BDC 0.1 ... 6 GHz
Directional Coupler (ISO 11452-9)

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STANDARD MODELS

Model Line Connector(s)	Part Number	Frequency Range	Coupling dB	Power Pmin W	Insertion Loss max dB	Directivity min dB	VSWR max Main Line	Main Line Connectors
BDC 0160-50/500	**0.1 ... 6 GHz**				**0**	**2 HU, 430 mm**	**0**	**N-f**
	144 ... 146 MHz	**65 ±3**	**0 / 0 ±0**	**0 / 0**				
	400 ... 450 MHz	**56 ±3**	**0 / 0 ±0**	**0 / 0**				
	0.7 ... 6 GHz	**50 ±2**	**0 / 0 ±0**	**0 / 0**				

S: Single directional coupler

Special Dual Directional Coupler according to Automotive ISO 11452-9
Road vehicles - Component test methods for electrical disturbances - Part 9: Portable transmitters
142 MHz ... 6 GHz at standardized sub-bands
-> Attention: Below 700 MHz there is no continuously usable frequency range with defined coupling attenuation!

OPTIONS

X) custom frequency range and custom coupling attenuation upon request

Notice:
Under normal operating conditions all Directional Couplers do not need to be mounted to a heatsink. However, if the units permanently run into high mismatch conditions at full rated power, the circuits will heat up significantly. In this case, we would recommend the units be mounted to a suitable heatsink or metal surface, capable to maintain a baseplate temperature of +60°C max.

Dual Directional Coupler according to ISO 11452-9

ISO 11452-9 Road vehicles – Component test methods for electrical disturbances from narrowband radiated electromagnetic energy – Part 9: Portable transmitters

4. Applicable Frequency Range
142 MHz ... 6 GHz at standardized sub-bands

6.2.2 Dual Directional Coupler – Required Performance

- Coupling factor: >20 dB (40 dB recommended)
- Mainline port VSWR: <1.3
- Coupling port VSWR: <1.5
- Transmission Loss: <0.5 dB
- Directivity: >18 dB

The coupling factor (20 ... 40 dB) must be selected for measure forward and reflected power with relation to the sensitivity of the measurement equipment (see 6.2.3 for details).

Table A.1 – Standardized Frequency Ranges

Service Designation	Frequency band MHz	Power W
2 m	142 ... 174	10 (RMS)
70 cm	410 ... 470	10 (RMS)
	380 ... 390	
	410 ... 420	
TETRA/ TETRAPOL	450 ... 470	10 (Peak)
	806 ... 825	
	870 ... 876	
AMPS/GSM850	824 ... 849	10 (Peak)
GSM900	876 ... 915	26 or 2 (Peak)
	893 ... 898	
PDC	925 ... 958	0.8 (Peak)
	1429 ... 1453	
PCS	1710 ... 1785	
GSM1800/1900	1850 ... 1910	1 (Peak)
IMT-2000	1885 ... 2025	CW - 1 (RMS) / PM - 1 (Peak)
Bluetooth/WLAN	2400 ... 2500	0.5 (Peak)
IEEE 802.11a	5725 ... 5850	1 (Peak)