

### STANDARD MODELS

Model Line Connector(s)	Part I Number	Frequency Rar	n <b>ge Coupling</b> dB	<b>Power</b> Pmin W	<b>Insertion Los</b> max dB	<b>Directivity</b> min dB	VSWR max Main Line	Mai <b>©bip±ing</b> Connectors
BDC 0160-40/500	0.1 6 GHz 144 146 MHz 400 450 MHz 0.7 6 GHz	55 ±3 46 ±3 40 ±2	0/0±0 0/0±0 0/0±0	0 / 0 0 / 0 0 / 0	0	2 HU, 430 mm	0	N-f

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	Frequency band	Power
Designation	MHz	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)