

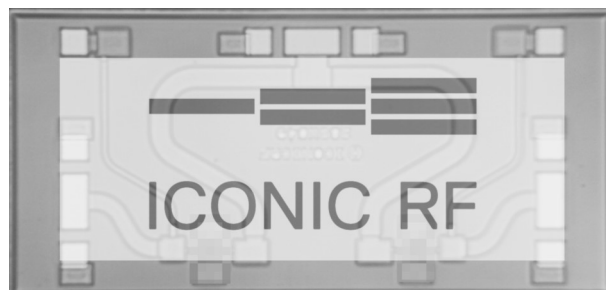
Features

- Frequency Range 19-31GHz
- Low loss < 1dB
- Isolation >20dB
- Return Loss >15dB
- Technology: GaAs PIN diode
- Chip Dimensions: 1.7 x 0.82 x 0.10mm

Applications

- Ka Band Applications including 5G mm-wave

Image



Description

The ICRF-4002 is broadband reflective PIN SPDT switch matched to 50 ohms with GSG RF pads, DC blocks and separate RF bias network

RF Performance | Test Conditions unless otherwise stated | $T_A=25^{\circ}\text{C}$, $I_{SW}=10\text{mA}$

Parameter	Units	Min.	Typ.	Max.
Frequency	GHz	19		28
Switch Insertion Loss	dB		1.0	1.3
Switch Isolation	dB		-18	
Switch Control Current	mA		10	

Absolute Maximum Ratings

Parameter	Absolute Maximum
Reverse bias voltage	-50 V
Forward Bias Current	40mA
Storage Temperature	-65°C to +150°C

Exceeding any one or combination of these limits may cause permanent damage to this device.
ICONIC RF does not recommend sustained operation near these survivability limits.

Handling Procedures

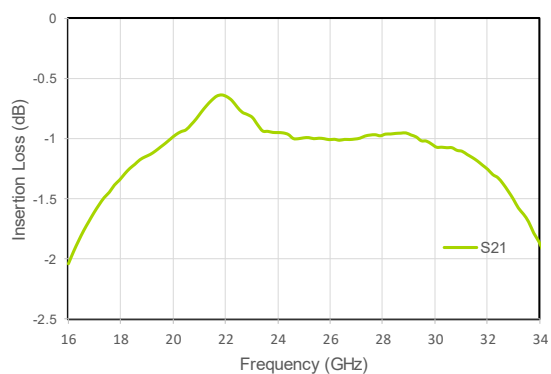
Please observe the following precautions to avoid damage:

Static Sensitivity

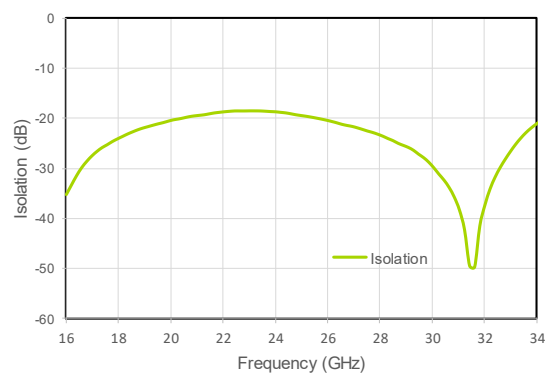
Integrated Circuits are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these devices.

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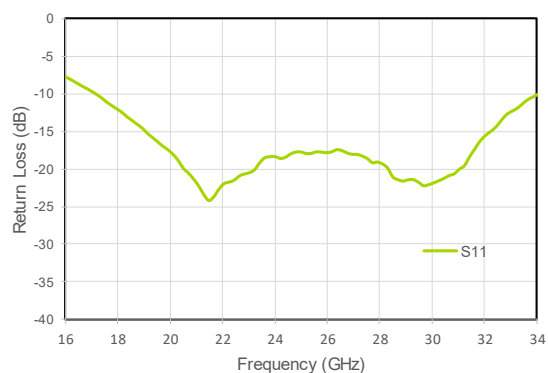
Insertion Loss (On State)



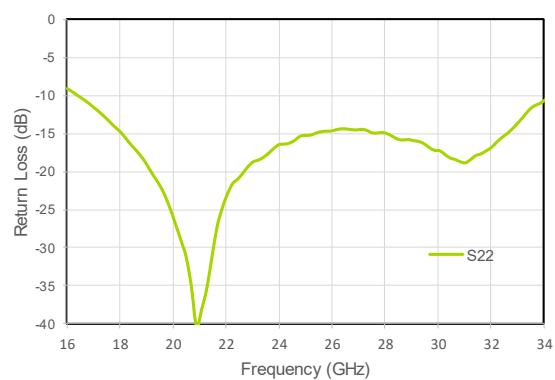
Isolation (Off State)



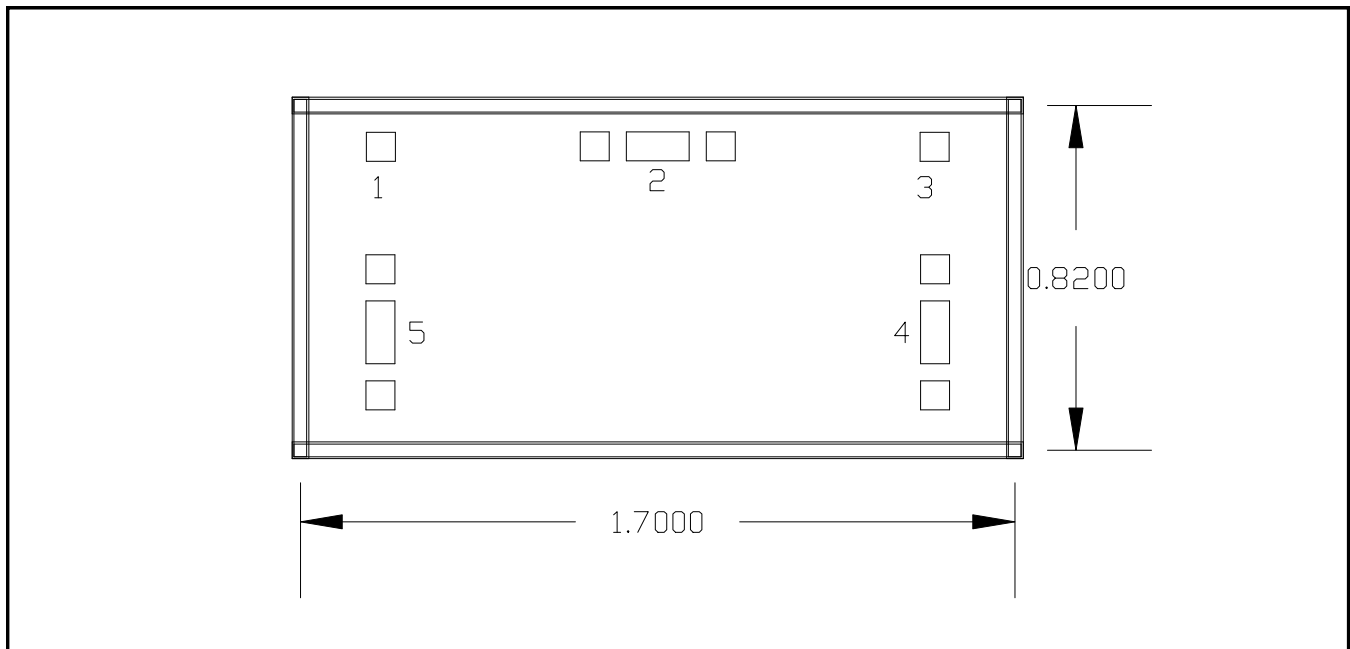
Return Loss S11 (On State)



Return Loss S22 (On State)



Mechanical Drawing



Bond Pads

Pad No.	Dimensions (mm)	Function	Description
1	0.069 x 0.069	Bias 1	Bias control 2
2	0.069 x 0.149	RF common	Common RF port (Ground Signal Ground Configuration)
3	0.069 x 0.069	Bias 2	Bias Control 1
4	0.069 x 0.149	RF 2	RF port 2 (Ground Signal Ground Configuration)
5	0.069 x 0.149	RF 1	RF port 1 (Ground Signal Ground Configuration)

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