

Absorptive, Broadband PIN Switch 0.1-8GHz/SP6T/SMA Female

Model: TLSP6T0.1G8GA

The TLSP6T0.1G8GA is an absorptive MMIC diode based switch with a TTL driver that operates between 0.1 and 8 GHz. The SP6T switch offers 45 dB port-to-port isolation with a typical switching speed of 100 ns. The input and output connectors of the switch are SMA female.

Features:

- Frequency range: 0.1-8GHz
- Low Insertion Loss: 4dB
- Power Handling : 30dBm
- High Isolation
- Switch Type: Absorptive

Applications:

- Communication Systems
- Automatic Test Equipment
- Switching Network

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range		0.1-8		GHz
Insertion Loss		4		dB
Isolation		45		dB
Switch Speed		100	200	ns
Input VSWR		1.5		:1
Output VSWR		1.5		:1
Power Handling			30	dBm
DC Voltage		5		V DC
Control Logic TTL		+5		V DC
DC Supply Current		66		mA
Switch type	Absorptive			
Impedance	50			Ohms

Absolute Maximum Ratings :

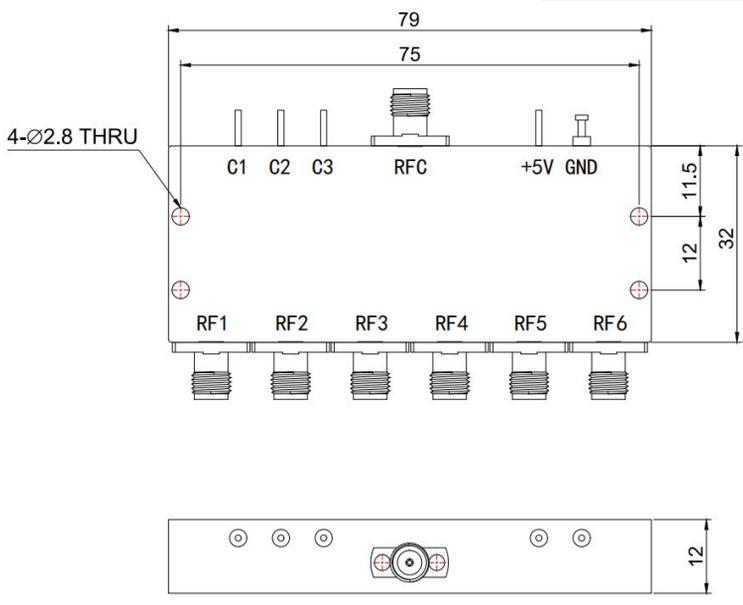
Description	Parameter	Units
Supply Bias Voltage	±5%	V
RF Input Power	30	dBm
ESD sensitivity (HBm)	Class 0, passed 150V	

Mechanical Specifications:

Description	Parameter	Units
Input /Output Connector	SMA Female/SMA Female	
Control Bias	Solder Pin	
Size	79*32*12	mm

Outline Drawing:

Unit:mm



Truth Table			
TTL Control Input			Signal Path State
Bit1	Bit2	Bit3	
0	0	0	J0-J1
0	0	1	J0-J2
0	1	0	J0-J3
0	1	1	J0-J4
1	0	0	J0-J5
1	0	1	J0-J6

TTL Control Voltages &VDD	
Stage	Bias Condition
VDD	+5V (±5%)
Low (0)	0 to 0.8Vdc
High (1)	2.0 to +5.0Vdc

1. Dimensions are in mm [inches]
 2. Tolerances: Outline drawing ±0.2 [0.008] Hole ±0.2 [0.008]
- NOTE: ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME



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

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°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
TLSP6T0.1G8GA	Absorptive, Broadband MMIC Switch 0.1-8 GHz, SP6T, SMA	Rev.1.1

Typical Performance Data:

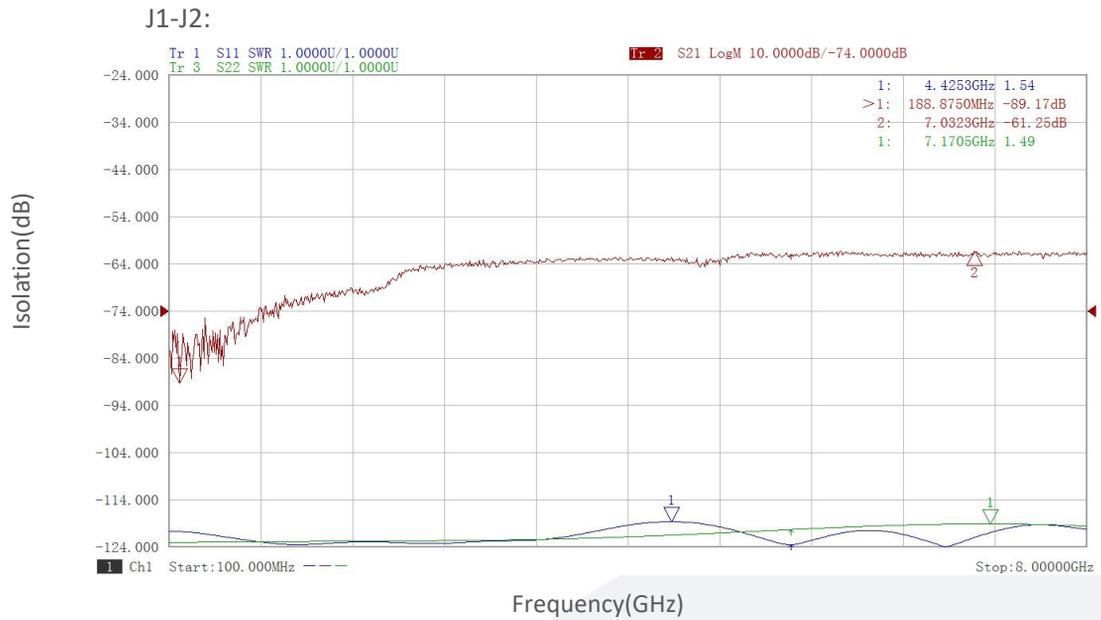
Insertion Loss & VSWR vs Frequency



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:

Isolation vs Frequency



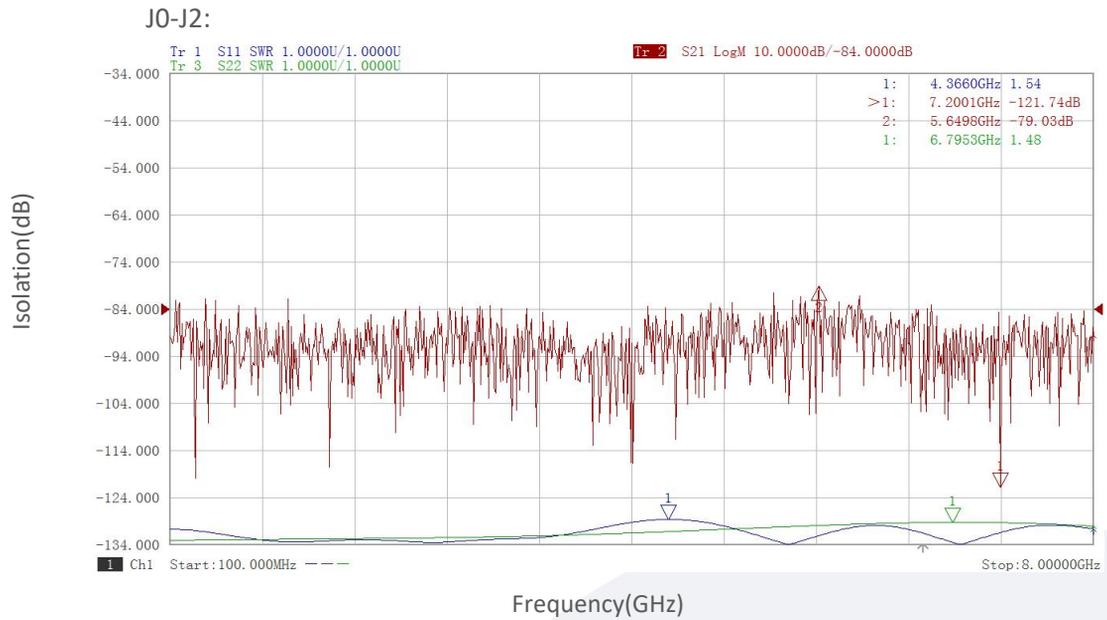
Insertion Loss&VSWR vs Frequency



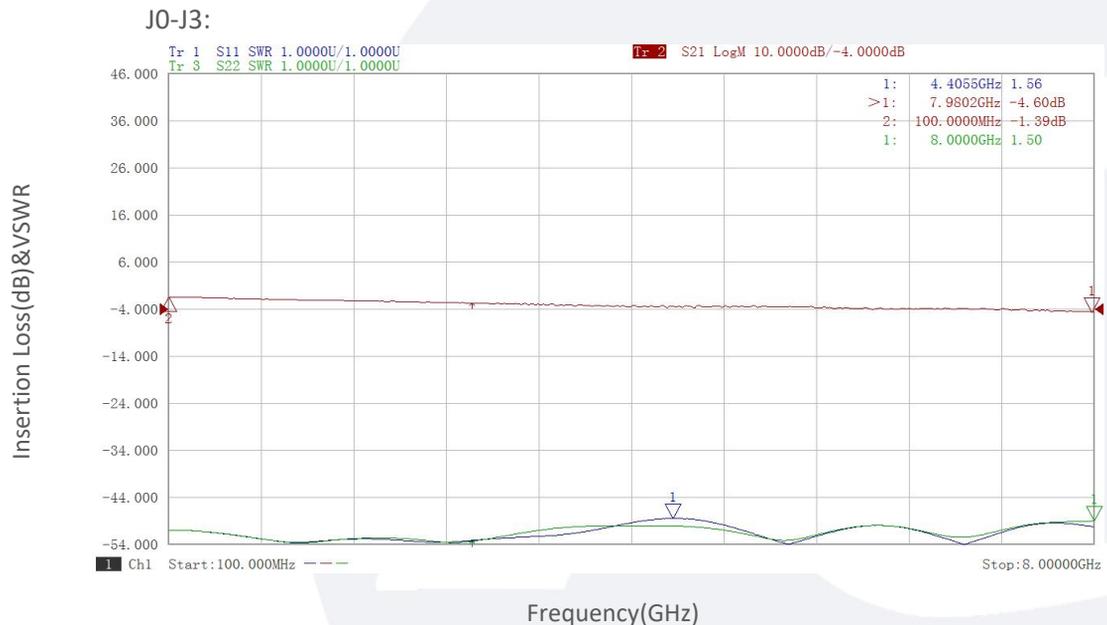
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Isolation vs Frequency



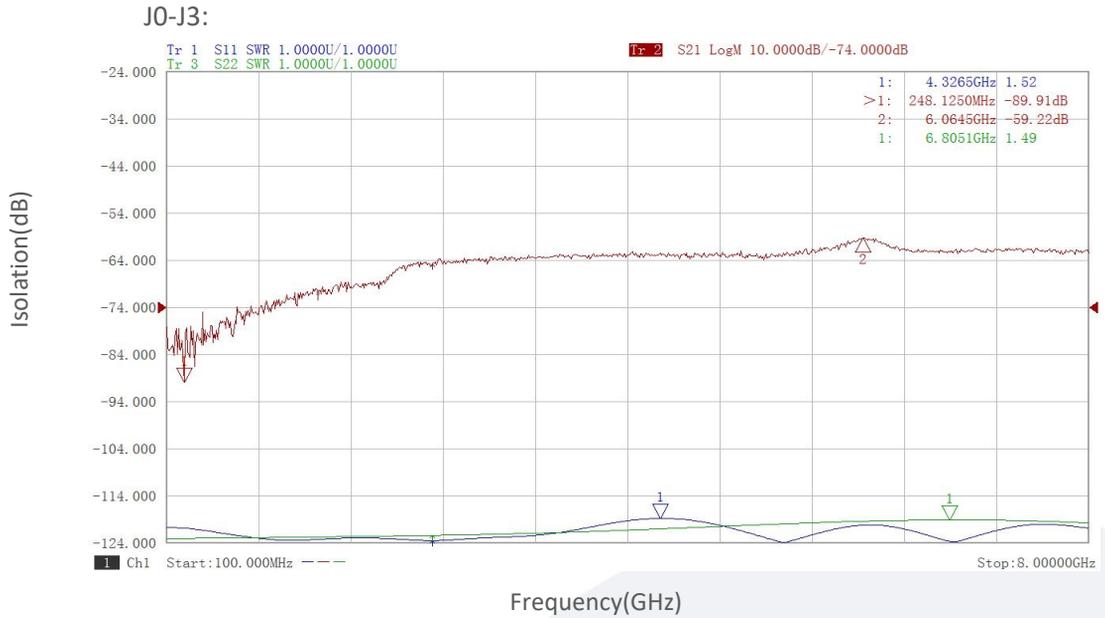
Insertion Loss&VSWR vs Frequency



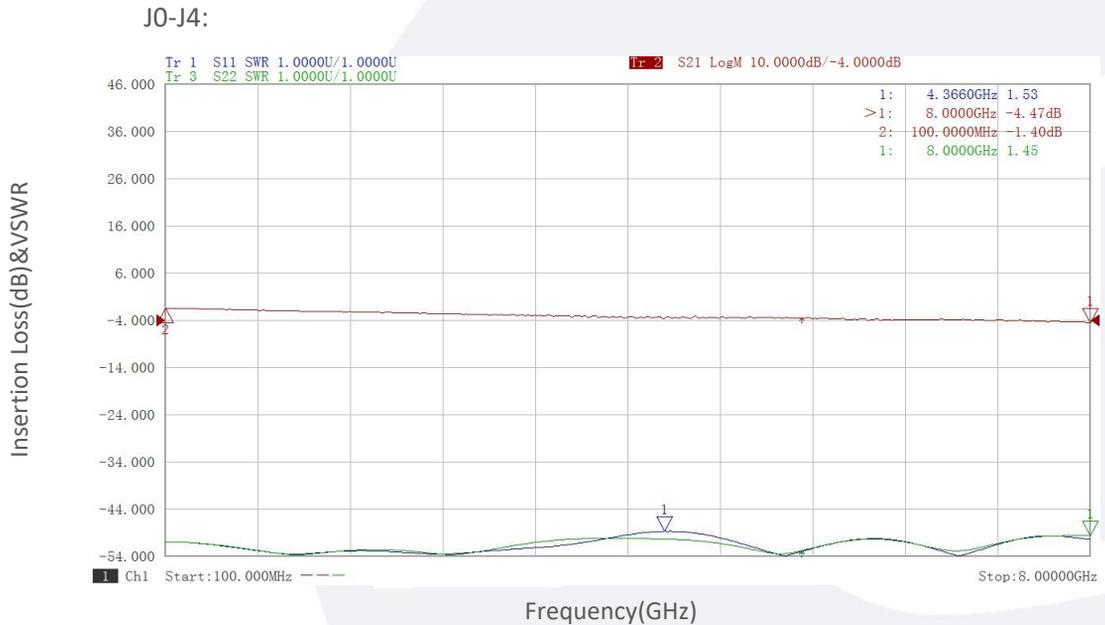
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Isolation vs Frequency



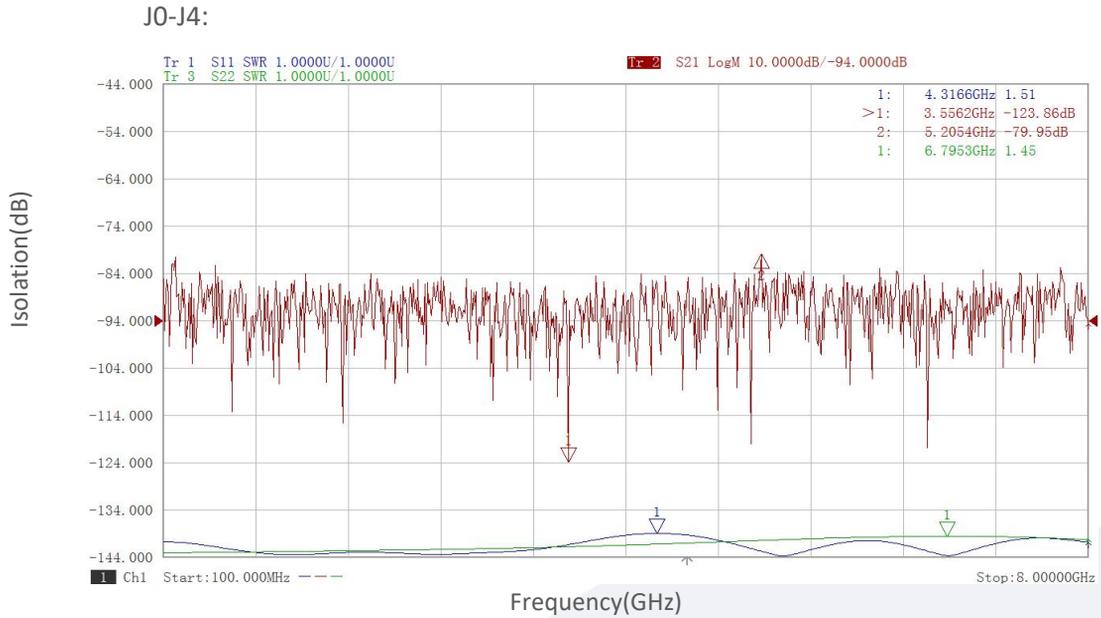
Insertion Loss&VSWR vs Frequency



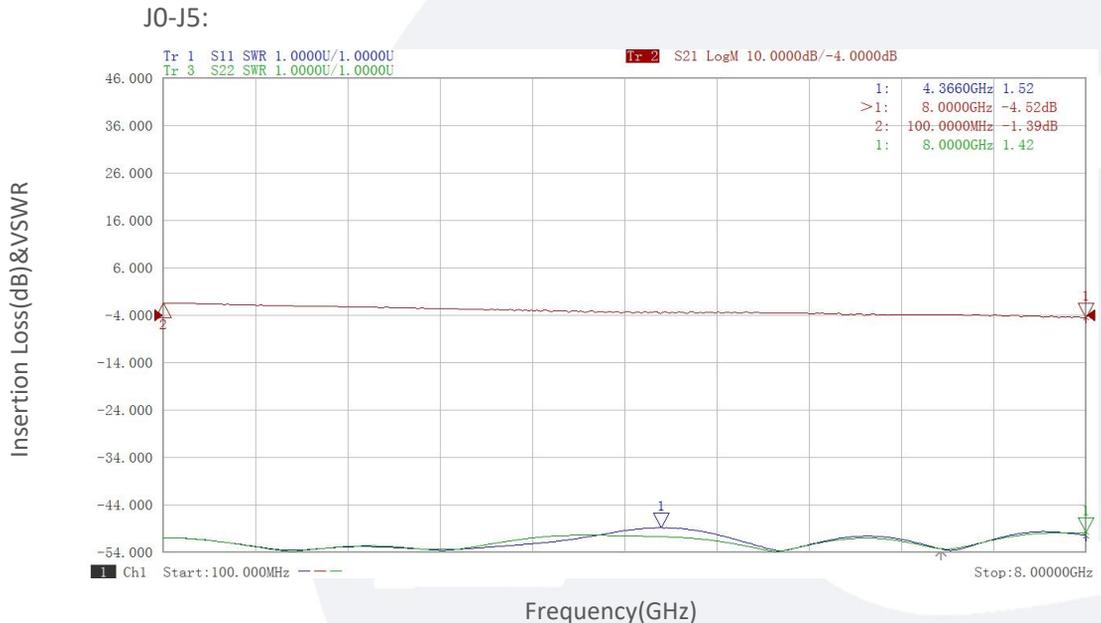
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Isolation vs Frequency



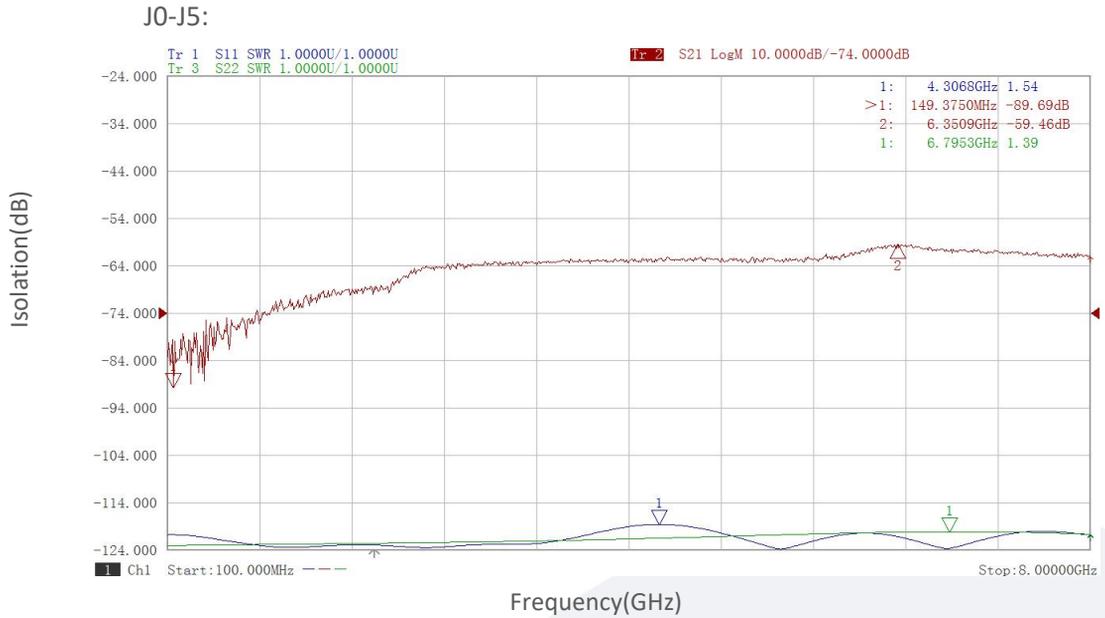
Insertion Loss & VSWR vs Frequency



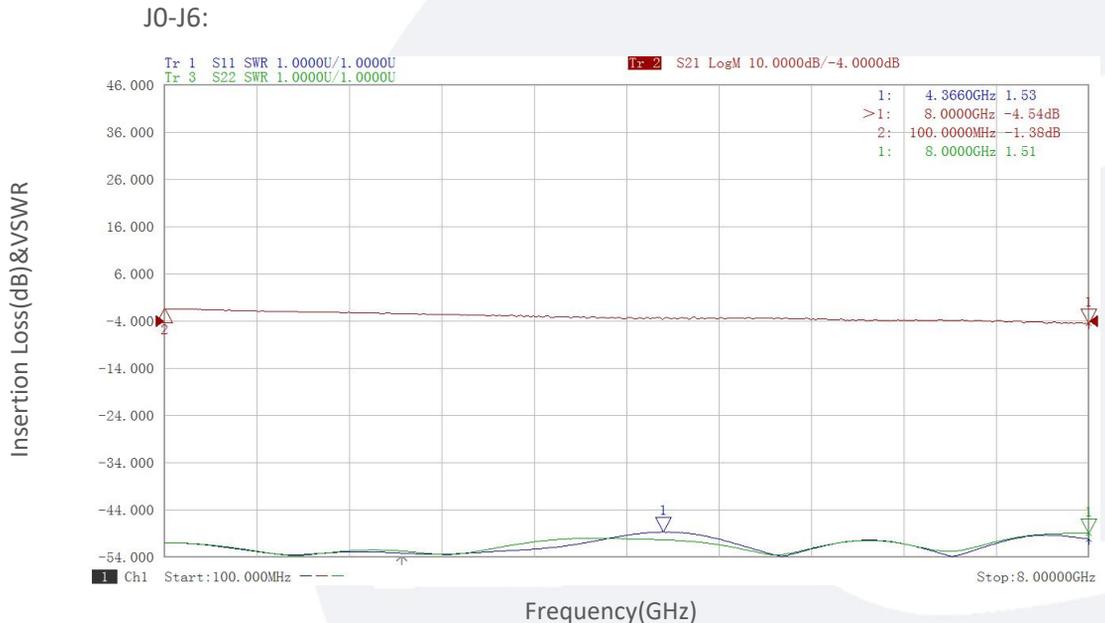
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Isolation vs Frequency



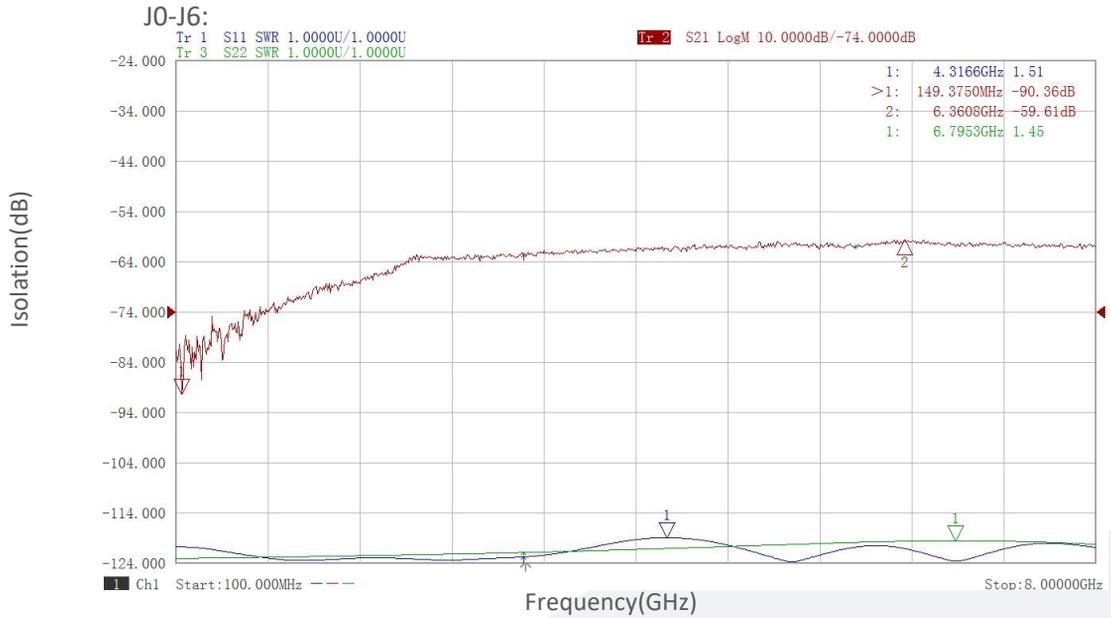
Insertion Loss&VSWR vs Frequency



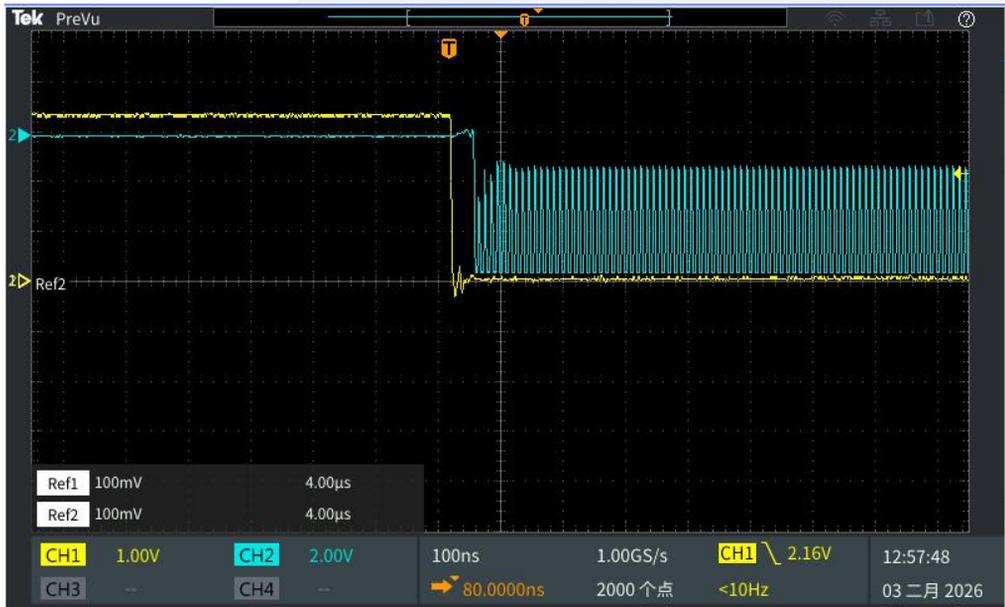
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Isolation vs Frequency



Switch Time



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.