

Description

The AM01Z is a 200 V, 1.0 A general-purpose rectifier diode with low loss characteristics. This rectifier diode is for a commercial power supply.

Features

•	V_{RM}	200 V
•	$I_{F(AV)}$	- 1.0 A
•	$V_F (I_F = 1.0 \text{ A}) 0.89$	V typ.

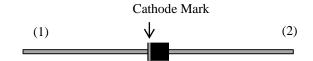
- Bare Leads: Pb-free (RoHS Compliant)
- Flammability: Equivalent to UL94V-0

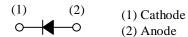
Applications

- Rectification Circuit
- Reverse Protection Circuit

Package

Axial ($\phi 2.4 \times 2.9 L / \phi 0.57$)





Not to scale

Absolute Maximum Ratings

Unless otherwise specified, $T_A = 25$ °C.

Parameter	Symbol	Conditions	Rating	Unit
Nonrepetitive Peak Reverse Voltage	V_{RSM}		250	V
Repetitive Peak Reverse Voltage	V_{RM}		200	V
Average Forward Current	I _{F(AV)}	See Figure 2 and Figure 3	1.0	A
Surge Forward Current	I_{FSM}	Half cycle sine wave, positive side, 10 ms, 1 shot	35	A
I ² t Limiting Value	I ² t	$1 \text{ ms} \le t \le 10 \text{ ms}$	6.125	A^2s
Junction Temperature	$T_{\rm J}$		-40 to 150	°C
Storage Temperature	T_{STG}		-40 to 150	°C

Electrical Characteristics

Unless otherwise specified, $T_A = 25$ °C.

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward Voltage Drop	V_{F}	$I_F = 1.0 A$		0.89	0.98	V
Reverse Leakage Current	I_R	$V_R = V_{RM}$	_	_	10	μA
Reverse Leakage Current under High Temperature	$H \cdot I_R$	$V_R = V_{RM}, T_J = 100 ^{\circ}C$	_		50	μΑ
Thermal Resistance ⁽¹⁾	$R_{\text{th(J-L)}}$	See Figure 1	_	_	22	°C/W

Mechanical Characteristics

Parameter	Conditions	Min.	Тур.	Max.	Unit
Package Weight			0.17	_	g

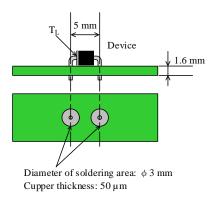
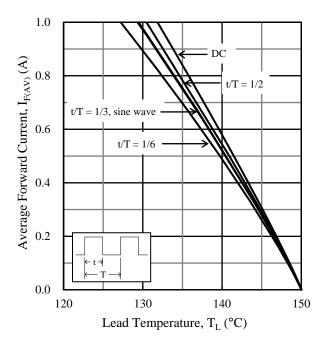
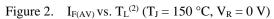


Figure 1. Lead Temperature Measurement Conditions

 $^{^{(1)}}R_{th\,(J-L)}$ is thermal resistance between junction and lead. Lead temperature (T_L) is measured near the root of pin (see Figure 1)

Derating Curves





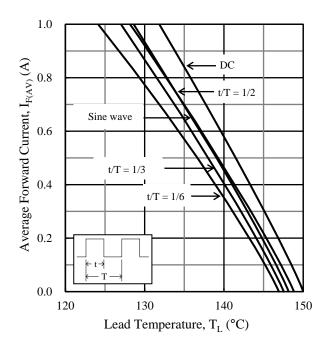


Figure 3. $I_{F(AV)}$ vs. $T_L^{(2)}$ ($T_J = 150$ °C, $V_R = 200$ V)

⁽²⁾ See Figure 1 for the lead temperature measurement conditions.

Characteristic Curves

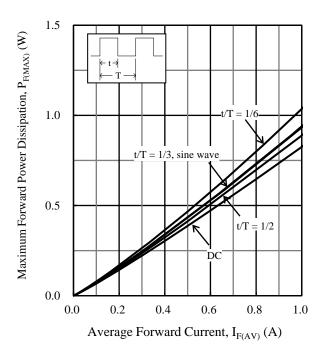


Figure 4. $P_{F(MAX)}$ vs. $I_{F(AV)}$ ($T_J = 150$ °C)

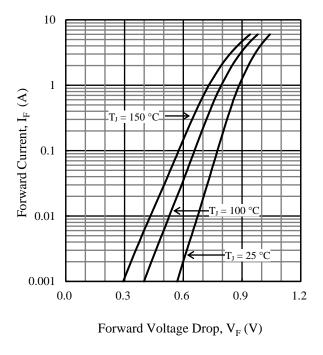


Figure 6. Typical Characteristics: I_F vs. V_F

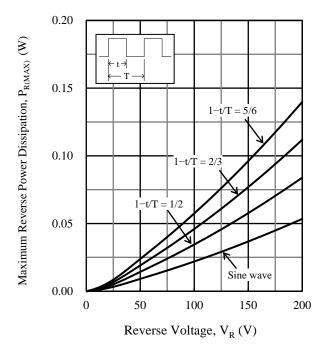


Figure 5. $P_{R(MAX)}$ vs. V_R ($T_J = 150$ °C)

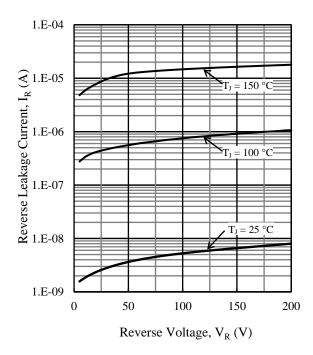


Figure 7. Typical Characteristics: I_R vs. V_R

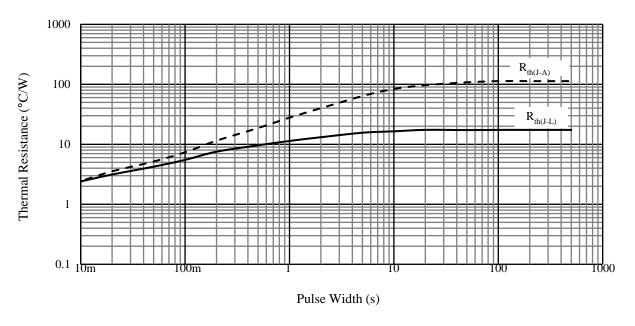
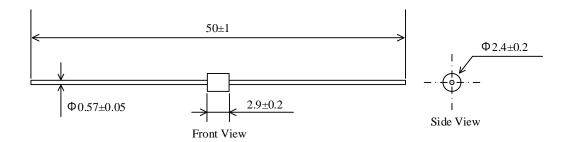


Figure 8. Typical Transient Thermal Resistance Characteristics

Physical Dimensions

• Axial $(\phi 2.4 \times 2.9 L / \phi 0.57)$



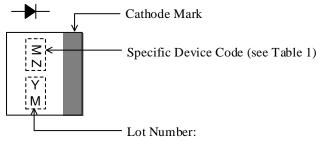
NOTES:

- Dimensions in millimeters
- Bare leads: Pb-free (RoHS compliant)
- When soldering the products, it is required to minimize the working time within the following limits:
- The total length of the product is the dimension when delivered separately and depends on the taping and lead forming specifications.
- The allowance position of body against the center of the total length of the product is 0.5 mm (max.); see Front View.
- The allowance position of lead against the center of body is 0.2 mm (max.); see Side View.
- The burr may exist up to 2 mm from the body of lead root.

Flow: 260 °C / 10 s, 1 time

Soldering Iron: $350 \,^{\circ}\text{C} \,/\, 3.5 \,\text{s}$, 1 time (Soldering should be at a distance of at least 1.5 mm from the body of the product.)

Marking Diagram



Y is the last digit of the year of manufacture (0 to 9) M is the month of the year (1 to 9, O, N or D)

Table 1. Specific Device Code

Specific Device Code	Part Number
MZ	AM01Z

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