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V_{RM} = 600 V, $I_{F(AV)}$ = 1.2 A
General-Purpose Rectifier Diode

EM2A

Data Sheet

Description

The EM2A is a 600 V, 1.2 A general-purpose rectifier diode with low loss characteristics. This rectifier diode is for a commercial power supply.

Features

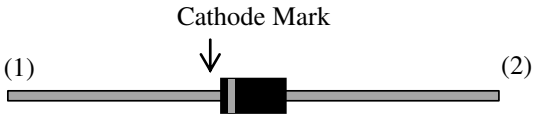
- V_{RM} ---------- 600 V
- $I_{F(AV)}$ ---------- 1.2 A
- V_F (I_F = 1.2 A) ---------- 0.85 V typ.
- Bare Leads: Pb-free (RoHS Compliant)

Applications

- Rectification Circuit
- Reverse Protection Circuit

Package

Axial (φ2.7 × 5.0L / φ0.78)



(1) Cathode
(2) Anode

Not to scale

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Absolute Maximum Ratings

Unless otherwise specified, T_A = 25 °C.

Parameter	Symbol	Rating	Unit	Conditions
Peak Repetitive Reverse Voltage	V_{RSM}	650	V	
Repetitive Reverse Voltage	V_{RM}	600	V	
Average Forward Current	$I_{F(AV)}$	1.2	A	See Figure 2 and Figure 3
Surge Forward Current	I_{FSM}	80	A	Half cycle sine wave, positive side, 10 ms, 1 shot
I^2t Limiting Value	I^2t	32	A^2s	1 ms ≤ t ≤ 10 ms
Junction Temperature	T_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 = 1.2 A	—	0.85	0.92	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 = 150 °C	—	—	500	µA
Thermal Resistance[(1)]	$R_{th(J-L)}$	See Figure 1	—	—	17	°C/W

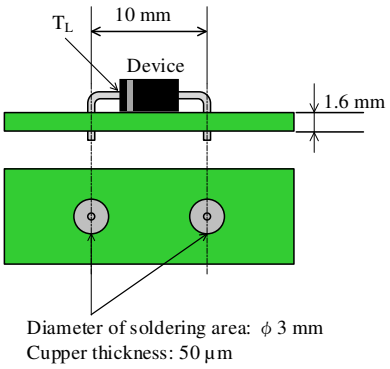

Figure 1 Lead Temperature Measurement Conditions

[(1)] $R_{th\ (J-L)}$ is thermal resistance between junction and lead.

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Rating and Characteristic Curves

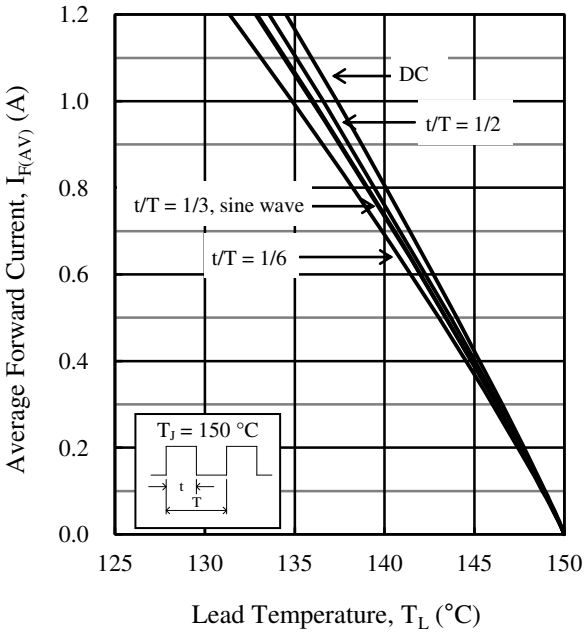

Figure 2. T_L vs. $I_{F(AV)}$ Typical Characteristics (V_R = 0 V)

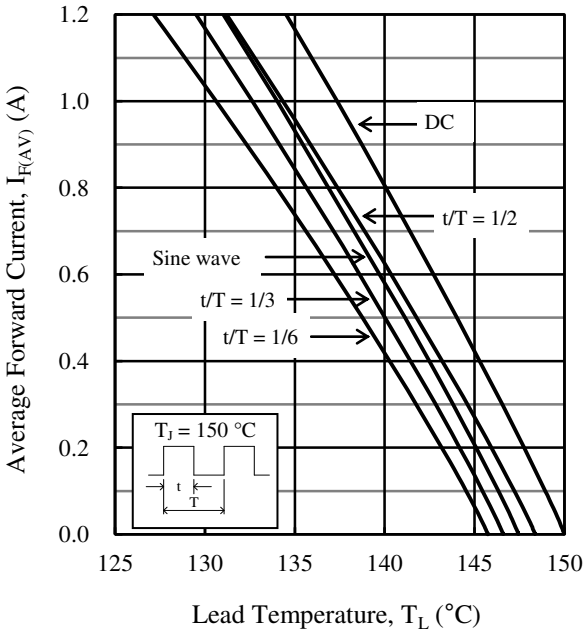

Figure 3. T_L vs. $I_{F(AV)}$ Typical Characteristics (V_R = 600 V)

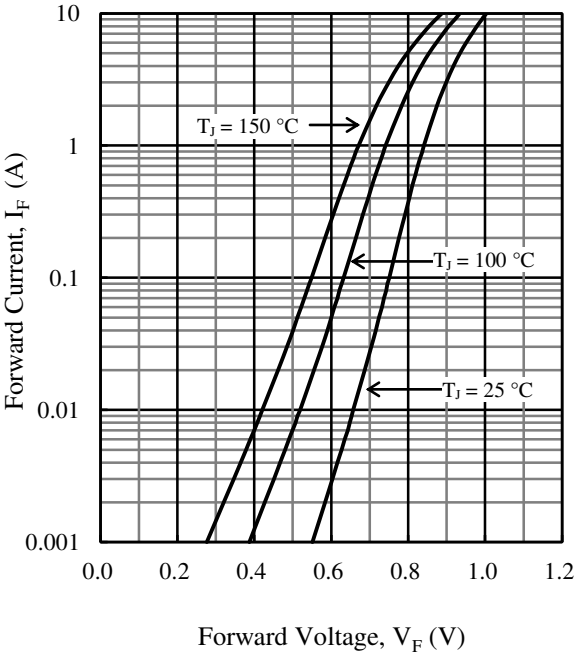

Figure 4. V_F vs. I_F Typical Characteristics

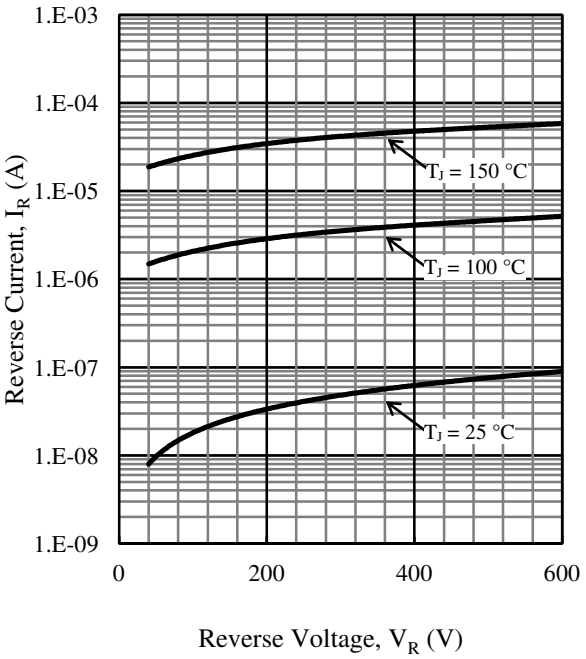

Figure 5. V_R vs. I_R Typical Characteristics

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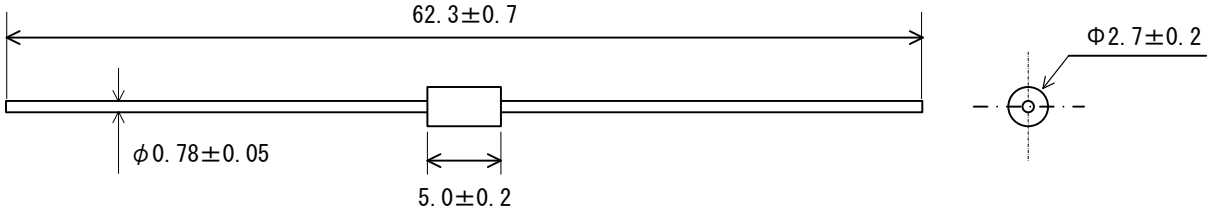
Physical Dimensions

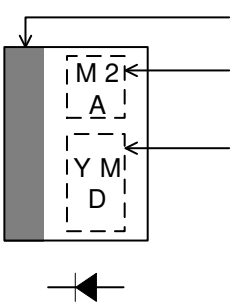
● **Axial (φ4 × 7.2L / φ0.78)**



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:
  Flow: 260 ± 5 °C / 10 ± 1 s, 2 times
  Soldering Iron: 380 ± 10 °C / 3.5 ± 0.5 s, 1 time (Soldering should be at a distance of at least 1.5 mm from the body of the product.)

Marking Diagram



Cathode Mark

Specific Device Code (see Table 1)

Lot Number:

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)

D is the period of days represented by:

- • : the first 10 days of the month (1st to 10th)
- •• : the second 10 days of the month (11th to 20th)
- ••• : the last 10–11 days of the month (21st to 31st)

Table 1. Specific Device Code

Specific Device Code	Part Number
M2A	EM2A

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