# PIN diode

## **RN142V**

#### Applications

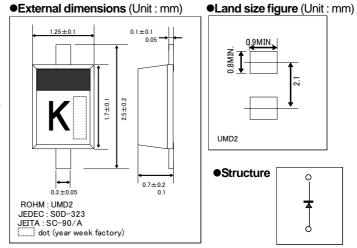
High frequency switching

#### ● Features

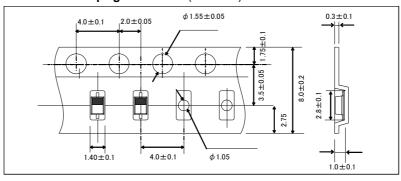
- 1) Small mold type. (UMD2)
- 2) Low high-frequency forward resistance / low capacitance (CT).

#### Construction

Silicon epitaxial planar



#### ●Taping dimensions (Unit: mm)



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

The solution ratings (14-20 0)							
Parameter	Symbol Limits		Unit				
Reverse voltage	$V_R$	60	V				
Reverse current	$I_F$	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	$V_{F}$	ı	-	1	V	I <sub>F</sub> =10mA
Reverse current	I <sub>R</sub>	ı	-	0.1	μA	$V_R=60V$
Capacitance between terminals	Ct	1	-	0.45	pF	V <sub>R</sub> =1V , f=1MHz
High frequeny switching	Rf	-	-	3	Ω	I <sub>F</sub> =3mA,f=100MHz

#### ●Electrical characteristic curves (Ta=25°C) f=1MHz 100 FORWARD CURRENT:IF(mA) REVERSE CURRENT:IR(nA) CAPACITANCE BETWEEN TEBMINALS:Ct(pF) Ta=25°C 0.1 0.01 30 20 30 40 50 60 REVERSE VOLTAGE: VR(V) 0 10 20 0 70 REVERSE VOLTAGE:VR(V) VR-Ct CHARACTERISTICS FORWARD VOLTAGE: VF(V) VF-IF CHARACTERISTICS VR-IR CHARACTERISTICS Ta=25°C VR=0V Ta=25°C IF=10m/ VOLTAGE: VF(mV) CAPACITANCE BETWEEN TERMINALS:Ct(pF) FORWARD OPERATING RESISTANCE:#(♀) 830 820 FORWARD AVE:825.4mV 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 10 Ta=25°C Ta=25°C f=100MHz 0.9 1.9 VR=60V n=30pcs IF=3mA REVERSE CURRENT:IR(nA) CAPACITANCE BETWEEN OPERATING TERMINALS:Ot(pF) 6.0 5.0 7.0 4.0 8.0 5.0 8.0 5.0 n=10pcs RESISTANCE:rf(Ω) AVE:1.206 Ω 1.3 0.2 AVE:0.364pF 0.1 0 FORWARD CURRENT:IF(mA) IR DISPERSION MAP Ct DISPERSION MAP rf DISPERSION MAP Ta=25°C f=100MHz 0.9 0.8 IF=10mA DISCHARGE TEST ESD(KV) FORWARD OPERATING n=10pcs RESISTANCE:元(♀) ELECTROSTATIC 0.6 0.5 0.4 AVE:0.71kV 0.3 AVE:0.639 Ω 0.1 R=0 Ω FORWARD CURRENT:IF(mA) rf DISPERSION MAP ESD DISPERSION MAP



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