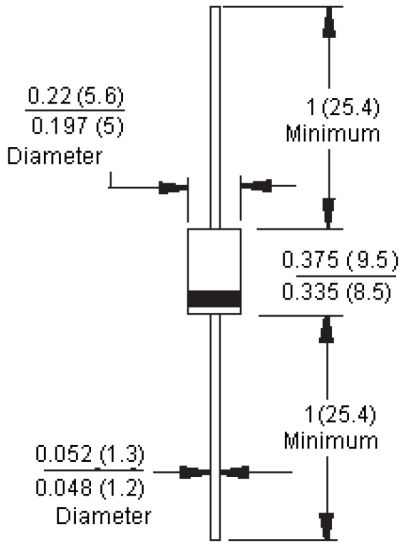


Figure 5 Typical Junction Capacitance



Dimensions:

DO-201AD



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Schottky Rectifier, 20V, 3A	1N5820+
Schottky Rectifier, 30V, 3A	1N5821+
Schottky Rectifier, 40V, 3A	1N5822+