# Schottky barrier diode RB520G-30

# Applications

Low current rectification

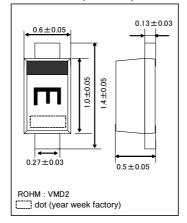
# ● Features

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

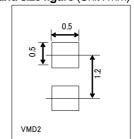
#### Construction

Silicon epitaxial planar

# • Dimensions (Unit: mm)



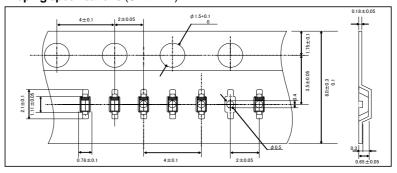
# • Land size figure (Unit : mm)



Structure



# • Taping specifications (Unit : mm)



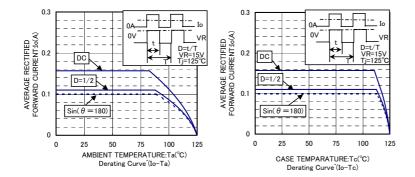
### ● Absolute maximum ratings (Ta=25°C)

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:JFSM(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



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