PIN diode RN142G

Applications

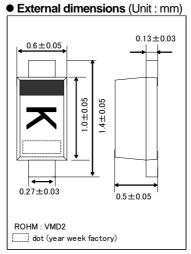
High frequency switching

● Features

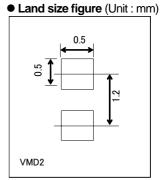
- 1) Ultra small mold type. (VMD2)
- 2) High frequency resistance which is small and low capacity.

Construction

Silicon epitaxial planar

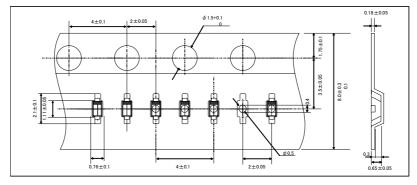


• Taping specifications(Unit : mm)



Structure





● Absolute maximum ratings (Ta=25°C)

| • , | • | | |
|----------------------|----------------|-------------|------|
| Parameter | Symbol | Limits | Unit |
| Reverse voltage | V_R | 60 | V |
| Reverse current | l _F | 100 | mA |
| Junction temperature | Tj | 150 | °C |
| Storage temperature | Tstg | -55 to +150 | °C |

●Electrical characteristics (Ta=25°C)

| Parameter | Symbol | Min. | Тур. | Max. | Unit | Conditions |
|-------------------------------|----------------|------|------|------|------|-------------------------------|
| Forward voltage | V_{F} | - | - | 1 | V | I _F =10mA |
| Reverse current | I _R | - | - | 0.1 | μA | $V_R=60V$ |
| Capacitance between terminals | Ct | - | - | 0.45 | pF | V _R =1V , f=1MHz |
| High frequency resistance | Rf | - | - | 3 | Ω | I _F =3mA,f=100MHz |
| | | - | - | 2 | Ω | I _F =10mA,f=100MHz |

●Electrical characteristic curves (Ta=25°C) f=1MHz FORWARD CURRENT: IF(mA) REVERSE CURRENT:IR(nA) CAPACITANCE BETWEEN 10 TERMINALS:Ct(pF) 0.1 0.01 0.01 10 20 REVERSE VOLTAGE:VR(V) 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.1 1.2 0 30 60 70 80 0 30 FORWARD VOLTAGE: VF(V) REVERSE VOLTAGE: VR(V) VR-IR CHARACTERISTICS VF-IF CHARACTERISTICS VR-Ct CHARACTERISTICS 100 Ta=25°C Ta=25°C VR=0V f=1MHz FORWARD VOLTAGE:VF(mV) CAPACITANCE BETWEEN TERMINALS:Ct(pF) n=30pcs FORWARD OPERATING RESISTANCE:rf(요) 810 0.1 0.1 800 0.1 10 100 FREQUENCY(MHz) Ct-f CHARACTERISTICS 1000 FORWARD CURRENT:IF(mA) rf-IF CHARACTERISTICS VF DISPERSION MAP Ta=25°C f=1MHz VR=1V Ta=25°C VR=60V Ta=25°C f=100MHz 0.9 0.8 FORWARD OPERATING RESISTANCE:rf(12) 1 2 1 2 1 2 1 1 8 1 8 1 1.8 REVERSE CURRENT:IR(nA) IF=3mA n=10pcs n=10pcs 1.2 AVE:0.364pF AVE:1.206Ω 0 0 FORWARD CURRENT:IF(mA) rf DISPERSION MAP IR DISPERSION MAP Ct DISPERSION MAP Ta=25°C f=100MHz 0.9 0.8 IF=10mA ELECTROSTATIC DISCHARGE TEST ESD(KV) FORWARD OPERATING RESISTANCE:rf(Ω) 0.7 AVE:2.01kV 0.6 0.5 0.4 0.3 AVE:0.71kV 0.2 1111 AVE:0.639 Ω 0.1 C=200pF C=100pF FORWARD CURRENT:IF(mA) rf DISPERSION MAP

Notes

- No technical content pages of this document may be reproduced in any form or transmitted by any
 means without prior permission of ROHM CO.,LTD.
- The contents described herein are subject to change without notice. The specifications for the
 product described in this document are for reference only. Upon actual use, therefore, please request
 that specifications to be separately delivered.
- Application circuit diagrams and circuit constants contained herein are shown as examples of standard use and operation. Please pay careful attention to the peripheral conditions when designing circuits and deciding upon circuit constants in the set.
- Any data, including, but not limited to application circuit diagrams information, described herein are intended only as illustrations of such devices and not as the specifications for such devices. ROHM CO.,LTD. disclaims any warranty that any use of such devices shall be free from infringement of any third party's intellectual property rights or other proprietary rights, and further, assumes no liability of whatsoever nature in the event of any such infringement, or arising from or connected with or related to the use of such devices.
- Upon the sale of any such devices, other than for buyer's right to use such devices itself, resell or
 otherwise dispose of the same, no express or implied right or license to practice or commercially
 exploit any intellectual property rights or other proprietary rights owned or controlled by
- ROHM CO., LTD. is granted to any such buyer.
- Products listed in this document are no antiradiation design.

The products listed in this document are designed to be used with ordinary electronic equipment or devices (such as audio visual equipment, office-automation equipment, communications devices, electrical appliances and electronic toys).

Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

About Export Control Order in Japan

Products described herein are the objects of controlled goods in Annex 1 (Item 16) of Export Trade Control Order in Japan.

In case of export from Japan, please confirm if it applies to "objective" criteria or an "informed" (by MITI clause) on the basis of "catch all controls for Non-Proliferation of Weapons of Mass Destruction.

