PIN diode

RN739F

Applications

VHF / UHF band variable attenuators and AGC

Features

- 1) Small mold type. (UMD3)
- 2) Low high-frequency forward resistance (r_F) / low capacitance (C_T).

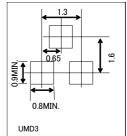
●Construction

Silicon diffusion junction

2 0±0 2 0.3±0.1 Each lead has same dimension 0.15±0.05 (3) (3) (3) (4) (2) (0,65) (0,65) (0,65)

●External dimensions (Unit : mm)

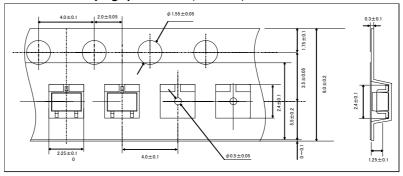
●Land size figure (Unit : mm)



●Structure



● Taping specification (Unit: mm)



ROHM : UMD3
JEDEC : SOT-323
JEITA : SC-70
dot (year week factory)

● Absolute maximum ratings (Ta=25°C)

3- \			
Parameter	Symbol	Limits	Unit
Reverse voltage (DC)	V_R	50	V
Forward current (DC)	I_{F}	50	mA
Power dissipation	P_d	100	mW
Junction temperature	Tj	125	°C
Storage temperature	Tstg	-55 to +125	°C

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Forward voltage	V_{F}	-	-	1	V	I _F =50mA
Reverse current	I _R	-	-	0.1	μΑ	V _R =50V
Capacitance between terminals	Ct	-	-	0.4	pF	V _R =35V , f=1MHz
Forward operating resistance	Rf	-	-	7.0	Ω	IF=10mA,f=100MHz

●Electrical characteristic curves (Ta=25°C) 100 1000 f=1MHz 100 TO CONTRINGUE OF THE CONTRINGU FORWARD CURRENT:IF(mA) CAPACITANCE BETWEEN TERMINALS:Ct(pF) Ta=25°C Ta=-25°C 0.00001 0.1 200 300 900 1000 1100 0 30 40 50 60 70 0 35 FORWARD VOLTAGE: VF(mV) REVERSE VOLTAGE: VR(V) REVERSE VOLTAGE:VR(V) VF-IF CHARACTERISTICS 10000 Ta=25°C IF=50mA FORWARD VOLTAGE:VF(mV) n=30pcs CAPACITANCE BETWEEN TERMINALS: Ot(pF) 930 920 AVE:931.5mV 10 0.1 1 FORWARD CURRENT:IF(mA) 10 100 FREQUENCY(MHz) 0.01 1000 VF DISPERSION MAP rf-IF CHARACTERISTICS Ct-f CHARACTERISTICS 50 45 Ta=25°C Ta=25°C Ta=25°C f=100MHz f=1MHz VR=50V 40 IF=10mA 0.4 VR=35V REVERSE CURRENT:IR(nA) CAPACITANCE BETWEEN TERMINALS:Ct(pF) FORWARD OPERATING n=30pcs n=10pcs RESISTANCE:rf(Ω) 0.3 25 20 0.2 15 10 0.1 AVE:3.406 Ω AVE:0.203pF 5 = = = = AVE:10.58nA = = = = = 0 FORWARD CURRENT:IF(mA) rf DISPERSION MAP IR DISPERSION MAP Ct DISPERSION MAP AVE:2.96kV ELECTROSTATIC DISCHARGE TEST ESD(KV) AVE:1.38kV 2 C=100pF R=1.5kΩ ESD 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.

