

Absorptive, Broadband MMIC Switch 20-40GHz/SP16T/SMP Male

Model: TLSP16T20G40GA

The TLSP16T20G40GA is an absorptive MMIC diode based switch with a TTL driver that operates between 20 and 40 GHz. The SP16T switch offers 55 dB port-to-port isolation with a typical switching speed of 50 ns. The input and output connectors of the switch are SMP male.

Features:

- Frequency range: 20-40GHz
- Insertion Loss: 14dB
- Power Handling: 25dBm
- High Isolation
- Switch Type: Absorptive

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	20		40	GHz
Insertion Loss		14		dB
Isolation		50		dB
Switch Speed		50	100	ns
Input VSWR		2		:1
Output VSWR		2		:1
Power Handling			25	dBm
DC Supply Voltage		+5		V DC
Control Logic TTL		0/+3.3~+5		V DC
DC Supply Current		30		mA
Switch type	Absorptive			
Impedance	50			Ohms

Absolute Maximum Ratings :

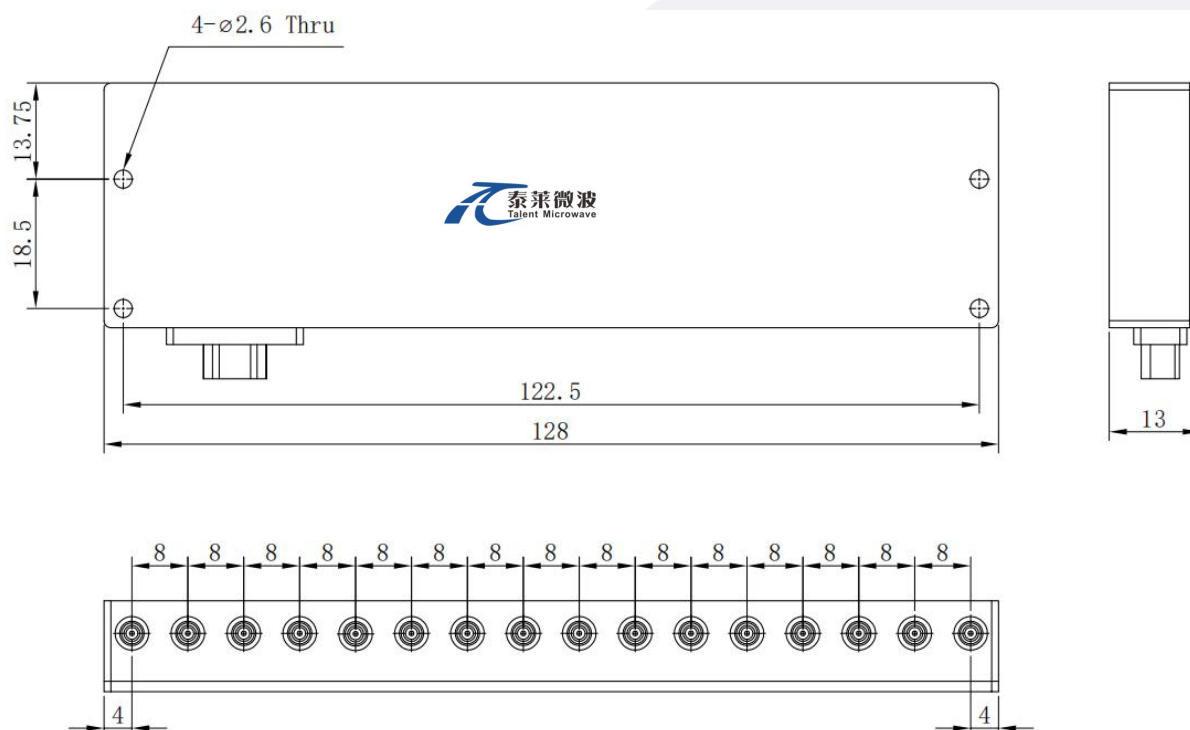
Description	Parameter	Units
Supply Bias Voltage	±5%	V
RF Input Power	25	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Mechanical Specifications:

Description	Parameter	Units
Input /Output Connector	SMP Male/SMP Male	
Control Bias Connector	J30J-9ZKP	
Size	128*35*13	mm

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

DC Power Supply Connector&Truth Table:

J30J-9ZKP	
Pin#	Function
1	+5V
2	C1
3	C2
4	C3
5	C4
6	+5V
7	GND
8	GND
9	GND

Truth Table				
TTL Control Input				Signal Path State
Bit1	Bit2	Bit3	Bit4	
0	0	0	0	J0-J1
0	0	0	1	J0-J2
0	0	1	0	J0-J3
0	0	1	1	J0-J4
0	1	0	0	J0-J5
0	1	0	1	J0-J6
0	1	1	0	J0-J7
0	1	1	1	J0-J8
1	0	0	0	J0-J9
1	0	0	1	J0-J10
1	0	1	0	J0-J11
1	0	1	1	J0-J12
1	1	0	0	J0-J13
1	1	0	1	J0-J14
1	1	1	0	J0-J15
1	1	1	1	J0-J16

Environmental Conditions:

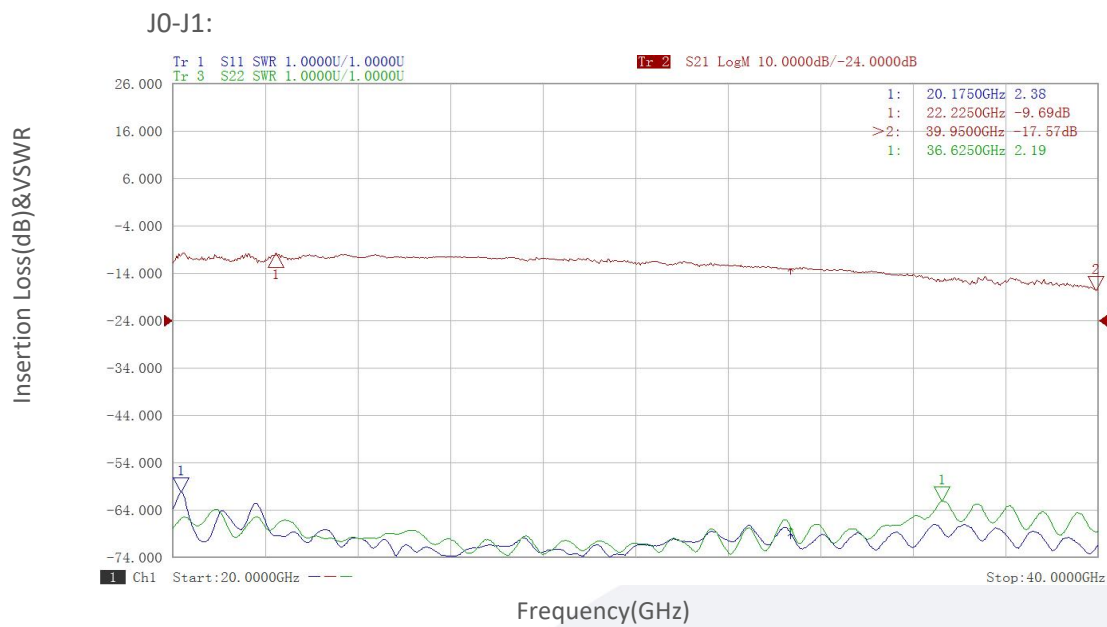
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

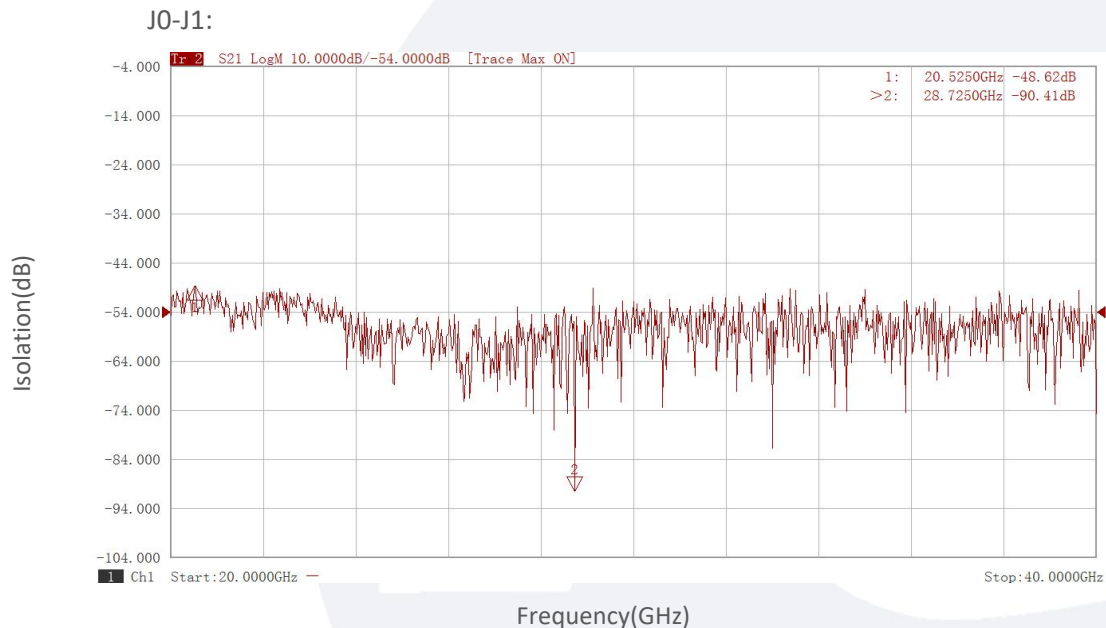
Base Number	Description	Revision
TLSP16T20G40GA	Absorptive,Broadband MMIC Switch 20-40 GHz, SP16T, SMP Male	Rev.1.0

Typical Performance Data:

Insertion Loss&VSWR vs Frequency



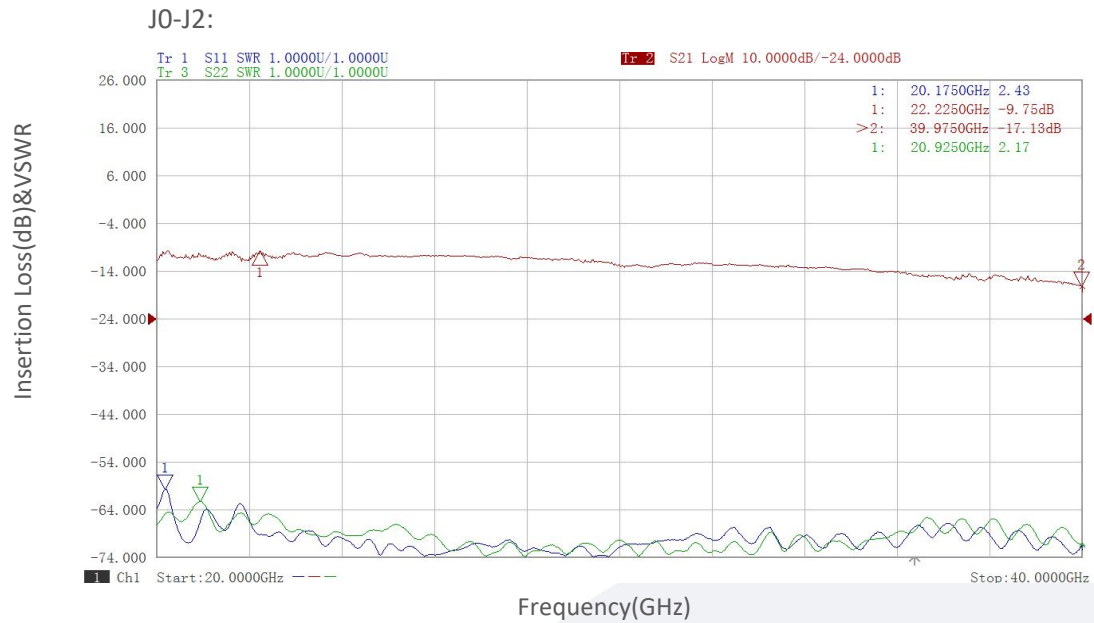
Isolation vs Frequency



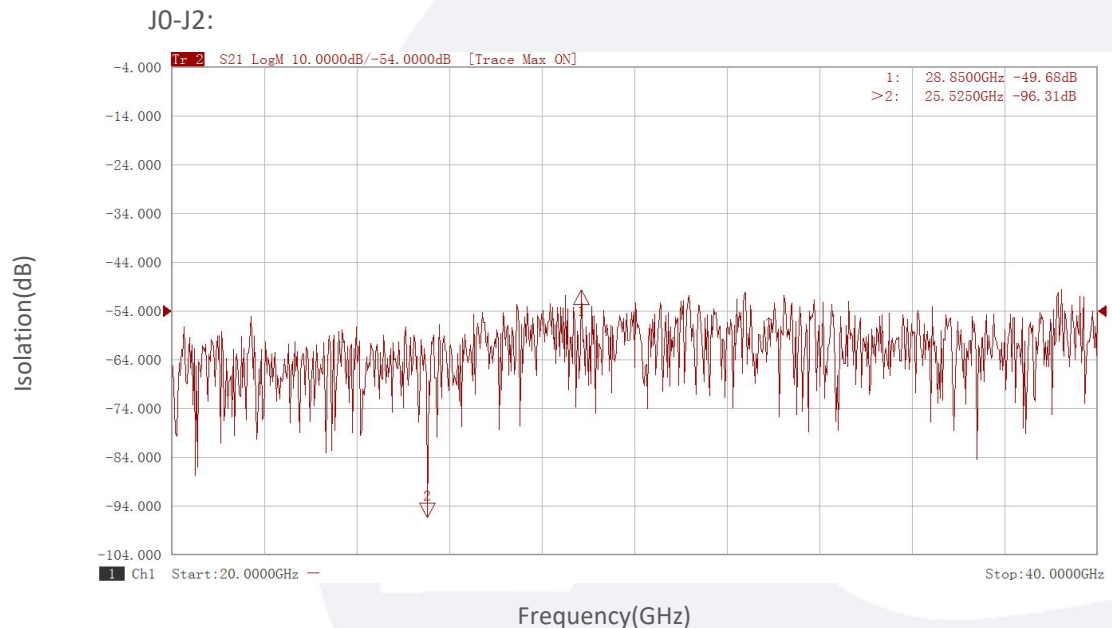
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Insertion Loss&VSWR vs Frequency



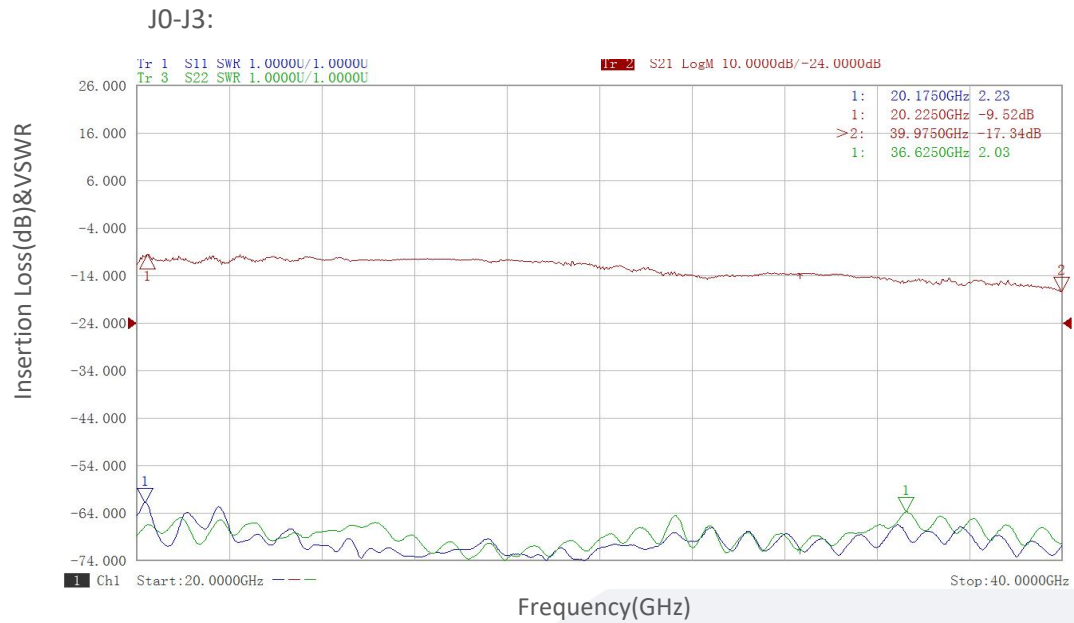
Isolation vs Frequency



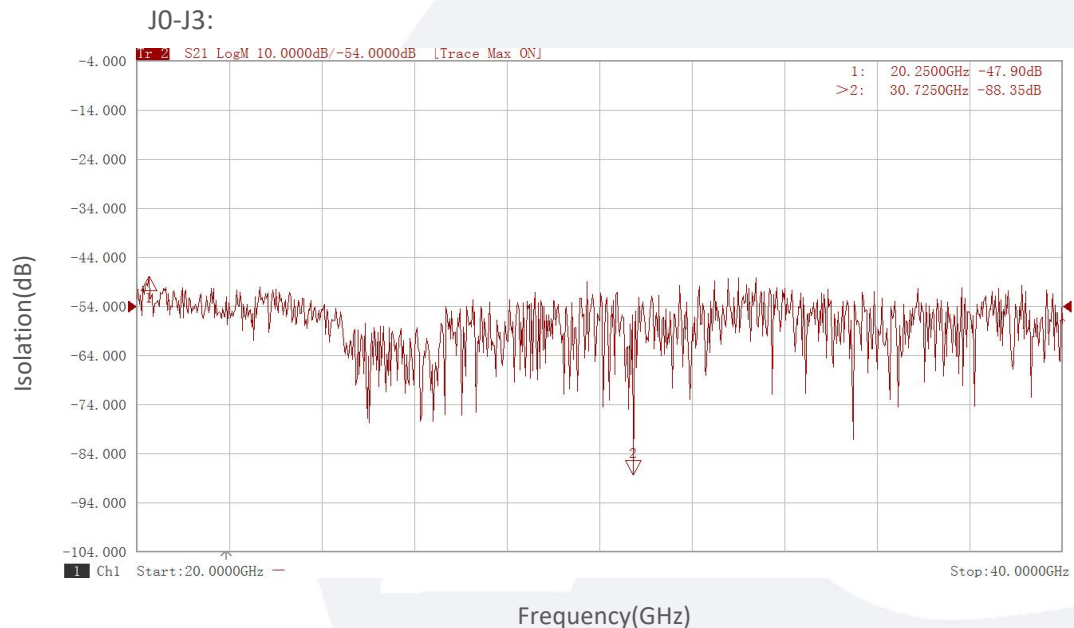
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Insertion Loss&VSWR vs Frequency



Isolation vs Frequency

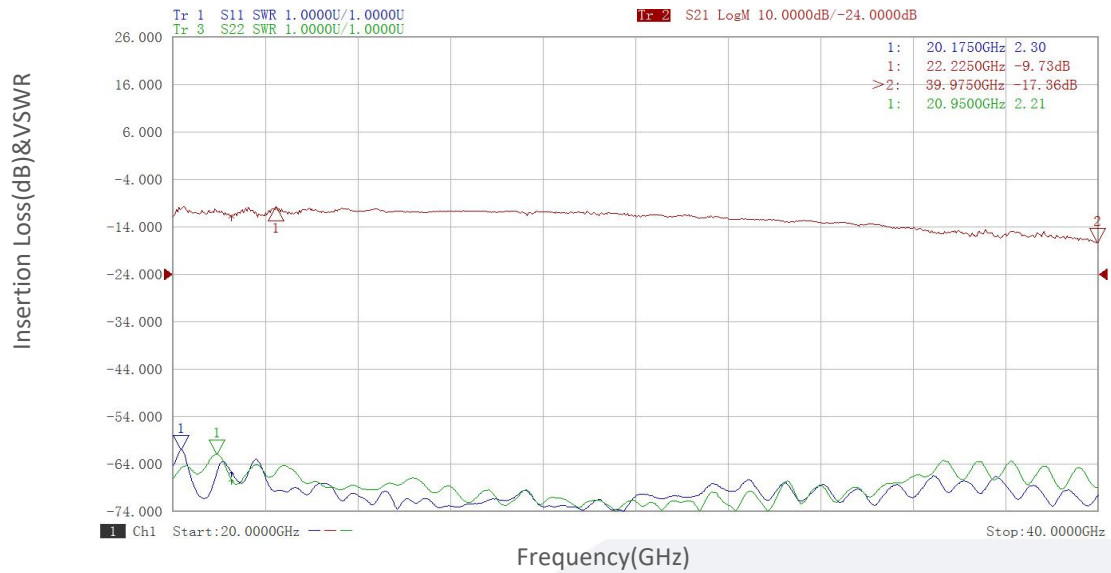


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

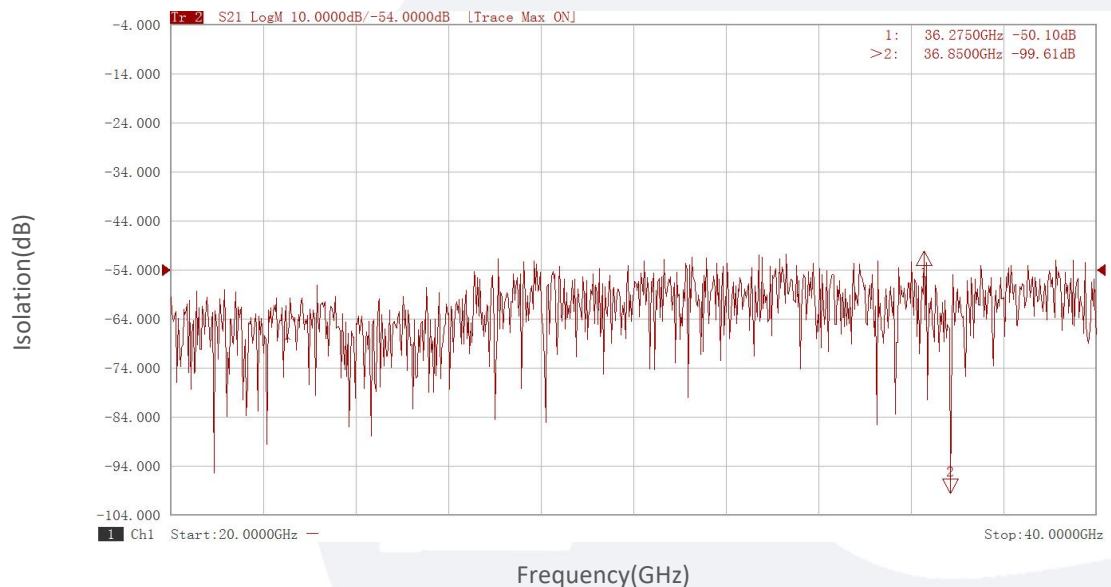
Insertion Loss&VSWR vs Frequency

J0-J4:



Isolation vs Frequency

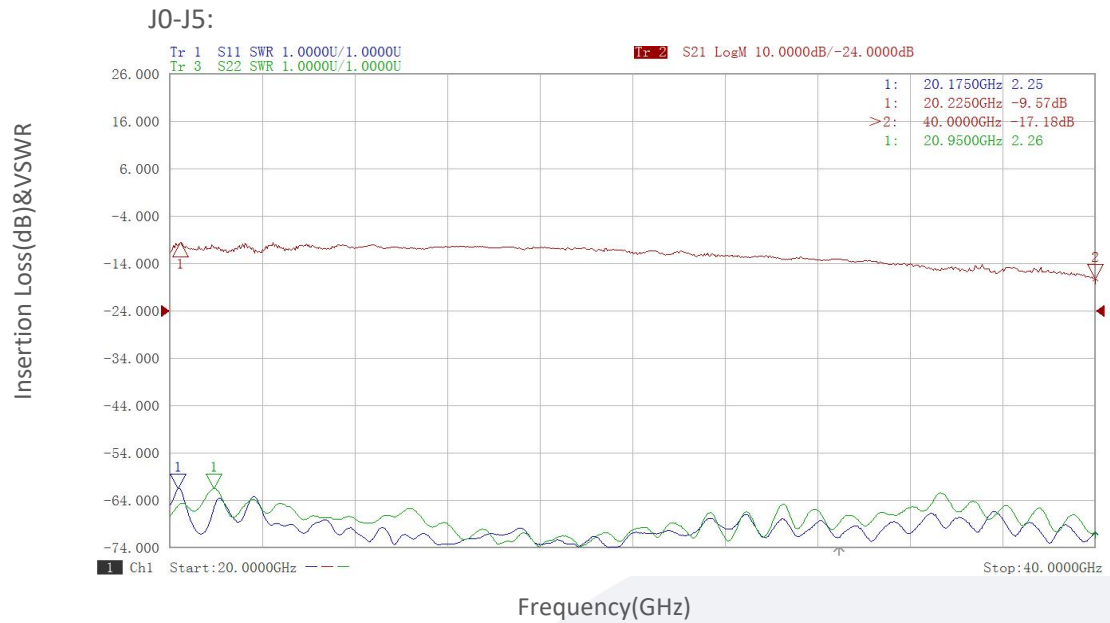
J0-J4:



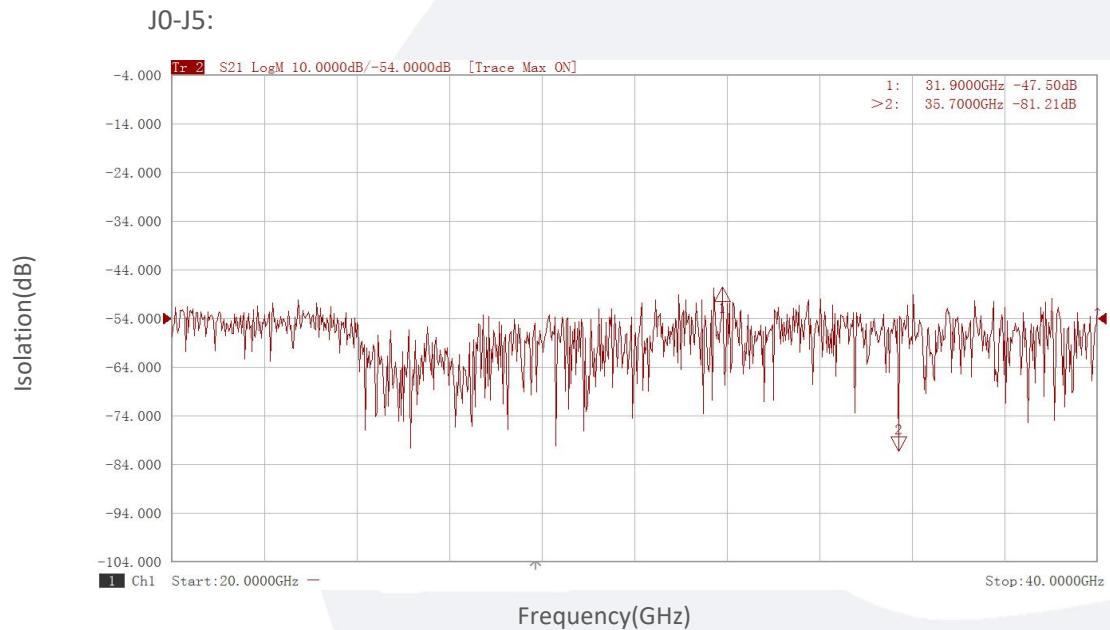
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Insertion Loss&VSWR vs Frequency



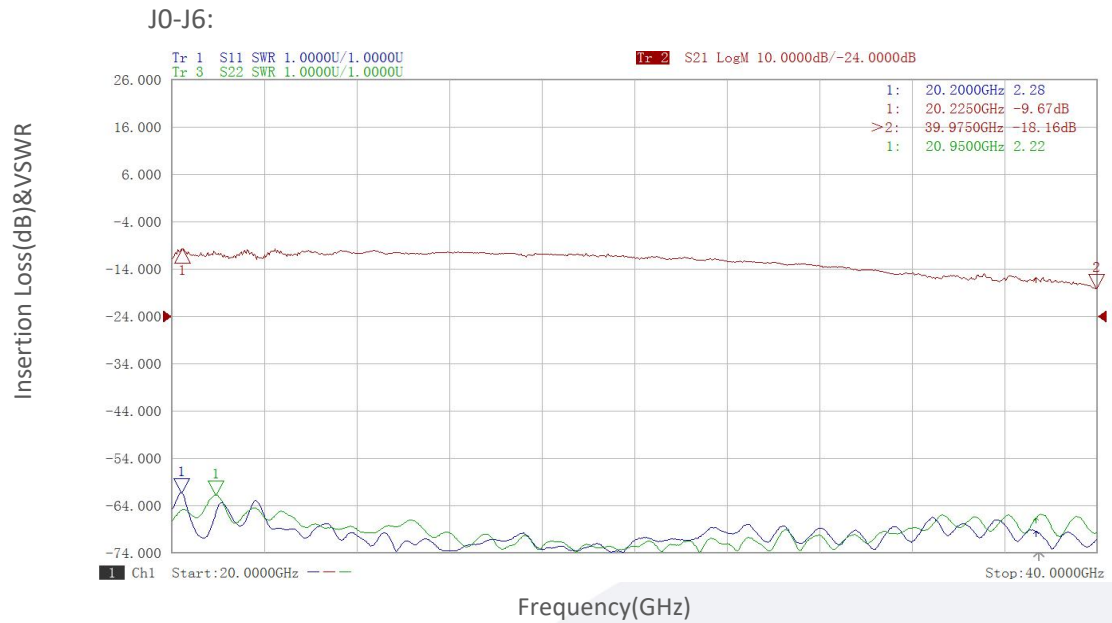
Isolation vs Frequency



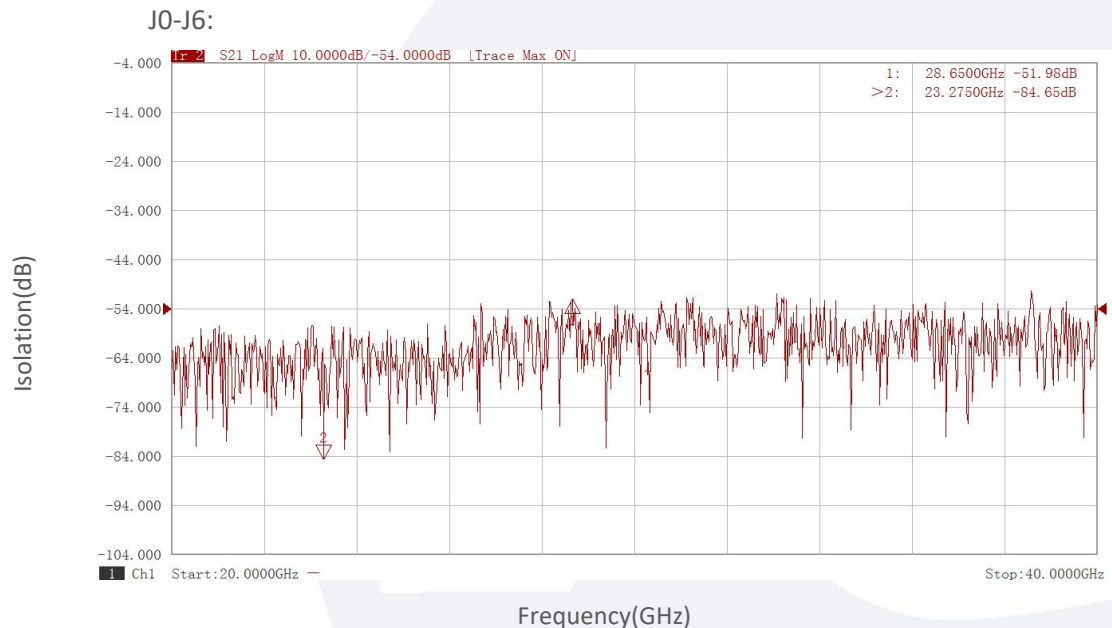
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Insertion Loss&VSWR vs Frequency



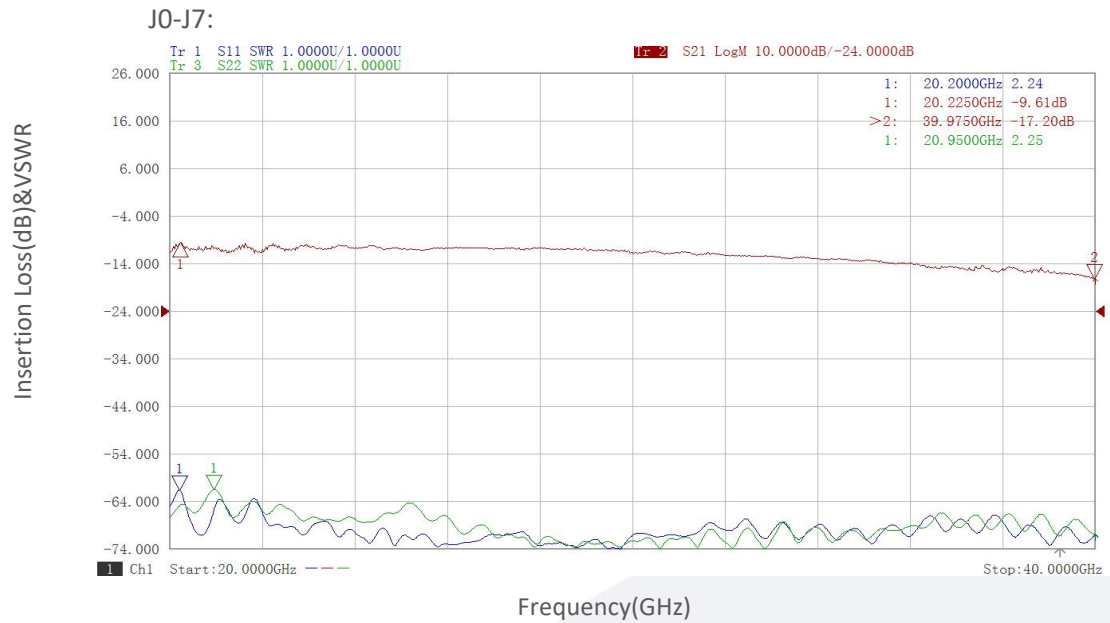
Isolation vs Frequency



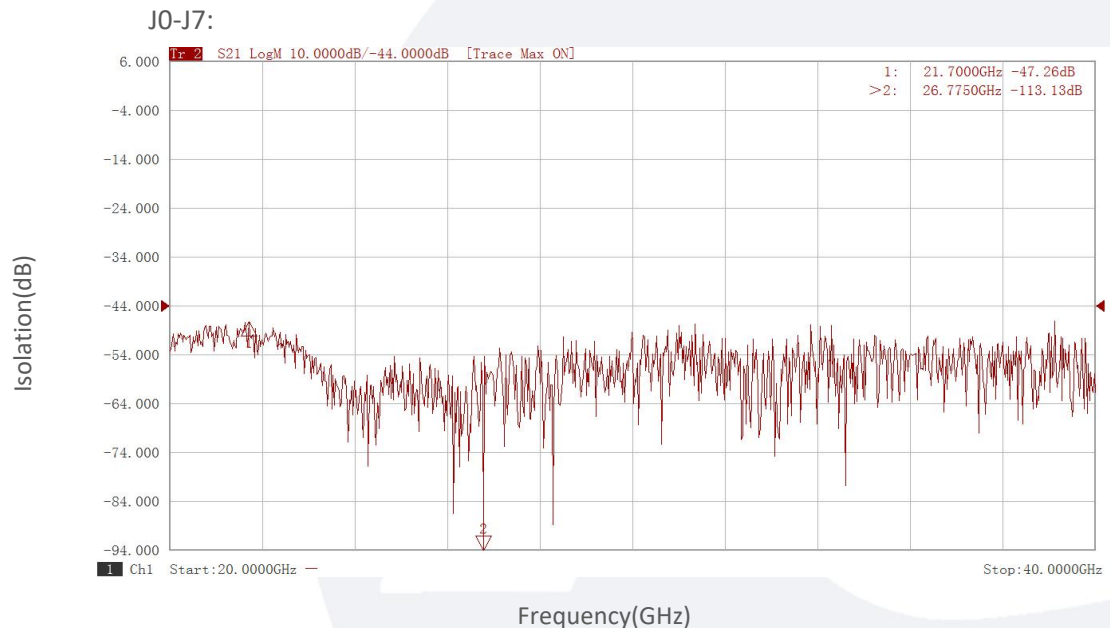
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Insertion Loss&VSWR vs Frequency



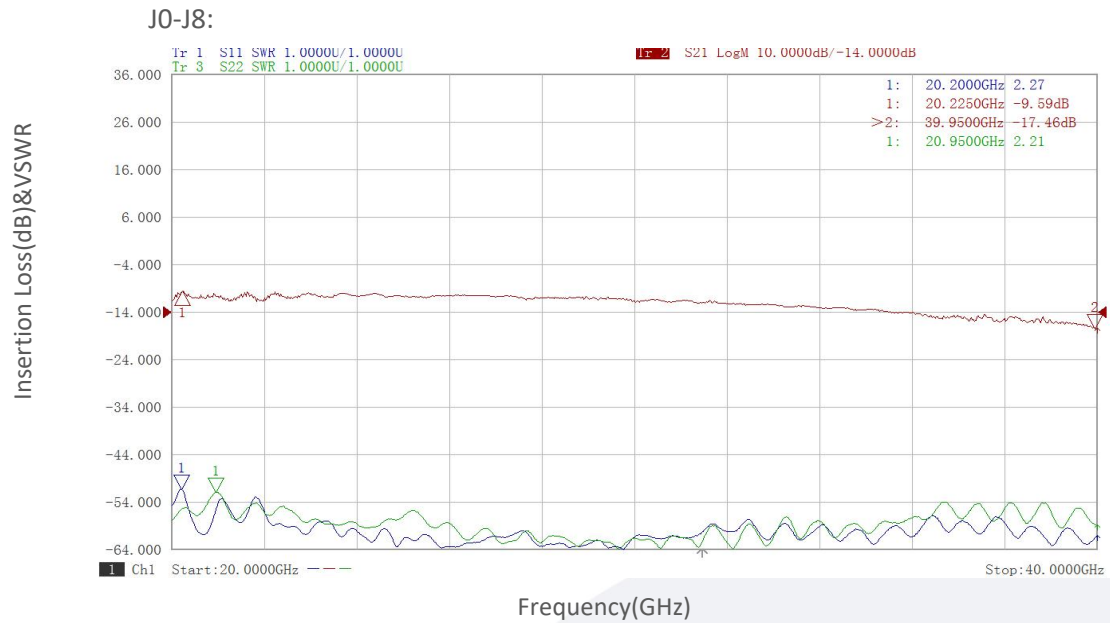
Isolation vs Frequency



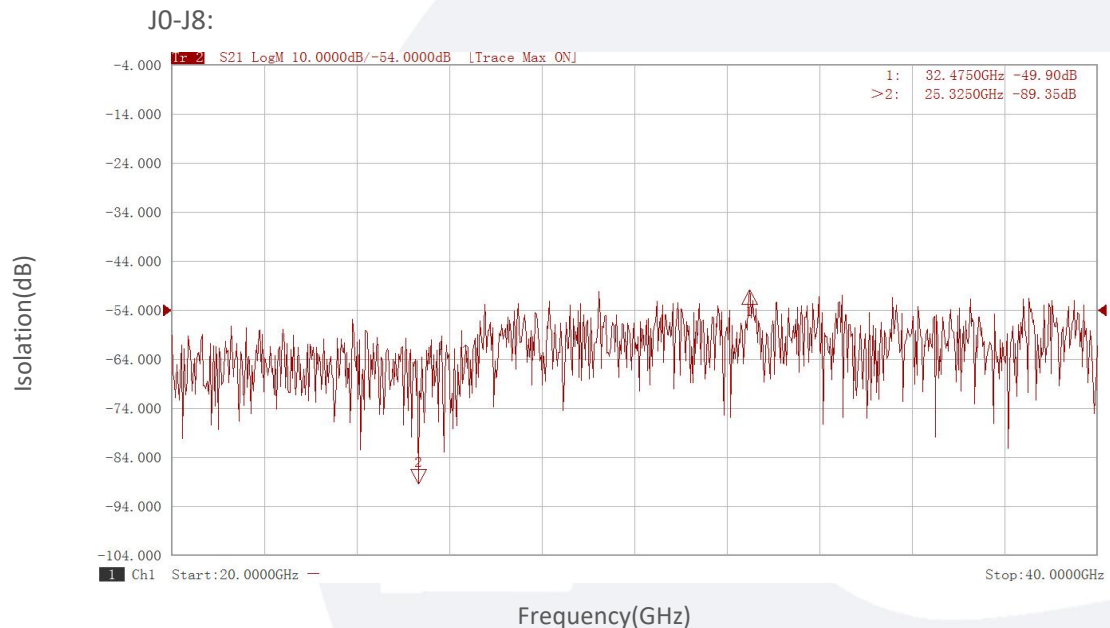
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Insertion Loss&VSWR vs Frequency



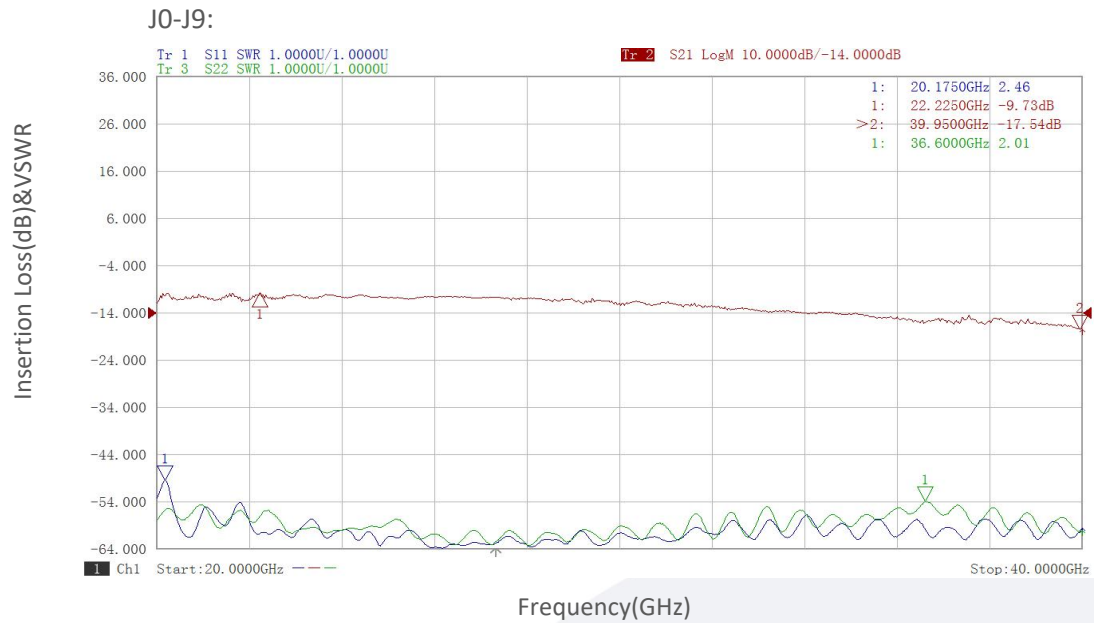
Isolation vs Frequency



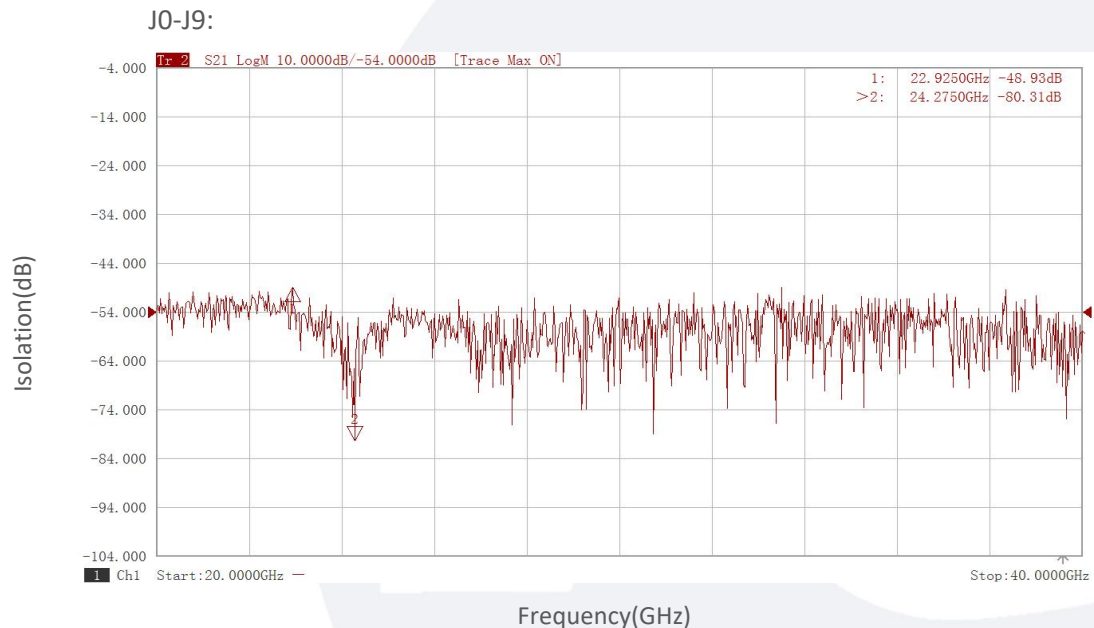
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Insertion Loss&VSWR vs Frequency



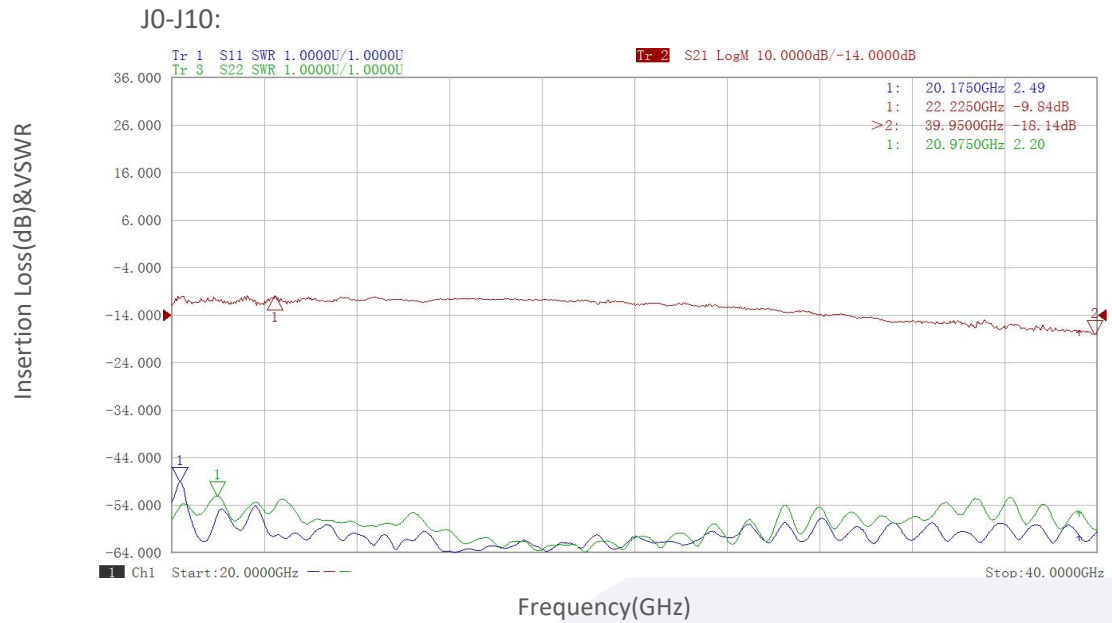
Isolation vs Frequency



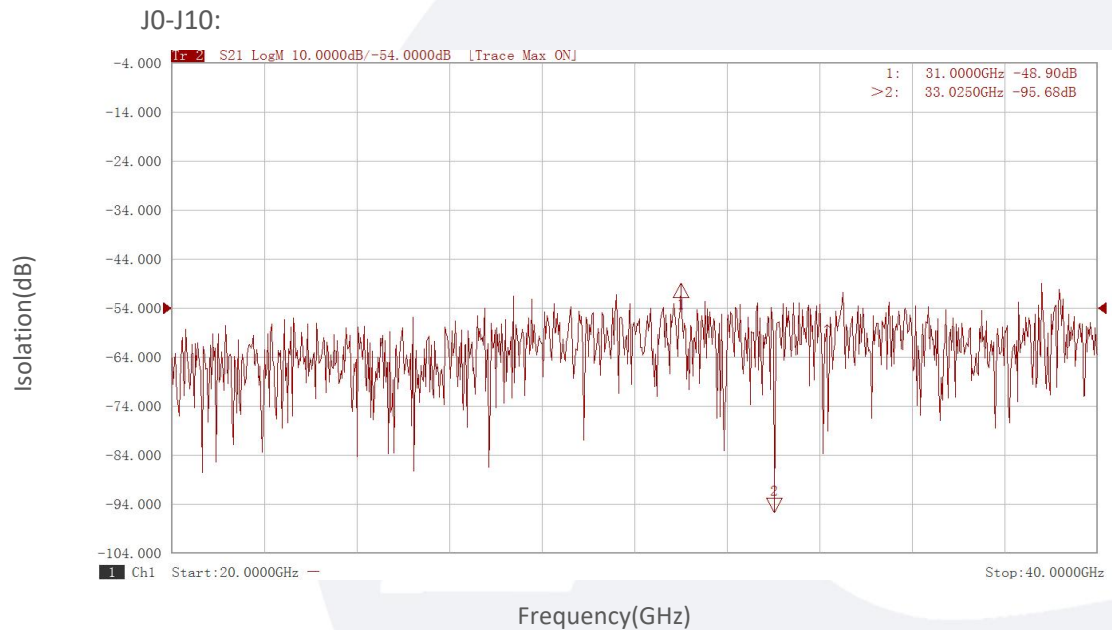
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Insertion Loss&VSWR vs Frequency



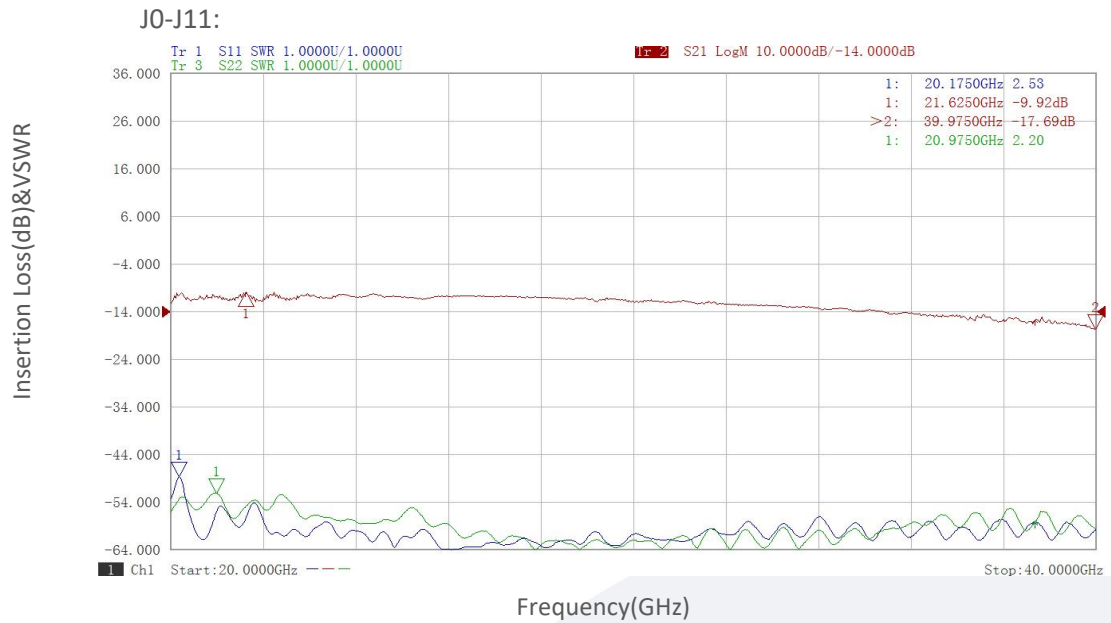
Isolation vs Frequency



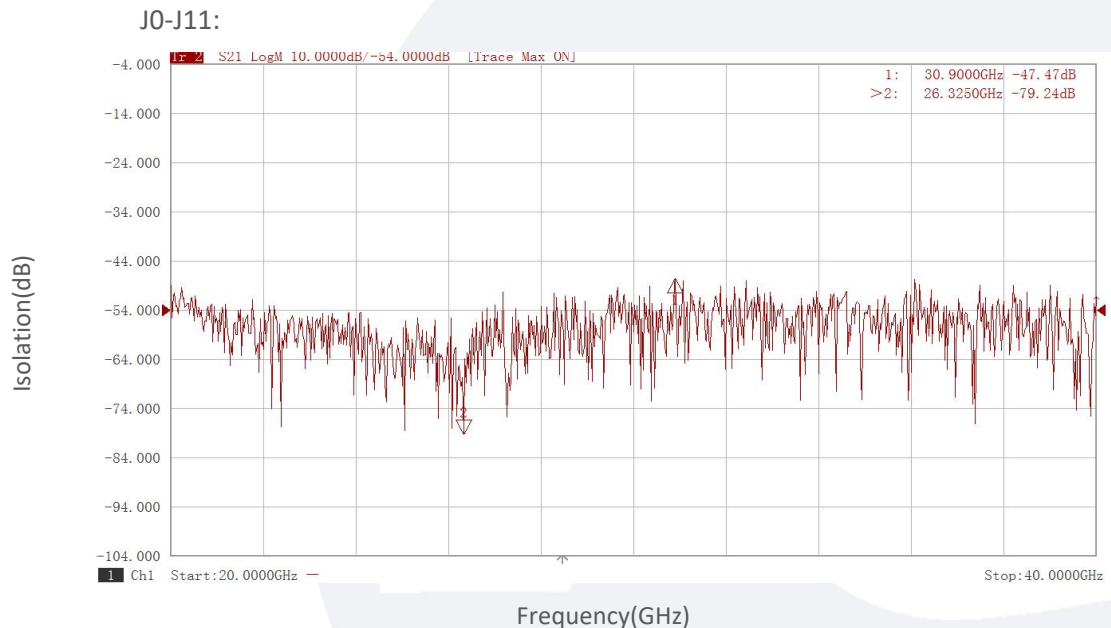
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Insertion Loss&VSWR vs Frequency



Isolation vs Frequency

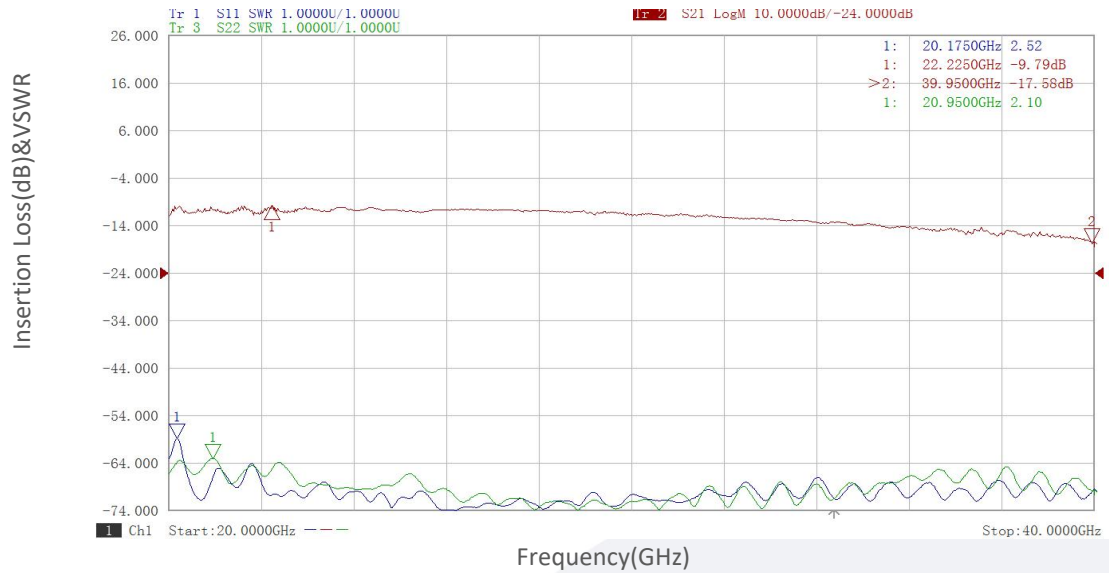


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

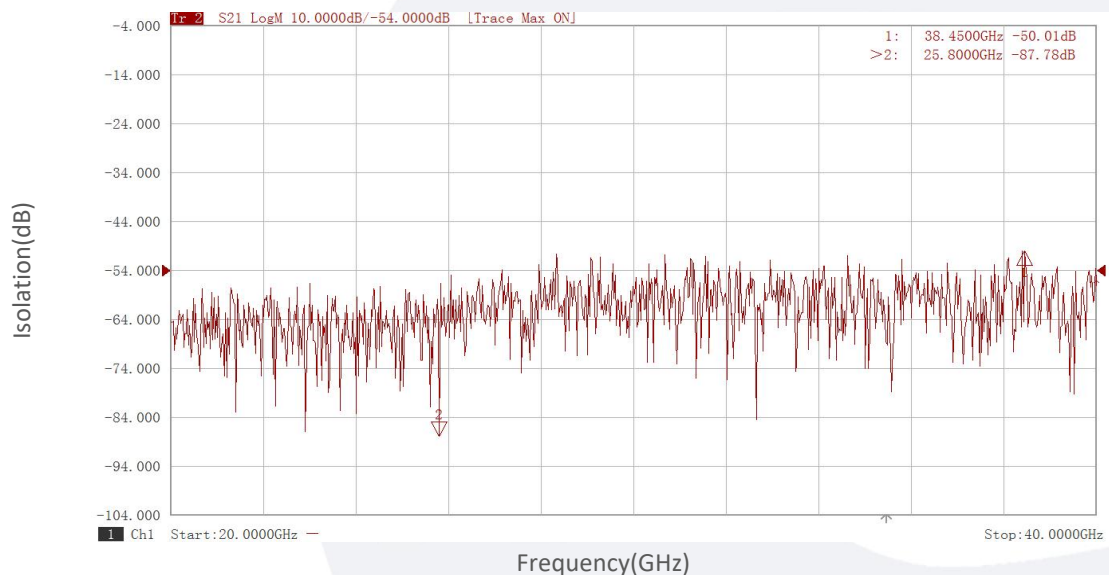
Insertion Loss&VSWR vs Frequency

J0-J12:



Isolation vs Frequency

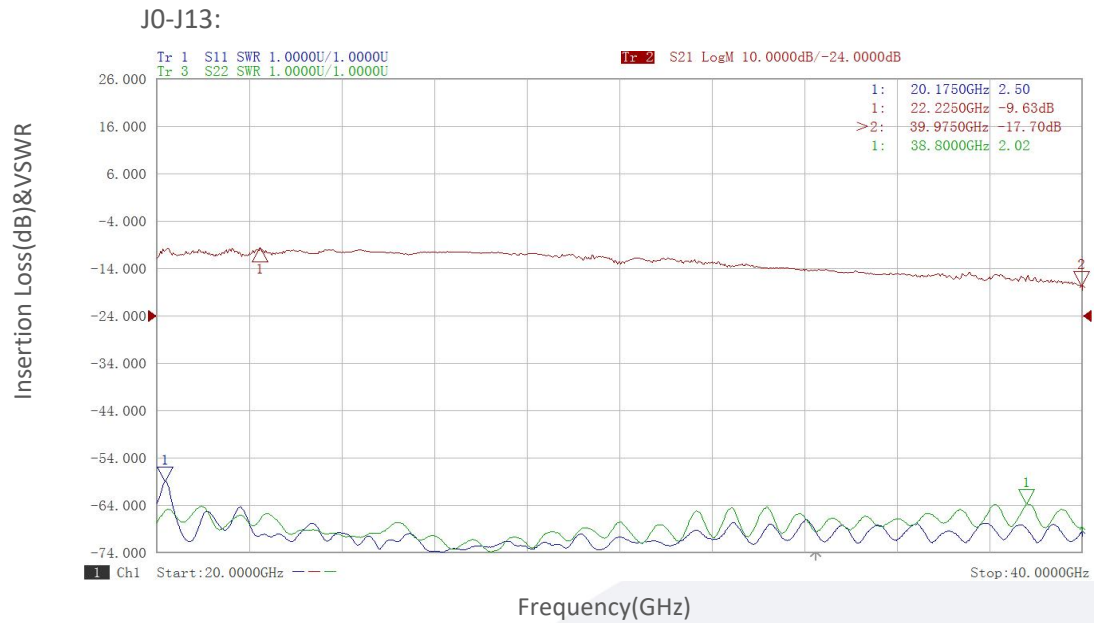
J0-J12:



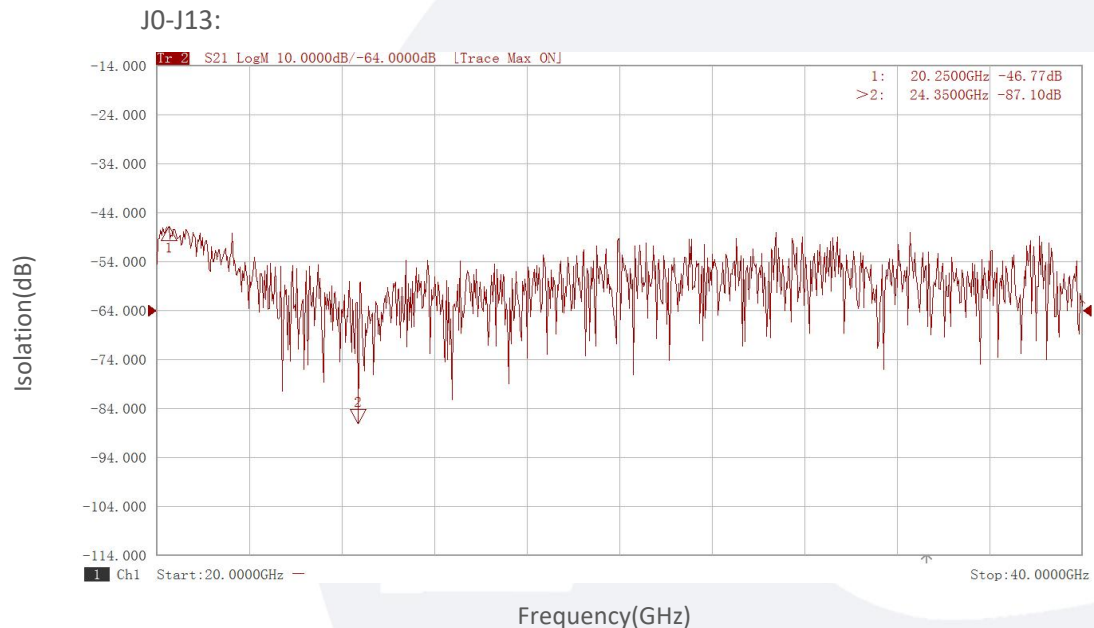
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Insertion Loss&VSWR vs Frequency



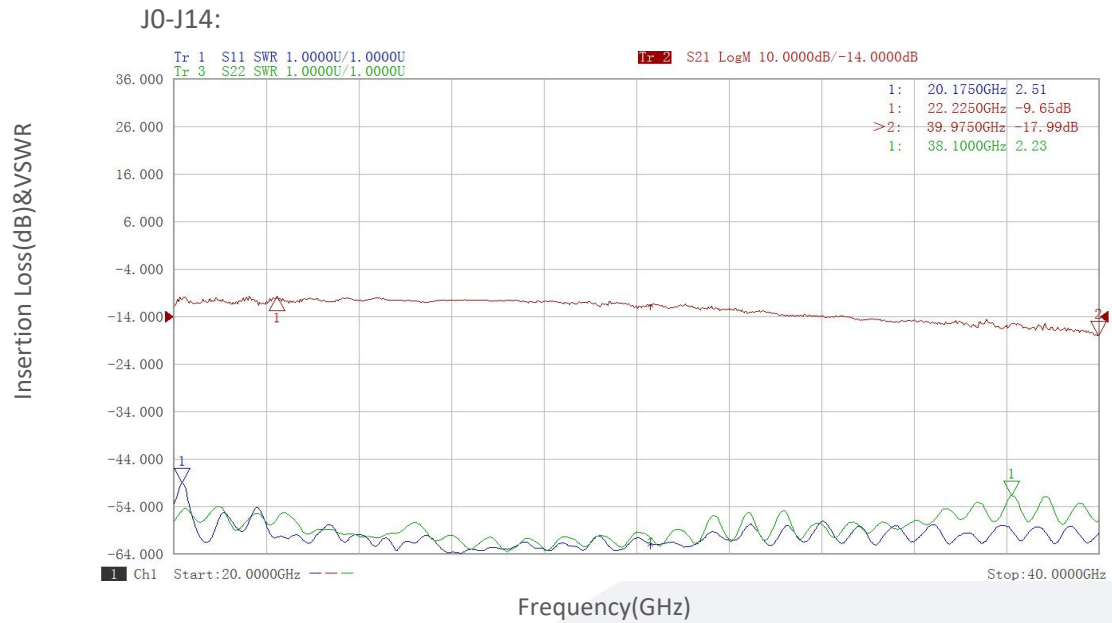
Isolation vs Frequency



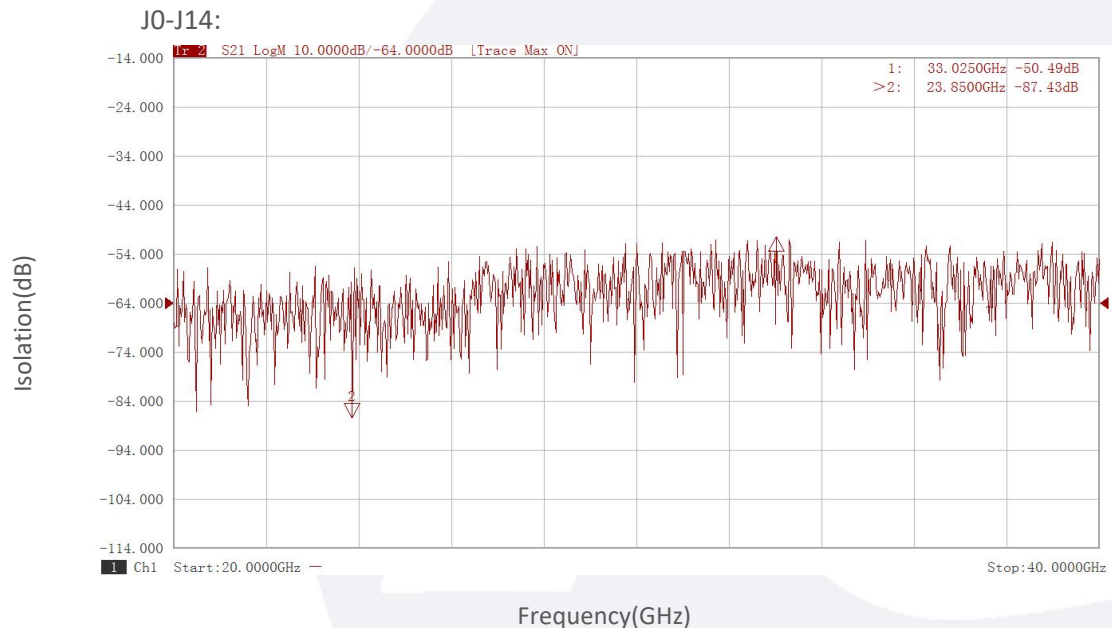
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Insertion Loss&VSWR vs Frequency



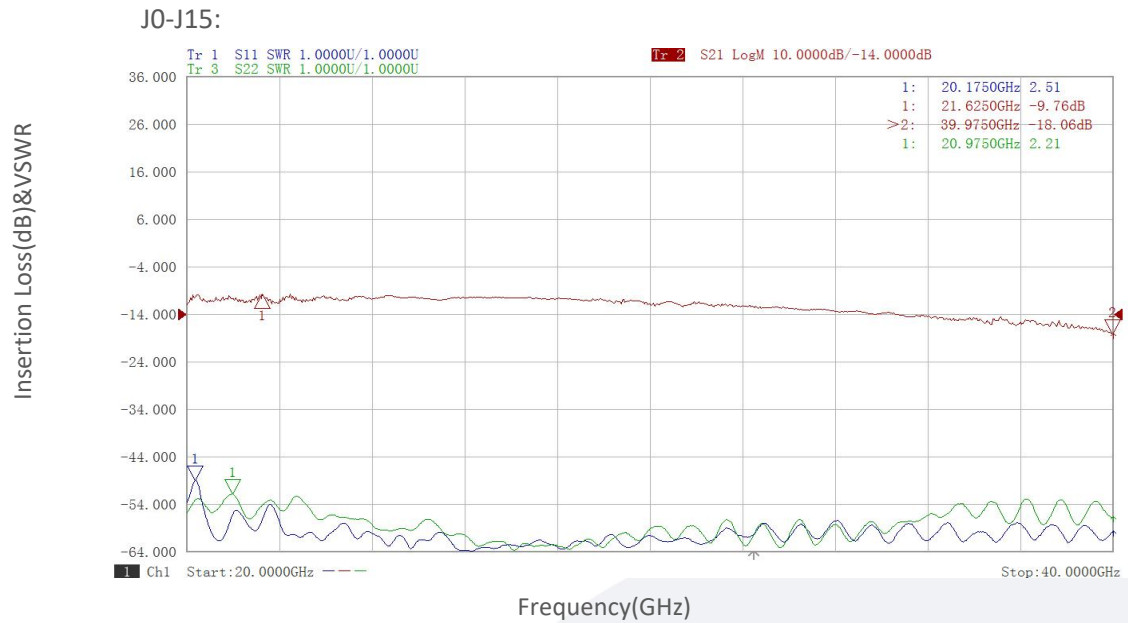
Isolation vs Frequency



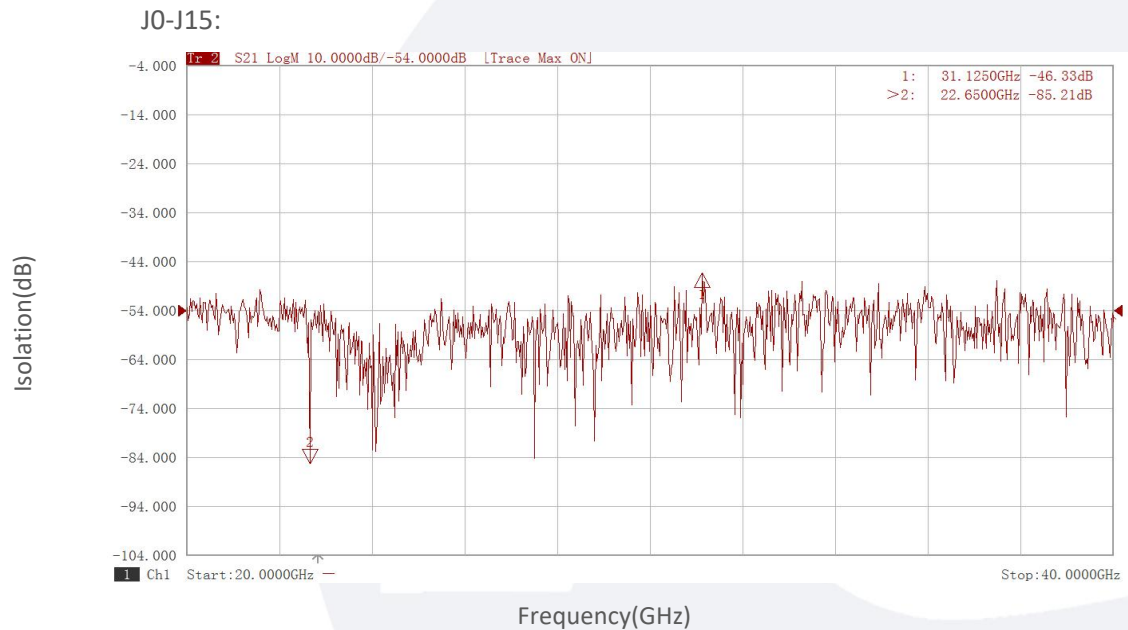
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Insertion Loss&VSWR vs Frequency



Isolation vs Frequency

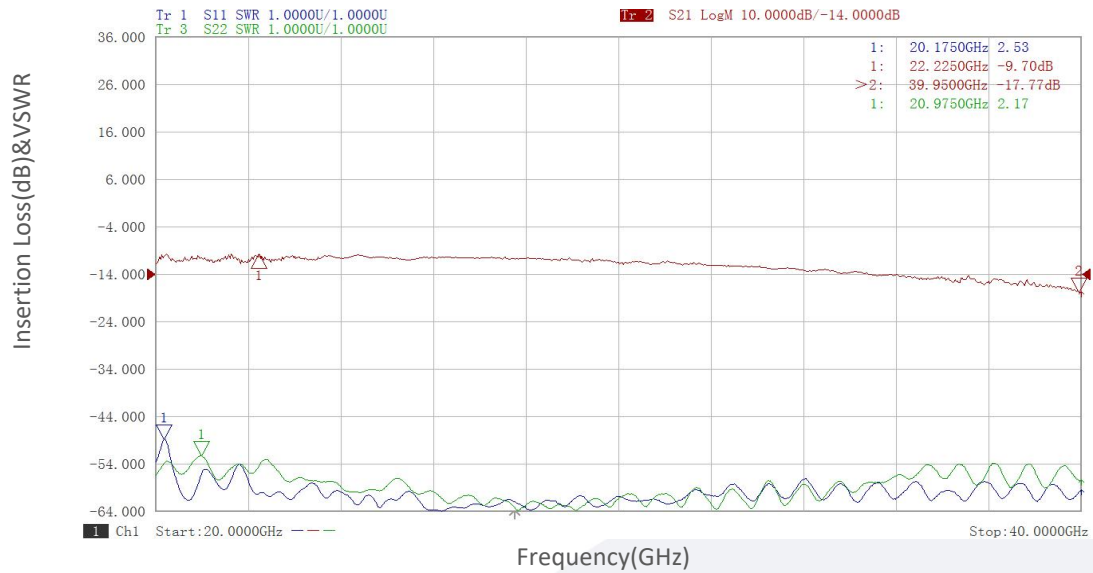


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

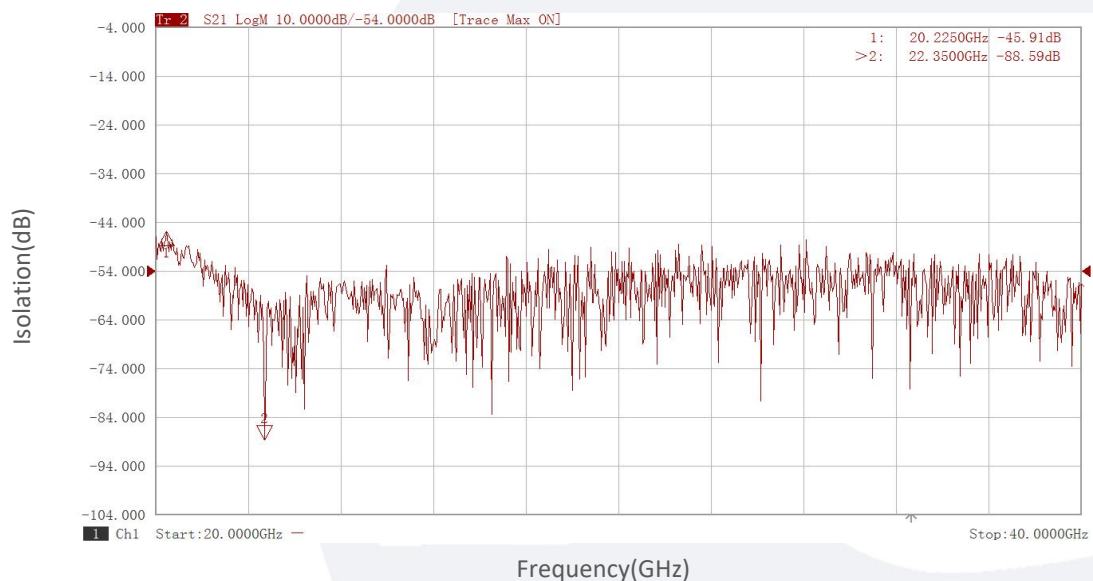
Insertion Loss&VSWR vs Frequency

J0-J16:



Isolation vs Frequency

J0-J16:



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.