

## 80622X Series High Directivity Bridge Coupler

### Key Features:

- ◆ 100kHz ~ 50GHz Broadband Performance
- ◆ Ultra High Directivity
- ◆ Excellent Coupling Flatness
- ◆ Good Return Loss

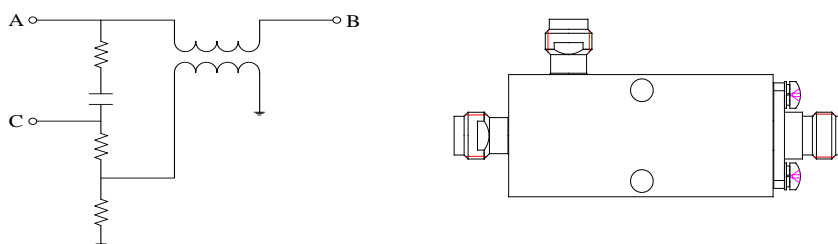


### Product description:

The 80622 series directional bridge couplers consist of a coaxial Balun and an unequal power divider circuit, which can realize ultra-wide band signal directional separation from 100 kHz to 50 GHz. They have the advantages of **flat coupling, good directivity, and high isolation**, making them suitable for use as couplers and unequal power dividers/combiners, which are widely used in various applications such as signal monitoring in instruments and systems, high-precision reflection measurements, noise loading error testing, directional separation/transmission, and signal power dividing/combining.

### Schematic diagram

The port definitions are as shown in the block diagram: Port A is the through-input port, Port C is the coupled output port, and Port B is the through-output port. Port B and Port C are isolated from each other.



### General specifications:

1. Electrical specifications ( performance test temperature 23°C±3°C )

Model		80622B	80622BA	80622DA	80622EA	80622FA	80622HA
Frequency range (GHz)		0.01-6	0.0001-9	0.0001-20	0.0001-26.5	0.0001-40	0.0001-50
Nominal coupling(dB) <sup>1</sup>		16.0±1.0	16.0±1.0	16.0±1.0	16.0±1.0	16.0±1.0	16.0±1.0
Coupling Flatness(dB)	Max.	1.0	1.4	1.6	1.8	2.5	3.2
	Typ.	0.6	0.9	1.0	1.2	1.8	2.5
Directivity(dB) <sup>2</sup>	Min.	30.0	28.0	24.0	22.0	20.0	18.0
Isolation(dB)	Min.	47.0	45.0	42.0	41.0	39.0	38.0
Return Loss(dB)	Min.	22.0	22.0	20.0	18.0	16.0	16.0
Insertion Loss (dB)	Max.	2.0	2.4	2.8	3.0	3.2	3.6
	Typ.	1.8	2.0	2.3	2.4	2.8	3.4
Connectors-3×Jack/Female		3.5mm	3.5mm	3.5mm	3.5mm	2.4mm	2.4mm
Impedance (Ω)		50	50	50	50	50	50

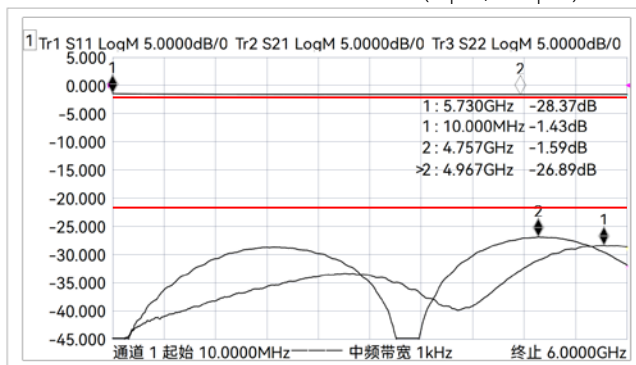
1. Nominal coupling test frequency 10MHz.



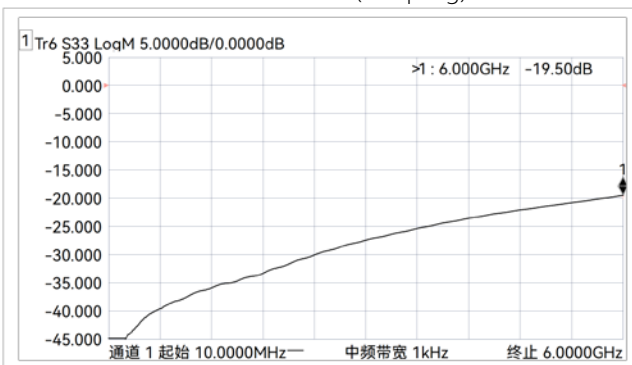
Typical RF performance ( updated in 2024 )

1. 80622B, 3.5mm bridge coupler

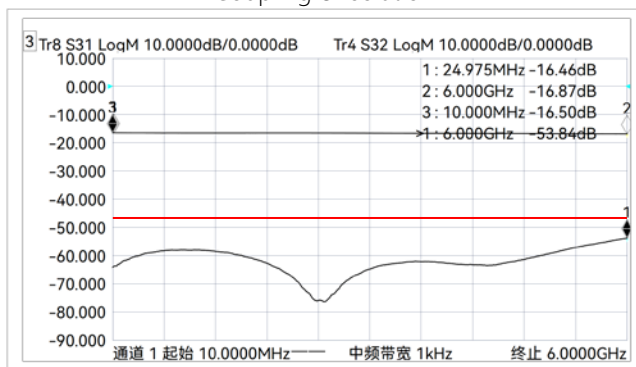
Insertion Loss & Return Loss(Input/Output)



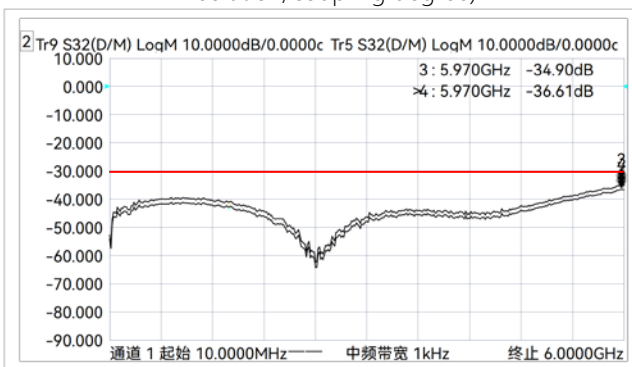
Return Loss(Coupling)



Coupling & Isolation

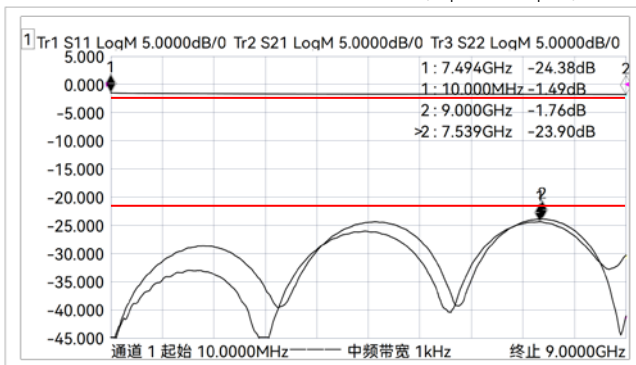


Directionality (inverse coupling normalization method, isolation/coupling degree)

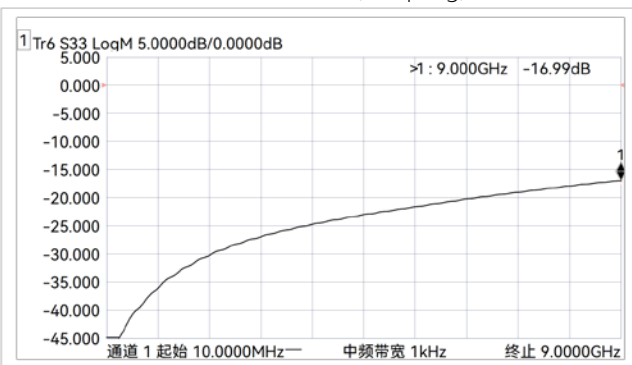


2. 80622BA, 3.5mm bridge coupler

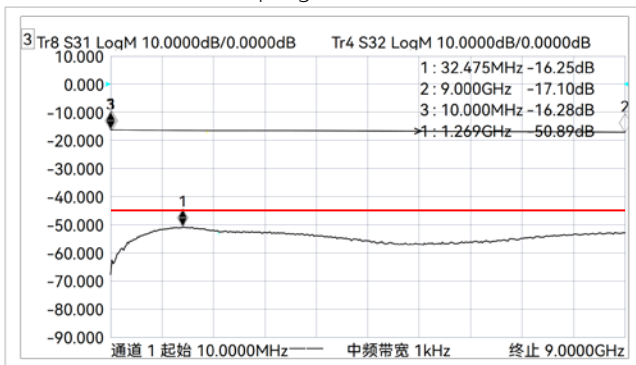
Insertion Loss & Return Loss(Input/Output)



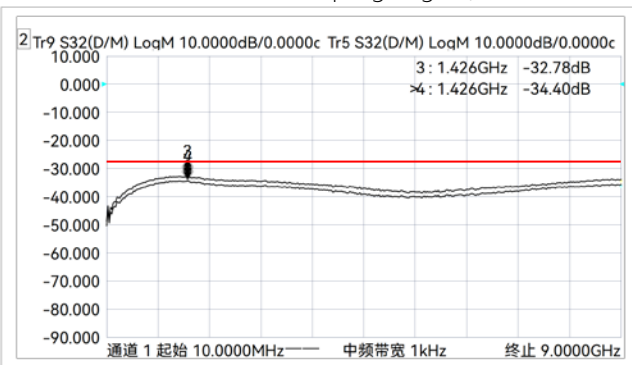
Return Loss(Coupling)



Coupling & Isolation

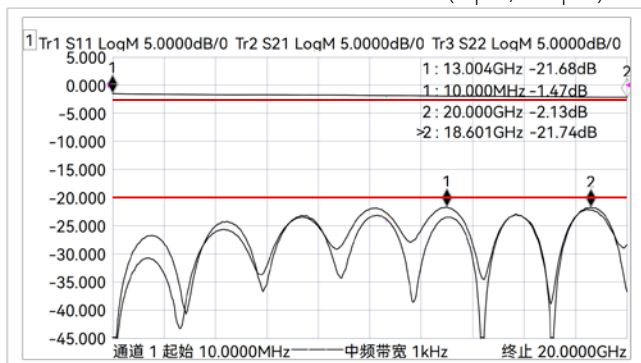


Directionality (inverse coupling normalization method, isolation/coupling degree)

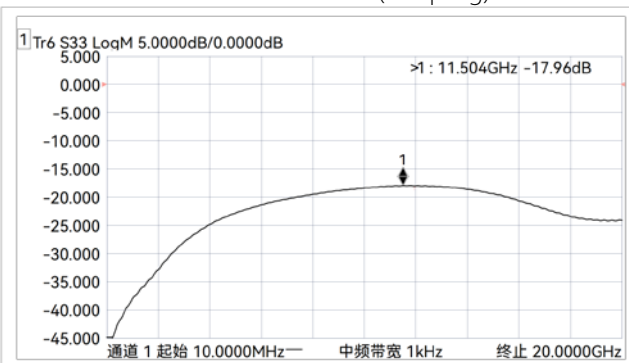


### 3. 80622DA, 3.5mm bridge coupler

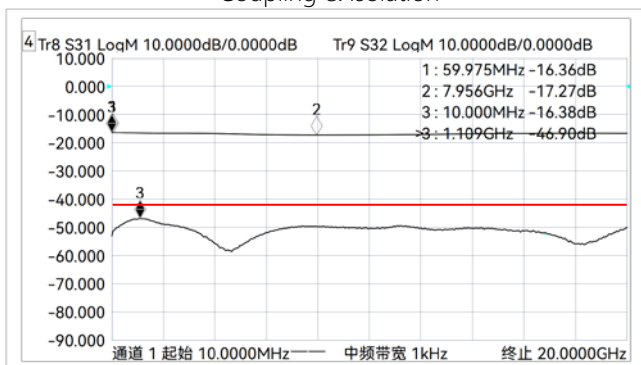
Insertion Loss & Return Loss(Input/Output)



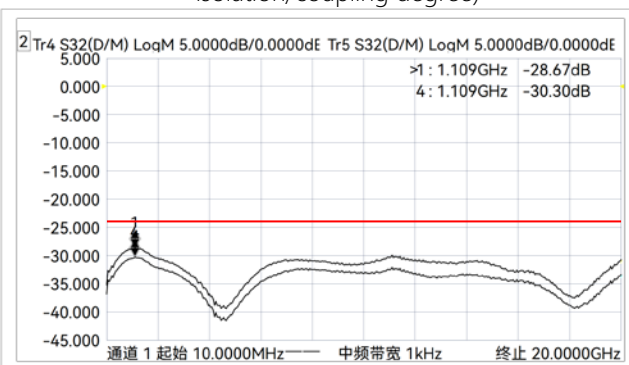
Return Loss(Coupling)



Coupling & Isolation

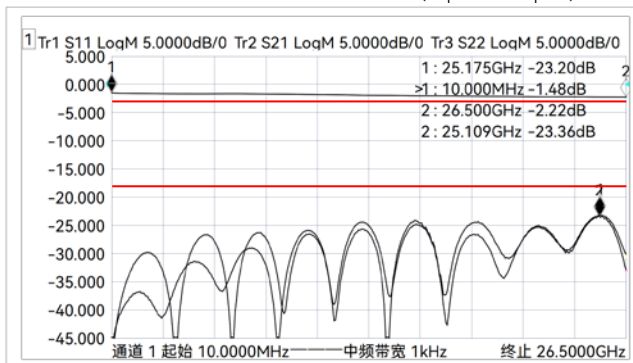


Directionality (inverse coupling normalization method, isolation/coupling degree)

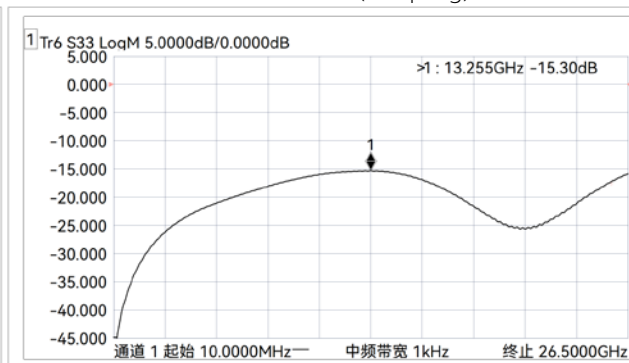


### 4. 80622EA, 3.5mm bridge coupler

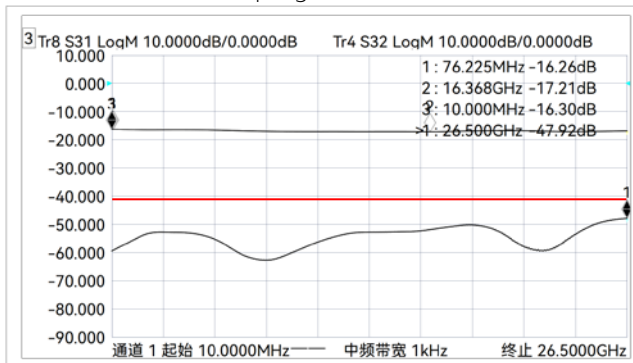
Insertion Loss & Return Loss(Input/Output)



Return Loss(Coupling)



Coupling & Isolation

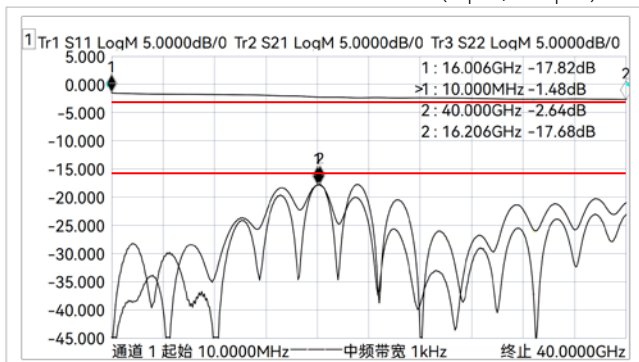


Directionality (inverse coupling normalization method, isolation/coupling degree)

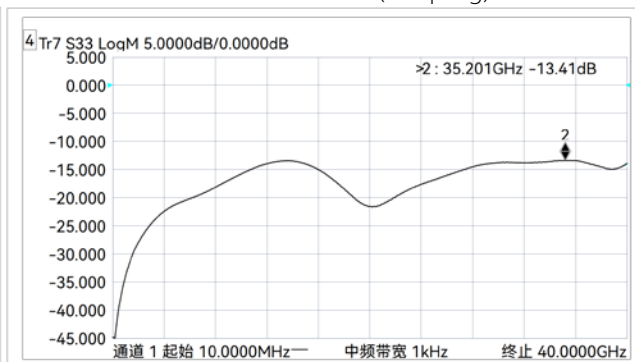


### 5. 80622FA, 2.4mm bridge coupler

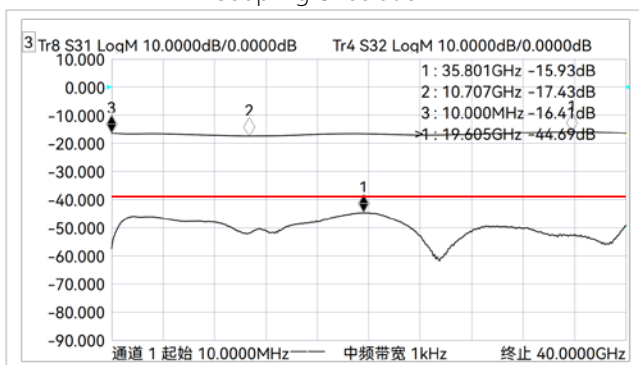
Insertion Loss & Return Loss(Input/Output)



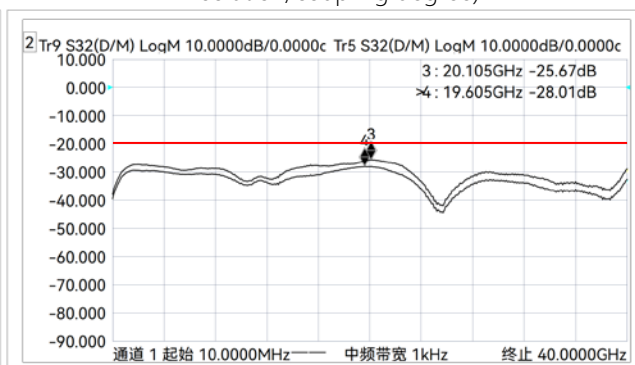
Return Loss(Coupling)



Coupling & Isolation



Directionality (inverse coupling normalization method, isolation/coupling degree)

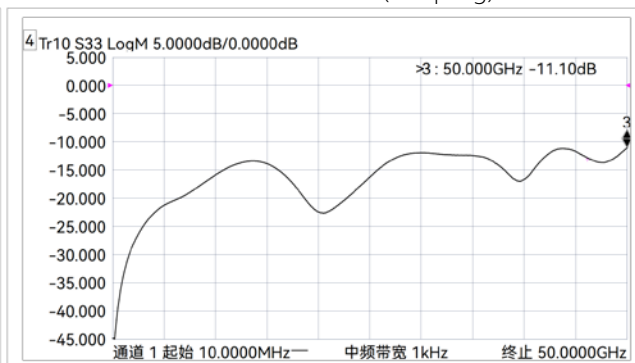


### 6. 80622HA, 2.4mm bridge coupler

Insertion Loss & Return Loss(Input/Output)



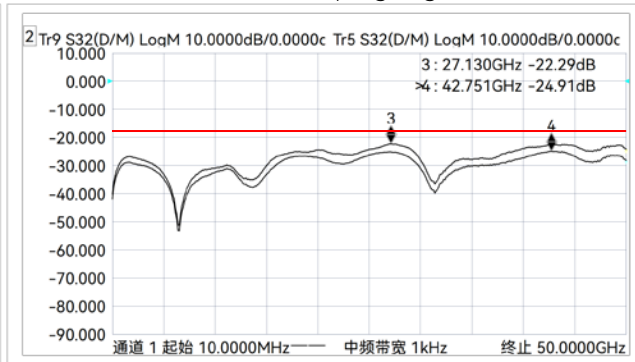
Return Loss(Coupling)



Coupling & Isolation



Directionality (inverse coupling normalization method, isolation/coupling degree)



## Ordering Information:

Model	Connectors -3x Jack/Female	Frequency range	Note
80622B	3.5mm	10MHz-6GHz	16dB coupling
80622BA	3.5mm	100kHz-9GHz	16dB coupling
80622DA	3.5mm	100kHz-20GHz	16dB coupling
80622EA	3.5mm	100kHz-26.5GHz	16dB coupling
80622FA	2.4mm	100kHz-40GHz	16dB coupling
80622HA	2.4mm	100kHz-50GHz	16dB coupling
80622-H03-EN			Laser marking product name in English. This is an option.

## Notes:

1. This product is an electrostatic sensitive part. It is forbidden to have an electrostatic voltage exceeding 5000V. Pay attention to electrostatic protection during storage, transportation and use.
2. During use, pay attention to the requirements of service limit parameters and do not exceed the specified value.
3. This product is unsealed and should be protected from moisture and rain. Please store it in a dry and dust-free environment.
4. This product contains soft magnetic components. Storage or operation in a strong magnetic environment may lead to changes in the performance of the component.
5. The specifications of the above products can be changed without notice.