# Schottky barrier diode RB520G-30

# Applications

Low current rectification

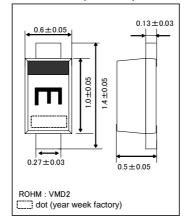
# ● Features

- 1) Ultra Small mold type. (VMD2)
- 2) Low I<sub>R</sub>.
- 3) High reliability.

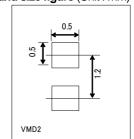
### Construction

Silicon epitaxial planar

# • Dimensions (Unit: mm)



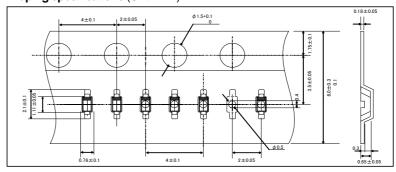
# • Land size figure (Unit : mm)



●Structure



# • Taping specifications (Unit : mm)



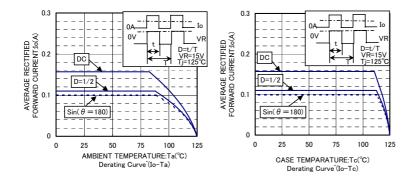
### ● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit				
Reverse voltage(DC)	$V_R$	30	V				
Average rectified forward current	lo	100	mA				
Forward current surge peak (60Hz•1cyc)	I <sub>FSM</sub>	500	mA				
Junction temperature	Tj	125	°C				
Storage temperature	Tstg	-40 to +125	°C				

# ●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Forward voltage	$V_{F}$	-	-	0.45	V	I <sub>F</sub> =10mA
Reverse current	I <sub>R</sub>	-	-	0.5	μA	V <sub>R</sub> =10V

#### ●Electrical characteristic curves (Ta=25°C) 1000 Ta=125°C 100000 FORWARD CURRENT:IF(mA) CAPACITANCE BETWEEN TERMINALS:Ct(pF) REVERSE CURRENT:IR(nA) 10000 10 1000 100 0.1 0.01 0.001 0.1 400 500 0 10 20 30 0 200 5 10 REVERSE VOLTAGE:VR(V) 0 20 FORWARD VOLTAGE:VF(mV) REVERSE VOLTAGE: VR(V) VF-IF CHARACTERISTICS VR-IR CHARACTERISTICS VR-Ct CHARACTERISTICS 370 Ta=25°C VF=10mA Ta=25°C VR=10V n=30pcs Ta=25°C f=1MHz 900 REVERSE CURRENT!R(nA) 200 400 400 100 100 FORWARD VOLTAGE:VF(mV) 360 18 n=30pcs CAPACITANCE BETWEEN VR=0V n=10pcs 350 340 AVE:347.5mV AVE:100.5nA 12 330 11 0 320 VF DISPERSION MAP Ct DISPERSION MAP IR DISPERSION MAP PEAK SURGE FORWARD CURRENT:IFSM(A) PEAK SURGE FORWARD CURRENT:IFSM(A) PEAK SURGE FORWARD CURRENT:IFSM(A) 8.3ms 8.3ms 1cyc 10 - AVE:4.20A 0 10 10 100 100 NUMBER OF CYCLES IFSM-CYCLE CHARACTERISTICS TIME:t(ms) IFSM DISRESION MAP IFSM-t CHARACTERISTICS 0.02 TRANSIENT THAERMAL IMPEDANCE:Rth (°C/W) 0.015 REVERSE POWER DISSIPATION: PR (W) FORWARD POWER DISSIPATION: Pf(W) Rth(j-c 0.06 0.01 0.04 0.005 0.02 10 0.05 0.1 0.15 AVERAGE RECTIFIED FORWARD CURRENT: Io(A) Io-Pf CHARACTERISTICS 0.001 1000 0 30 0 10 15 20 TIME:t(s) Rth-t CHARACTERISTICS REVERSE VOLTAGE:VR(V) VR-P<sub>R</sub> CHARACTERISTICS



#### **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.

