PIN diode

RN142S

Application

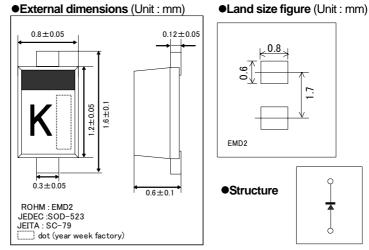
High frequency switching

Features

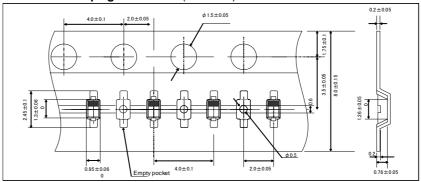
- 1) Ultra small mold type (EMD2)
- 2) High frequency resistance which is small and low capacity.

Construction

Silicon epitaxial planar



●Taping dimensions (Unit : mm)



● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Reverse voltage (DC)	V_R	60	V
Forward current (DC)	I _F	100	m A
Power dissipation	P_d	150	m W
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	-	-	1.00	V	I _F =10m A
Reverse current	I _R	-	-	0.1	μA	V _R =60V
Capacitance between terminals	Ct	-	-	0.45	pF	V _R =1.0V , f=1MHz
Forward resistance	Rf	-	-	3	Ω	$I_F=3m A, f=100MHz$
		-	-	2	Ω	I _F =10m A,f=100MHz

●Electrical characteristic curves (Ta=25°C) f=1MHz 100 FORWARD CURRENT:IF(mA) REVERSE CURRENTIR(nA) Ta=-25°C 0.1 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 1.1 1.2 20 30 40 50 60 REVERSE VOLTAGE: VR(V) 0 FORWARD VOLTAGE: VF(V) REVERSE VOLTAGE:VR(V) VR-Ct CHARACTERISTICS VF-IF CHARACTERISTICS VR-IR CHARACTERISTICS 100 f=1 MHz Ta=25°C VR=0V IF=10mA VOLTAGE:VF(mV) CAPACITANCE BETWEEN TERMINALS:Ct(pF) FORWARD OPERATING RESISTANCE:rf(Ω) 10 AVE-825.4mV 820 FORWARD 0.1 0.1 800 0.1 10 FREQUENCY(MHz) FORWARD CURRENT:IF(mA) VF DISPERSION MAP rf-IF CHARACTERISTICS Ct-f CHARACTERISTICS Te=25°C VR=60V n=30pcs 10 Ta=25°C f=1MHz f=100MHz 8.0 REVERSE CURRENT:IR(nA) n=10pcs 0.3 0.2 1.2 AVE:1.206 Ω 0 0 FORWARD CURRENT:IF(mA) IR DISPERSION MAP Ct DISPERSION MAP rf DISPERSION MAP Ta=25°C f=100MHz IF=10mA n=10pcs 0.8 ELECTROSTATIC DISCHARGE TEST ESD(KV) 0.7 -ORWARD OPERATING ≣≣∄₁≣ 0.6 0.5 0.4 0.2 0.1 R=0Ω R=1.5kΩ FORWARD CURRENT:IF(mA) ESD DISPERSION MAP rf DISPERSION MAP



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