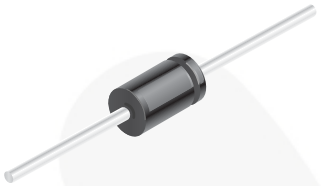
August 2015

1N5401 - 1N5408
General-Purpose Rectifiers

Features

- 3.0 A Operation at T_A = 75°C with No Thermal Runaway
- High Current Capability
- Low Leakage



DO-201AD

COLOR BAND DENOTES CATHODE

Ordering Information

Part Number	Top Mark	Package	Packing Method
1N5401	1N5401	DO-201AD	Tape and Reel
1N5402	1N5402	DO-201AD	Tape and Reel
1N5404	1N5404	DO-201AD	Tape and Reel
1N5406	1N5406	DO-201AD	Tape and Reel
1N5408	1N5408	DO-201AD	Tape and Reel

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value					Unit
		1N5401	1N5402	1N5404	1N5406	1N5408	
V_{RRM}	Maximum Repetitive Reverse Voltage	100	200	400	600	1000	V
$I_{F(AV)}$	Average Rectified Forward Current, .375 " lead length at T_A = 75°	3.0					A
I_{FSM}	Non-Repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	200					A
T_{STG}	Storage Temperature Range	-55 to +150					°C
T_J	Operating Junction Temperature	-55 to +150					°C

Thermal Characteristics

Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	6.25	W
$R_{\theta JA}$	Typical Thermal Resistance, Junction-to-Ambient	20	°C/W

Electrical Characteristics

Values are at T_A = 25°C unless otherwise noted.

Symbol	Parameter	Conditions	Value					Unit
			1N5401	1N5402	1N5404	1N5406	1N5408	
V_F	Forward Voltage	I_F = 3.0 A	1.2					V
I_{rr}	Maximum Full Load Reverse Current, Full Cycle	T_A = 105°C	0.5					mA
I_R	Reverse Current at Rated V_R	T_A = 25°C	5.0					µA
		T_A = 100°C	500					
C_T	Toatal Capacitance	V_R = 4.0 V, f = 1.0 MHz	30					pF

Typical Performance Characteristics

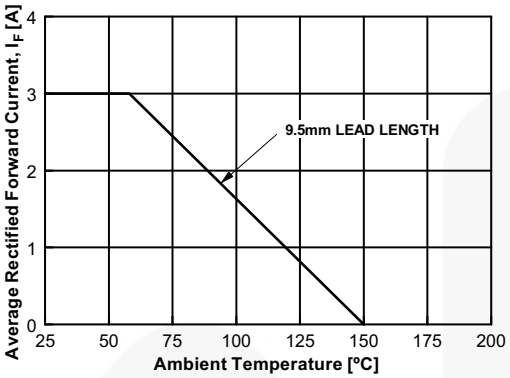


Figure 1. Forward Current Derating Curve

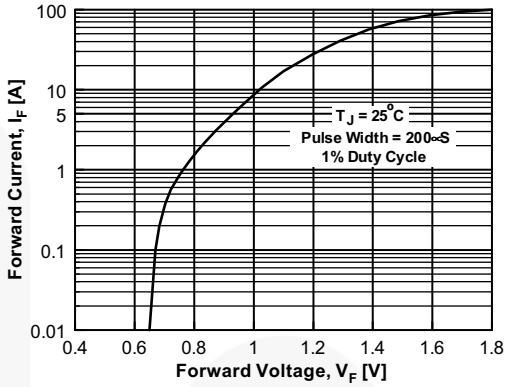


Figure 2. Forward Voltage Characteristics

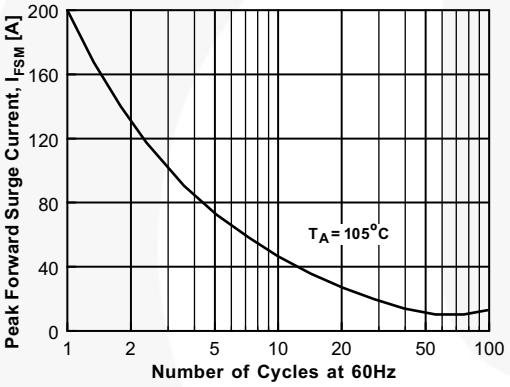


Figure 3. Non-Repetitive Surge Current

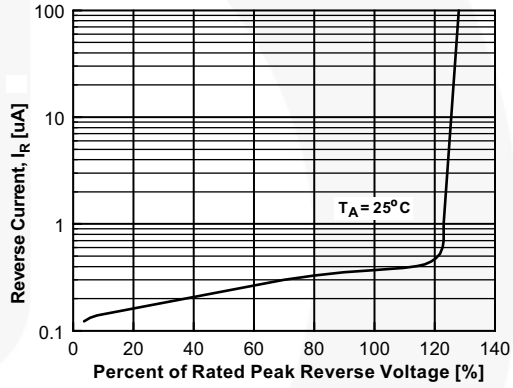


Figure 4. Reverse Current vs. Reverse Voltage

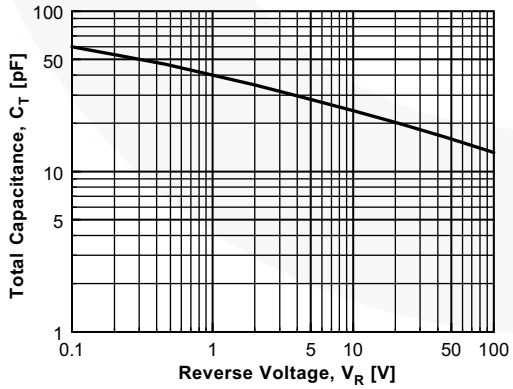
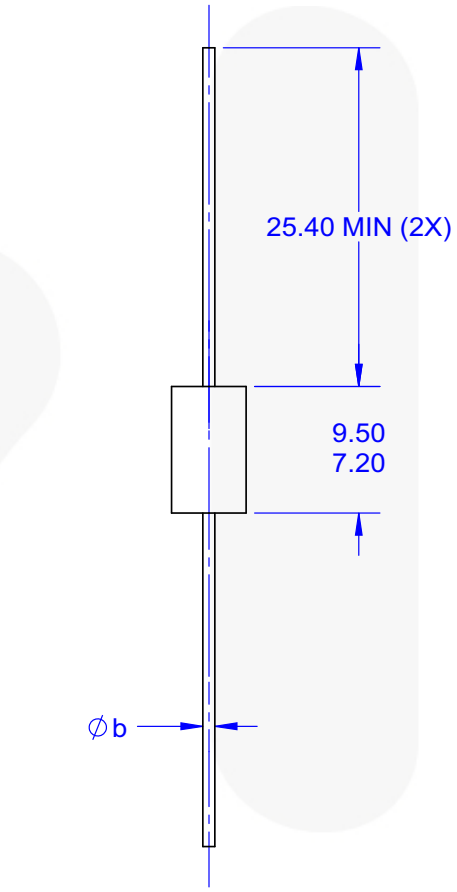
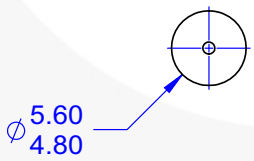


Figure 5. Total Capacitance

Physical Dimensions





NOTES: UNLESS OTHERWISE SPECIFIED

A) PACKAGE STANDARD REFERENCE:
JEDEC DO-201 VARIATION AD.
B) PLASTIC PACKAGE BODY.
D) ALL DIMENSIONS ARE IN MILLIMETERS.
E) ∅b DIMENSION REPRESENT LIKE BELOW:
OPTION AD = 1.20MIN TO 1.30MAX
OPTION AE = 0.94MIN TO 1.07MAX
E) DRAWING FILE NAME: DO201AREV1

Figure 6. AXIAL LEADED, JEDEC DO201, OPTION AD

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Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
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