

# MICROWAVE COUPLERS

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*Navigator*



**SIMPLIFICATION** IS OUR INNOVATION



COUPLERS NAVIGATOR

FAMILY

Radiall offers a comprehensive range of microwave couplers from 150 MHz to 18 GHz. It includes 3dB hybrid 90° and directional couplers, octave bands and wide bands.

The offer is equipped with SMA and N connectors and is compliant with MIL-STD-202 environmental testing (MIL grade).

APPLICATIONS

- Microwave commutation matrices
- Microwave bench tests
- Ground radar
- Airborne radar
- Satcom antennas
- Electronic Warfare systems
- Automatic Test Equipment

SERIES

3 DB 90° HYBRID COUPLERS



- 150 MHz up to 18 GHz
- Octave band and wide band
- SMA and N female connector; custom design available
- Isolation

DIRECTIONAL COUPLERS



- Octave Band*
- 150 MHz up to 18 GHz
  - Octave band
  - SMA and N female connector; custom design available
  - Directivity




- Wide Band*
- 900 MHz up to 18 GHz
  - Wide band
  - SMA and N female connector; custom design available
  - Directivity

PRODUCT ORDERING

SERIES		ELECTRICAL CHARACTERISTICS						PHYSICAL CHARACTERISTICS	
Type	Part Number	Frequency (GHz)	Coupling Factor (dB)	Max Insertion Loss (dB) / Attenuation (dB)	Min Isolation (dB)	VSWR max.	Average Power (W @25 °C)	Connectors	
3 dB Hybrid Couplers	R432171000	0.15 - 0.3	3 ± 0.5	0.3	30	1.15	50	N f / N f	
	R432431000	0.25 - 0.5	3 ± 0.5	0.3	30	1.15	500	N f / N f	
	R432371000	0.5 - 1	3 ± 0.5	0.3	25	1.15	300	N f / N f	
	R432431000	1 - 2	3 ± 0.5	0.3	25	1.2	100	SMA f / SMA f	
	R432471000	1 - 2	3 ± 0.5	0.3	25	1.2	200	N f / N f	
	R432531000	2 - 4	3 ± 0.5	0.3	23	1.2	80	SMA f / SMA f	
	R432571000	2 - 4	3 ± 0.5	0.3	20	1.2	80	N f / N f	
	R432631000	4 - 8	3 ± 0.5	0.3	19	1.25	50	SMA f / SMA f	
	R433721700	7 - 12.4	3 ± 0.5	0.4	18	1.35	30	SMA f / SMA f	
	R433611700	6 - 18	3 ± 0.6	0.6	15	1.5	30	SMA f / SMA f	
R433831700	12.4 - 18	3 ± 0.7	0.6	16	1.4	30	SMA f / SMA f		
Directional Couplers <sup>(1)</sup>	Octave Band	R432172000	0.15 - 0.3	6 ± 0.3	2	30	1.10 / 1.10	500	N f / N f
		R432173000	0.15 - 0.3	10 ± 0.3	1	30	1.10 / 1.10	500	N f / N f
		R432174000	0.15 - 0.3	20 ± 0.3	0.4	30	1.10 / 1.10	500	N f / N f
		R432175000	0.15 - 0.3	30 ± 0.3	0.4	30	1.10 / 1.10	500	N f / N f
		R432273000	0.25 - 0.5	10 ± 0.3	1	30	1.12 / 1.12	500	N f / N f
		R432274000	0.25 - 0.5	20 ± 0.3	0.4	30	1.12 / 1.12	500	N f / N f
		R432275000	0.25 - 0.5	30 ± 0.3	0.4	30	1.12 / 1.12	500	N f / N f
		R432372000	0.5 - 1	6 ± 0.3	2	25	1.15 / 1.15	300	N f / N f
		R432373000	0.5 - 1	10 ± 0.3	1	27	1.15 / 1.15	300	N f / N f
		R432374000	0.5 - 1	20 ± 0.3	0.4	27	1.15 / 1.15	300	N f / N f
		R432375000	0.5 - 1	30 ± 0.3	0.4	27	1.15 / 1.15	300	N f / N f
		R432432000	1 - 2	6 ± 1.1	1.8	23	1.20 / 1.20	100	SMA f / SMA f
		R432433000	1 - 2	10 ± 0.3	1	23	1.15 / 1.15	100	SMA f / SMA f
		R432434000	1 - 2	20 ± 0.3	0.4	23	1.15 / 1.15	100	SMA f / SMA f
		R432435000	1 - 2	30 ± 0.3	0.4	23	1.15 / 1.15	100	SMA f / SMA f
		R432472000	1 - 2	6 ± 0.3	2.25	23	1.15 / 1.15	200	N f / N f
		R432473000	1 - 2	10 ± 0.3	1	23	1.15 / 1.15	200	N f / N f
		R432474000	1 - 2	20 ± 0.3	0.4	23	1.15 / 1.15	200	N f / N f
		R432475000	1 - 2	30 ± 1.1	0.4	23	1.15 / 1.15	200	N f / N f
		R432533000	2 - 4	10 ± 0.3	1	20	1.15 / 1.15	80	SMA f / SMA f
		R432573000	2 - 4	10 ± 0.3	0.4	20	1.15 / 1.15	100	N f / N f
		R432534000	2 - 4	20 ± 0.3	0.4	20	1.15 / 1.15	80	SMA f / SMA f
		R432574000	2 - 4	20 ± 0.3	0.4	20	1.15 / 1.15	100	N f / N f
		R432535000	2 - 4	30 ± 1.1	0.4	20	1.15 / 1.15	80	SMA f / SMA f
	R432633000	4 - 8	10 ± 0.3	1	17	1.20 / 1.20	50	SMA f / SMA f	
	R432634000	4 - 8	20 ± 0.3	0.4	17	1.20 / 1.20	50	SMA f / SMA f	
	R432635000	4 - 8	30 ± 0.3	0.4	17	1.20 / 1.20	50	SMA f / SMA f	
	Wide Band	R433423000	0.9 - 2.1	10 ± 0.8	1	22	1.15 / 1.15	50	SMA f / SMA f
		R433463000	0.9 - 2.1	10 ± 0.5	1	22	1.20 / 1.20	50	N f / N f
		R433424000	0.9 - 2.1	20 ± 0.8	0.4	22	1.15 / 1.15	50	SMA f / SMA f
		R433464000	0.9 - 2.1	20 ± 0.5	0.4	22	1.20 / 1.20	50	N f / N f
		R433523000	1.7 - 4.2	10 ± 0.8	1	20	1.20 / 1.20	50	SMA f / SMA f
		R433563000	1.7 - 4.2	10 ± 0.5	1	20	1.25 / 1.25	50	N f / N f
		R433524000	1.7 - 4.2	20 ± 0.8	0.4	20	1.20 / 1.20	50	SMA f / SMA f
		R433564000	1.7 - 4.2	20 ± 0.8	0.4	20	1.25 / 1.25	50	N f / N f
		R433623000	3.7 - 8.3	10 ± 0.5	1	18	1.25 / 1.25	50	SMA f / SMA f
		R433663000	3.7 - 8.3	10 ± 0.5	1	18	1.30 / 1.30	50	N f / N f
		R433624000	3.7 - 8.3	20 ± 0.5	0.4	18	1.25 / 1.25	50	SMA f / SMA f
		R433664000	3.7 - 8.3	20 ± 0.5	0.4	18	1.30 / 1.30	50	N f / N f
		R433513700	2 - 8	10 ± 1	1	20	1.25 / 1.25	50	SMA f / SMA f
		R433514700	2 - 8	20 ± 1	0.4	20	1.25 / 1.25	50	SMA f / SMA f
		R433723700	7 - 12.4	10 ± 1	1	16	1.30 / 1.30	50	SMA f / SMA f
		R433724700	7 - 12.4	20 ± 1	0.4	16	1.30 / 1.30	50	SMA f / SMA f
		R433502000	2 - 18	6 ± 0.5	0.7	12	1.40 / 1.40	30	SMA f / SMA f
		R433503000	2 - 18	10 ± 1	1.4	12	1.35 / 1.50	20	SMA f / SMA f
		R433504000	2 - 18	20 ± 0.5	0.7	12	1.40 / 1.40	30	SMA f / SMA f
		R433612700	6 - 18	6 ± 1	2.2	15	1.40 / 1.40	50	SMA f / SMA f
		R433613700	6 - 18	10 ± 1	1.1	16	1.40 / 1.40	50	SMA f / SMA f
		R433614700	6 - 18	20 ± 1	0.6	15	1.40 / 1.40	50	SMA f / SMA f
		R433832700	12.4 - 18	6 ± 1	2.2	15	1.40 / 1.40	50	SMA f / SMA f
		R433833700	12.4 - 18	10 ± 1	1.1	15	1.35 / 1.35	50	SMA f / SMA f
		R433834700	12.4 - 18	20 ± 1	0.55	15	1.35 / 1.35	50	SMA f / SMA f

Notes  
1. All directional couplers are loaded with SMA 50 Ohms termination, VSWR max is main line / coupled line, max insertion loss includes coupling loss



An aerial night photograph of a city, likely Tokyo, with its lights reflecting on a river. Overlaid on the image are several white location pins connected by thin white lines, forming a network. A semi-transparent blue rectangle is positioned on the left side of the image, containing two paragraphs of text.

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## SIMPLIFICATION is our INNOVATION

*We advance the design and engineering process for innovators, ground-breakers and pioneers of technology. We reduce weight, improve durability and streamline installation to provide leading-edge connectors that drive product performance.*

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### GLOBAL PRESENCE

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