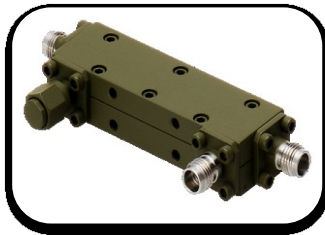


# Broadband Hybrid and Coupler

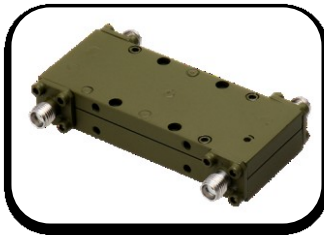
0.3-45GHz standard specifications

90/180deg Hybrid and 10/20/30dB Coupler

**ID CONNECTING**



30dB Coupler



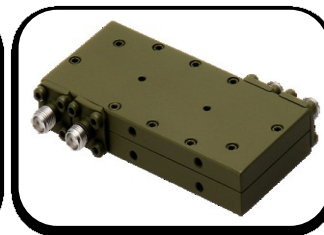
90deg Hybrid



20dB Coupler



10dB Coupler



180deg Hybrid

**Broadband 90/180 Hybrid and Coupler**

- Broadband 0.5-45GHz
- 3dB 90 /180 deg Hybrid
- 1-10/20/30dB Coupler
- Operating Temp. : -35 ~ +105 °C
- Storage Temp. -55~+125 °C

## Directional Coupler

The datasheet will be provide if you needed any products.

Model	Freq. Rang	Nominal	Insertion	Main	Coupling	Directivity	Average	Average	Connector	Operating
		Coupling	Loss	VSWR	VSWR		Power	Power		Temp.
	GHz	dB Max	dB Max	Max	Max	dB Min	W Max	KW Max		°C
ID06-040080	4-8	06±0.75	0.8	1.5	1.5	15	20	3	SMA-Female	-35 ~ +105
ID0-180265	18-26.5	10±0.3	1.4	1.4	1.4	14	20	3	SMA-Female	-35 ~ +105
ID005080	0.5-8	10±0.4	1.2	1.25	1.25	20	20	3	SMA-Female	-35 ~ +105
ID10-010200	1-20	10±0.4	1.4	1.4	1.4	16	20	3	SMA-Female	-35 ~ +105
ID10-020180	2-18	10±0.4	1.1	1.3	1.3	16	20	3	SMA-Female	-35 ~ +105
ID10-020200	2-20	10±0.4	1.4	1.3	1.3	15	20	3	SMA-Female	-35 ~ +105
ID10-060265	6-26.5	10±0.4	1.4	1.4	1.4	16	20	3	SMA-Female	-35 ~ +105
ID10-003060	0.38-6	10±0.5	1.1	1.25	1.25	15	20	3	SMA-Female	-35 ~ +105
ID10-005200	0.5-20	10±0.5	1.7	1.4	1.4	16	20	3	SMA-Female	-35 ~ +105
ID10-010265	1-26.5	10±0.5	1.6	1.4	1.4	14	20	3	SMA-Female	-35 ~ +105
ID10-060180	6-18	10±0.5	0.9	1.4	1.4	16	20	3	SMA-Female	-35 ~ +105
ID10-060400	6-40	10±0.5	1.7	1.6	1.6	12	20	3	2.92mm-F	-35 ~ +105
ID10-100400	10-40	10±0.5	1.7	1.6	1.6	12	20	3	2.92mm-F	-35 ~ +105
ID10-180400	18-40	10±0.5	1.7	1.7	1.7	12	20	3	2.92mm-F	-35 ~ +105
ID10-265400	26.5-40	10±0.5	1.7	1.7	1.7	13	20	3	2.92mm-F	-35 ~ +105
ID10-003080	0.3-8	10±0.6	1.5	1.30	1.35	15	20	3	SMA-Female	-35 ~ +105°C
ID10-004200	0.4-20	10±0.6	1.7	1.4	1.4	14	20	3	SMA-Female	-35 ~ +105
ID10-010400	1-40	10±0.6	2.5	1.7	1.7	10	20	3	2.92mm-F	-35 ~ +105
ID10-020265	2-26.5	10±0.6	1.7	1.5	1.5	13	20	3	SMA-Female	-35 ~ +105

## Broadband Hybrid and Coupler

### Directional Coupler

The datasheet will be provide if you needed any products.

Model	Freq. Rang	Nominal	Insertion	Main	Coupling	Directivity	Average	Average	Connector	Operating
		Coupling	Loss	VSWR	VSWR		Power	Power		Temp.
	GHz	dB Max	dB Max	Max	Max	dB Min	W Max	KW Max		°C
ID10-020400	2-40	10±0.6	2	1.7	1.7	10	20	3	2.92mm-F	-35 ~ +105
ID10-004040	0.4-4	10±0.7	1	1.5	1.5	15	20	3	SMA-Female	-35 ~ +105
ID10-015030	1.5-3	10±0.7	0.6	1.5	1.5	15	20	3	SMA-Female	-35 ~ +105
ID10-005265	0.5-26.5	10±0.8	2.2	1.4	1.4	14	20	3	SMA-Female	-35 ~ +105
ID10-010080	1-8	10±0.8	0.8	1.5	1.5	13	20	3	SMA-Female	-35 ~ +105
ID10-010100	1-10	10±0.8	1.2	1.5	1.5	13	20	3	SMA-Female	-35 ~ +105
ID10-020040	2-4	10±0.8	0.6	1.5	1.5	22	20	3	SMA-Female	-35 ~ +105
ID10-040080	4-8	10±0.8	0.8	1.5	1.5	15	20	3	SMA-Female	-35 ~ +105
ID10-005400	0.5-40	10±0.9	2.9	1.7	1.7	10	20	3	2.92mm-F	-35 ~ +105
ID10-060180A	6-18	10±1	0.7	1.4	1.4	14	20	3	SMA-Female	-40 ~ +70
ID10-010440	1-44	10±1.0	2.2	1.8	1.8	10	20	3	2.92mm-F	-35 ~ +105°C
ID10-005060A	0.5-6	10±1.2	0.6	1.3	1.3	18	50	3	SMA-Female	-40 ~ +70
ID13-020400	2-40	13±0.7	1.7	1.7	1.7	12	20	3	2.92mm-F	-35 ~ +105
ID13-010400	1-40	13±0.8	2.2	1.7	1.7	11	20	3	2.92mm-F	-35 ~ +105
ID15-010100	1-10	15±1.0	1	1.5	1.5	15	20	3	SMA-Female	-35 ~ +105
ID16-005080	0.5-8	16±0.5	0.9	1.3	1.3	18	20	3	SMA-Female	-35 ~ +105
ID16-005265	0.5-26.5	16±0.5	0.9	1.3	1.3	18	20	3	SMA-Female	-35 ~ +105
ID16-010200	1-20	16±0.5	1.5	1.4	1.4	16	20	3	SMA-Female	-35 ~ +105
ID16-010265	1-26.5	16±0.5	1.5	1.4	1.4	16	20	3	SMA-Female	-35 ~ +105

### Directional Coupler

The datasheet will be provide if you needed any products.

Model	Freq. Rang	Nominal	Insertion	Main	Coupling	Directivity	Average	Average	Connector	Operating
		Coupling	Loss	VSWR	VSWR		Power	Power		Temp.
	GHz	dB Max	dB Max	Max	Max	dB Min	KW Max	W Max		°C
ID16-020180	2-18	16±0.5	0.8	1.3	1.3	16	20	3	SMA-Female	-35 ~ +105
ID16-020265	2-26.5	16±0.5	1.2	1.5	1.5	13	20	3	SMA-Female	-35 ~ +105
ID16-020400	2-40	16±0.5	1.6	1.7	1.7	16	20	3	2.92mm-F	-35 ~ +105
ID20-180265	18-26.5	20±0.4	0.8	1.4	1.4	14	20	3	SMA-Female	-35 ~ +105
ID20-005080	0.5-8	20±0.5	0.8	1.3	1.3	20	20	3	SMA-Female	-35 ~ +105
ID20-010265	1-26.5	20±0.5	1.2	1.4	1.4	14	20	3	SMA-Female	-35 ~ +105
ID20-020180	2-18	20±0.5	0.7	1.4	1.4	16	20	3	SMA-Female	-35 ~ +105
ID20-020265	2-26.5	20±0.5	1.1	1.5	1.5	13	20	3	SMA-Female	-35 ~ +105
ID20-060265	6-26.5	20±0.5	0.8	1.4	1.4	15	20	3	SMA-Female	-35 ~ +105
ID20-060400	6-40	20±0.5	1.3	1.7	1.7	12	20	3	2.92mm-F	-35 ~ +105
ID20-340360	34~36	20±0.6	0.15	1.15	/	20	/	/	2.92mm-F	-35 ~ +105°C
ID20-100400	10-40	20±0.6	1.3	1.7	1.7	12	20	3	2.92mm-F	-35 ~ +105
ID20-010400	1-40	20±0.7	1.8	1.7	1.7	10	20	3	2.92mm-F	-35 ~ +105
ID20-180400	18-40	20±0.7	1.3	1.7	1.7	14	20	3	2.92mm-F	-35 ~ +105
ID20-005265	0.5-26.5	20±0.8	1.4	1.5	1.5	14	20	3	SMA-Female	-35 ~ +105
ID20-005020	0.5-2	20±1.0	0.6	1.3	1.3	20	20	3	SMA-Female	-35 ~ +105
ID20-010080	1-8	20±1.0	0.8	1.5	1.5	15	20	3	SMA-Female	-35 ~ +105
ID20-010100	1-10	20±1.0	1	1.5	1.5	30	20	3	SMA-Female	-35 ~ +105
ID20-060180	6-18	20±1.0	1	1.8	1.8	8	20	3	SMA-Female	-35 ~ +105

## Directional Coupler

The datasheet will be provide if you needed any products.

Model	Freq. Rang	Nominal	Insertion	Main	Coupling	Directivity	Average	Average	Connector	Operating
		Coupling	Loss	VSWR	VSWR		Power	Power		Temp.
	GHz	dB Max	dB Max	Max	Max	dB Min	W Max	KW Max		°C
ID20-080180	8-18	20±1.0	1	1.8	1.8	7	20	3	SMA-Female	-35 ~ +105
ID20-020180A	2-18	20±2	0.5	1.5	1.5	10	20	3	SMA-Female	-40 ~ +70
ID30-180265	18-26.5	30±0.4	0.7	1.4	1.4	14	20	3	SMA-Female	-35 ~ +105
ID30-005080	0.5-8	30±0.5	0.7	1.3	1.3	20	20	3	SMA-Female	-35 ~ +105
ID30-060265	6-26.5	30±0.5	0.6	1.5	1.5	14	20	3	SMA-Female	-35 ~ +105
ID30-180400	18-40	30±0.5	1	1.7	1.7	12	20	3	2.92mm-F	-35 ~ +105
ID30-265400	26.5-40	30±0.5	1	1.7	1.7	13	20	3	2.92mm-F	-35 ~ +105
ID30-060400	6-40	30±0.7	1.2	1.7	1.7	12	20	3	2.92mm-F	-35 ~ +105
ID30-004200	0.4-20	30±0.8	1.2	1.5	1.5	14	20	3	SMA-Female	-35 ~ +105
ID30-005265	0.5-26.5	30±0.8	1.4	1.4	1.5	14	20	3	SMA-Female	-35 ~ +105
ID30-375425	37.5-42.5	30±0.8	1.2	1.8	1.8	10	20	3	2.4mm-F	-35 ~ +105°C
ID30-022024A	2.2-2.4	30±1.0	0.3	1.25	1.25	18	50	/	SMA-Female	-35 ~ +105°C
ID30-020180	2-18	30±1.5	1	1.5	1.5	8	20	3	SMA-Female	-35 ~ +105
ID35-020040	2-4	35±1.5	0.5	1.5	1.5	50	20	3	SMA-Female	-35 ~ +105
ID40-020180	2-18	40±1.5	1	1.5	1.5	8	20	3	SMA-Female	-35 ~ +105
ID06-080180	8-18	6±1.0	2	1.8	1.8	7	20	3	SMA-Female	-35 ~ +105
ID07-020040	2-4	7±0.75	0.6	1.5	1.5	22	20	3	SMA-Female	-35 ~ +105

The datasheet will be provide if you needed any products.

## Broadband Hybrid and Coupler

### 3dB 90 / 180 deg Hybrid

The datasheet will be provide if you needed any products. Pls.

Model	Name	Freq. Rang	VSWR	Insertion	Amplitude	Isolation	Phase	Average	Average	Connector	Operating
		GHz	Max	Loss	Balance		Balance	Power	Power		Temp.
				dB Max	dB Max		dB Min	Deg Max	W Max		KW Max
ID8-030035	180deg	3-3.5	1.22	0.5	±0.4	20	±2.5	20	3	N-Female	-40~+70
ID9-196212	90deg	19.6-21.2	1.6	1.6	±0.5	18	±5	20	3	SMA-Female	-40~+70
ID9-120265	90deg	12~26.5	1.6	1.6	±0.7	15	±8	20	2	SMA-Female	-40~+70
ID8-020080	180deg	2~18	1.6	2.8	±0.6	16	±9.0	20	3	SMA-Female	-40~+70
ID9-190300	90deg	19-30	1.6	1.8	±0.6	15	±6	20	3	2.92mm-F	-35~+105
ID9-005030	90deg	0.5-3	1.2	1.1	±0.4	22	±4	50	1	SMA-Female	-35~+105
ID9-005090	90deg	0.5-9	1.4	1.5	±0.5	19	±5	20	3	SMA-Female	-35~+105
ID9-010020	90deg	1-2	1.5	1	±0.5	20	±2	20	3	SMA-Female	-35~+105
ID9-010124	90deg	1-12.4	1.3	1.4	±0.4	17	±6	20	3	SMA-Female	-35~+105
ID9-010180	90deg	1-18	1.35	1.9	±0.5	17	±8	20	3	SMA-Female	-35~+105
ID9-020080	90deg	2-8	1.5	1	±1.0	16	±3	20	3	SMA-Female	-35~+105
ID9-020124	90deg	2-12.4	1.3	1.2	±0.4	18	±6	20	3	SMA-Female	-35~+105
ID9-020180	90deg	2-18	1.35	1.3	±0.4	17	±7	20	3	SMA-Female	-40~+70
ID9-020265	90deg	2-26.5	1.6	1.7	±0.8	14	±10	20	3	SMA-Female	-40~+70
ID9-040124	90deg	4-12.4	1.35	1	±0.5	20	±4	20	3	SMA-Female	-40~+70
ID9-040180	90deg	4-18	1.4	1.6	±0.6	17	±6	20	3	SMA-Female	-40~+70
ID9-040265	90deg	4-26.5	1.6	1.8	±0.8	15	±8	20	3	SMA-Female	-40~+70
ID9-060180	90deg	6-18	1.45	1	±0.4	17	±5	20	3	SMA-Female	-40~+70
ID9-060265	90deg	6-26.5	1.6	1.5	±0.6	15	±8	20	3	SMA-Female	-40~+70
ID9-060400	90deg	6-40	1.7	2	±1.2	13	±10	20	3	2.92mm-F	-35~+105
ID9-080180	90deg	8-18	1.5	1.5	±0.6	18	±5	20	3	SMA-Female	-35~+105

## Broadband Hybrid and Coupler

### 3dB 90 / 180 deg Hybrid

The datasheet will be provide if you needed any products.

Model	Name	Freq. Rang	VSWR	Insertion	Amplitude	Isolation	Phase	Average	Average	Connector	Operating
		GHz	Max	Loss	Balance		Balance	Power	Power		Temp.
				dB Max	dB Max		dB Min	Deg Max	W Max		KW Max
ID8-007060	180deg	0.75-6	1.4	2	±0.6	20	±7	20	3	SMA-Female	-35~+105
ID8-007124	180deg	0.75-12.4	1.6	3	±0.6	20	±8	20	3	SMA-Female	-35~+105
ID8-007180	180deg	0.75-18	1.6	4.6	±0.6	20	±10	20	3	SMA-Female	-35~+105
ID8-010124	180deg	1-12.4	1.6	2.1	±0.4	17	±10	20	3	SMA-Female	-35~+105
ID8-010180	180deg	1-18	1.7	2.9	±0.6	15	±12	20	3	SMA-Female	-35~+105
ID8-020124	180deg	2-12.4	1.5	1.8	±0.5	17	±8	20	3	SMA-Female	-40~+70
ID8-020180	180deg	2-18	1.6	2	±0.6	16	±10	20	3	SMA-Female	-40~+70
ID8-040124	180deg	4-12.4	1.4	0.9	±0.4	18	±6	20	3	SMA-Female	-40~+70
ID8-040180	180deg	4-18	1.6	1.8	±0.7	15	±8	20	3	SMA-Female	-40~+70
ID8-060124	180deg	6-12.4	1.4	1.4	±0.4	18	±5	20	3	SMA-Female	-40~+70
ID8-060180	180deg	6-18	1.6	1.5	±0.6	15	±8	20	3	SMA-Female	-35~+105
ID8-060265	180deg	6-26.5	1.7	1.6	±0.7	14	±11	20	3	SMA-Female	-35~+105
ID8-060400	180deg	6-40	1.8	3.5	±1.2	13	±12	20	3	2.92mm-F	-35~+105
ID8-100400	180deg	10-40	1.8	3.5	±1.2	14	±12	20	3	2.92mm-F	-35~+105
ID8-180400	180deg	18-40	1.8	3.5	±1.2	14	±12	20	3	2.92mm-F	-35~+105
ID8-265400	180deg	26.5-40	1.7	3.5	±1.2	14	±12	20	3	2.92mm-F	-35~+105
ID9-100265	90deg	10-26.5	1.6	1.5	±0.7	16	±6	20	3	SMA-Female	-35~+105
ID9-100400	90deg	10-40	1.8	2	±0.7	12	±10	20	3	2.92mm-F	-40~+70
ID9-180400	90deg	18-40	1.7	2	±0.6	14	±9	20	3	2.92mm-F	-40~+70



## Directional Coupler

Model: 16-010265

### 10-20dB Directional Coupler



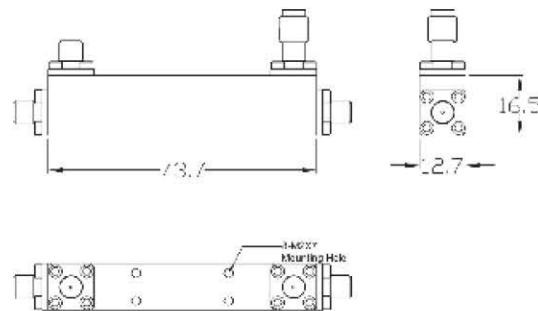
#### Features

- 1.Theoretical Insertion Loss not included in the Insertion Loss Parameter.
2. Multi-Octave bandwidth of working frequency range.
3. Superior phase balance and amplitude balance between any 2 ports.
4. Low VSWR and high Directivity.

#### Elec.Spec. "50Ω"

Freq. Range (GHz)	1-26.5
Nom.Coupling (dB) Limits	16±0.5
Main VSWR Max	1.4
Coupling VSWR Max	1.4
Insertion Loss ( dB) Max	1.5
Directivity (dB) Max	16
CW Power (W) Max	20
Peak Power (KW) Max	3
Connector	SMA-Female
Operating Temp. (°C)	-35 ~ +105
Storage Temp. (°C)	-55 ~ +125
Weight (g) Max	N/A

#### Outline Drawing Unit: mm



## Directional Coupler

Model: 10-010400

### 1-10dB Directional Coupler



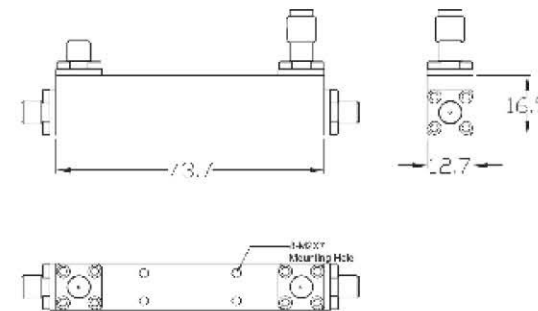
#### Features

- 1.Theoretical Insertion Loss not included in the Insertion Loss Parameter.
2. Multi-Octave bandwidth of working frequency range.
3. Superior phase balance and amplitude balance between any 2 ports.
4. Low VSWR and high Directivity.

#### Elec.Spec. "50Ω"

Freq. Range (GHz)	1-40
Nom.Coupling (dB) Limits	10±0.6
Main VSWR Max	1.7
Coupling VSWR Max	1.7
Insertion Loss ( dB) Max	2.5
Directivity (dB) Max	10
CW Power (W) Max	20
Peak Power (KW) Max	3
Connector	2.92mm-F
Operating Temp. (°C)	-35 ~ +105
Storage Temp. (°C)	-55 ~ +125
Weight (g) Max	N/A

#### Outline Drawing Unit: mm



## 3dB 90° 180° Hybrid

Model: 8-265400

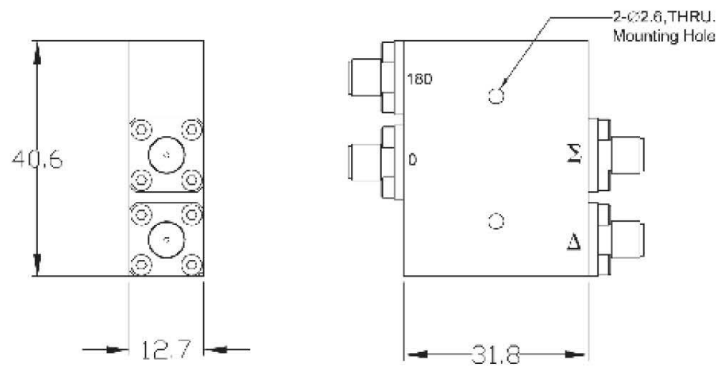
### 180deg Hybrid Coupler



#### Features

- 0.7-40GHz Ultra-wide Operating Frequency Band Coverage
- Low VSWR, High Isolation,
- Good Phase Balance

OutlineDrawing Unit: mm



#### Elec. Spec. "50Ω"

Freq. Range (GHz)	26.5-40
Insertion Loss (dB) Max	3.5
Isolator (dB) Min	14
VSWR Max	1.7
Amp. Bal. ( dB) Max	±1.2
Phase Bal. ( dB) Max	±12
CW Power (W) Max	20
Peak Power(KW) Max	3
Connector	2.92mm-Female
Operating Temp.(°C)	-35~+105
Storage Temp.(°C)	-55~+125
Weight (g) Max	N/A

## 3dB 90° 180° Hybrid

Model: 9-060400

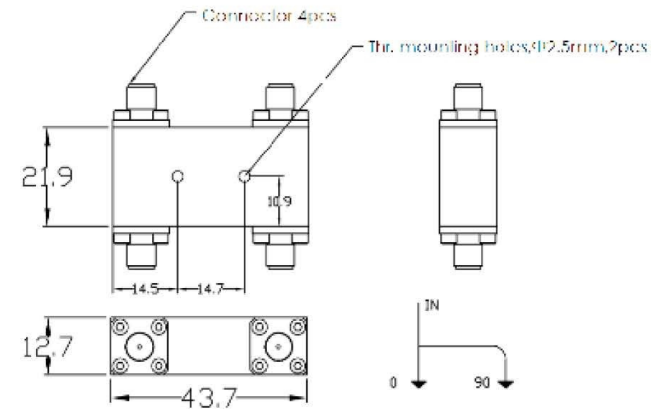
### 90deg Hybrid Coupler



#### Features

- 0.7-40GHz Ultra-wide Operating Frequency Band Coverage
- Low VSWR, High Isolation,
- Good Phase Balance

OutlineDrawing Unit: mm



#### Elec. Spec. "50Ω"

Freq. Range (GHz)	6-40
Insertion Loss (dB) Max	2
Isolator (dB) Min	13
VSWR Max	1.7
Amp. Bal. ( dB) Max	±1.2
Phase Bal. ( dB) Max	±10
CW Power (W) Max	20
Peak Power(KW) Max	3
Connector	2.92mm-Female
Operating Temp.(°C)	-35~+105
Storage Temp.(°C)	-55~+125
Weight (g) Max	N/A