



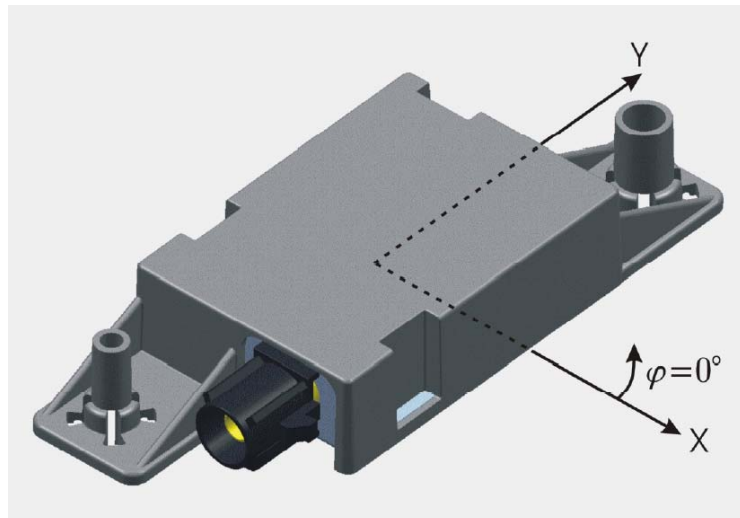
BMW COMBOX



Antenna Information for BMW Combox

BT Antenna

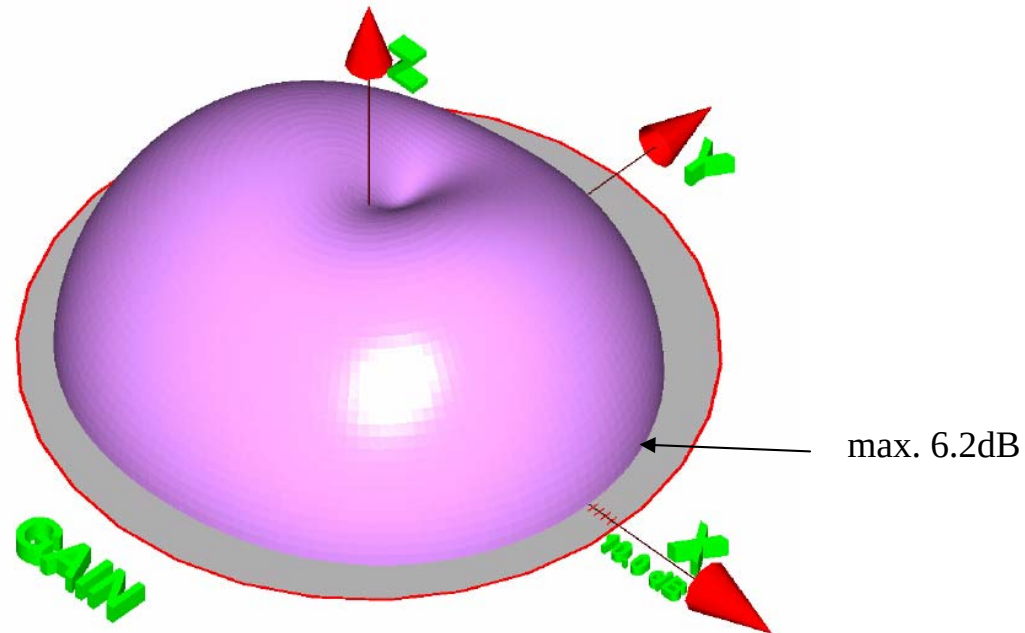
- Manufacture: Hirschmann Car Communcation
- Type: Bluetooth-Antenne BMW Nr. 84.10 9 142 092 – 02
(Hirschmann Erz. Nr. 920-140-001)
- Dimension: 75 x 30 x 12 mm (L x W x H)



BT Antenna Gain

Frequency	2400 MHz	2441 MHz	2483 MHz	Average
Integral level of the Bluetooth antennae [dB], vertical polarisation	3,7	3,9	4,2	3,9
Max. level of the Bluetooth antennae [dB], vertical polarisation	5,6	5,8	6,2	5,8

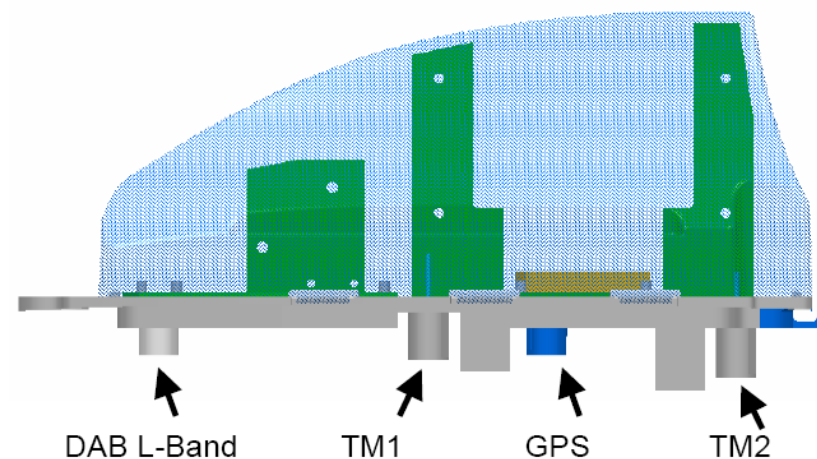
BT Antenna / 3D Power Chart



- For further information, please look at datasheet
Datenblatt_920-140-001_071116.doc

BMW Roof Antenna (GPS / GSM)

- Manufacture: Delphi
- Type: 28074583 9141460 Dachantenne 2x Tel/GPS/SDARS
28074581 9141461 Dachantenne 2x Tel/GPS/DAB-L
28074224 9141462 Dachantenne 2x Tel/GPS
- Combox is connected to TM2(GSM) and GPS
- Dimension: 150 x 55 x 80 mm (L x W x H)



BMW Roof Antenna / Level Overview

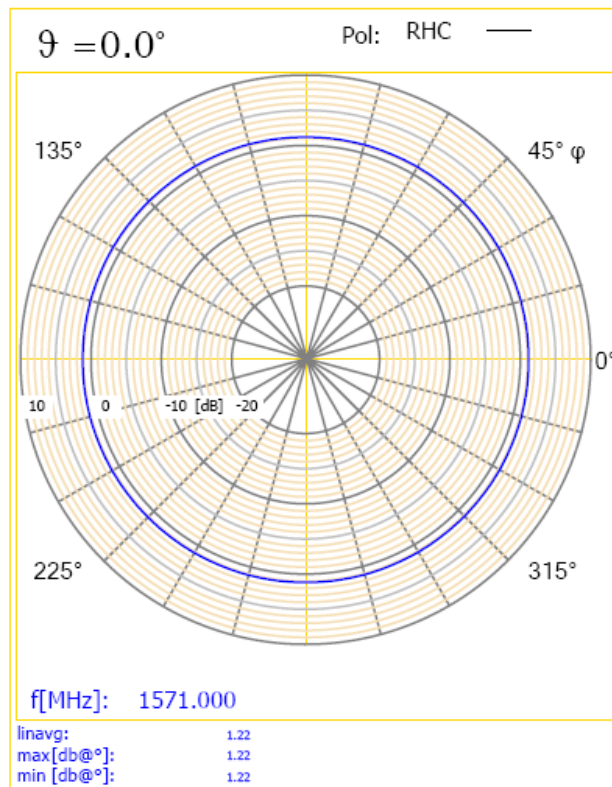
- AMPS USA 824 – 894 MHz T1 -1,24dB T2 -3,15dB
- D – Netz 880 – 960 MHz T1 -1,85dB T2 -1,95dB
- E – Netz 1710 – 1880 MHz T1 +1,39dB T2 +1,29dB
- PCS USA 1850 – 1990 MHz T1 +1,74d T2 +2,07dB
- GPS passiv 1575,42 MHz max +3,95dBi

amplifier gain type 29dB

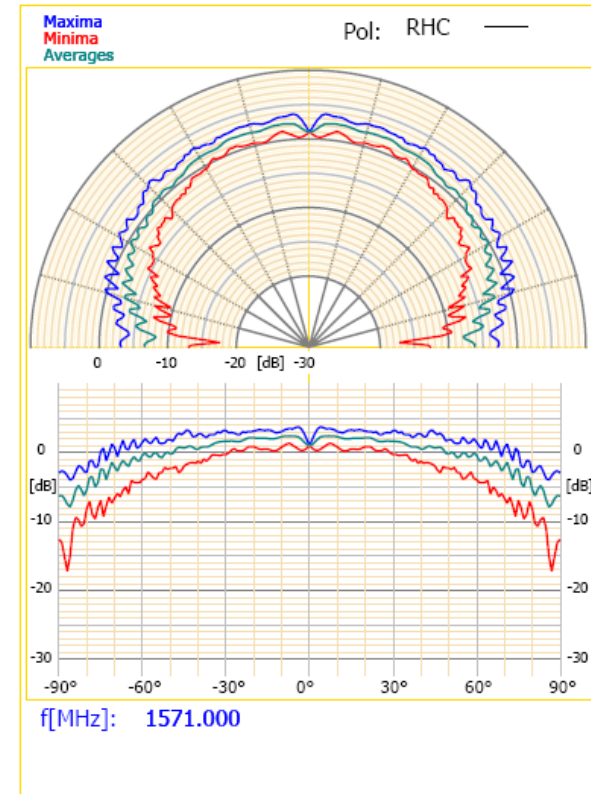
- For further information, please look at datasheet
2009-05-Messungen-Fuba-BMW F01 Dachantenne.pdf

GPS Antenna Gain

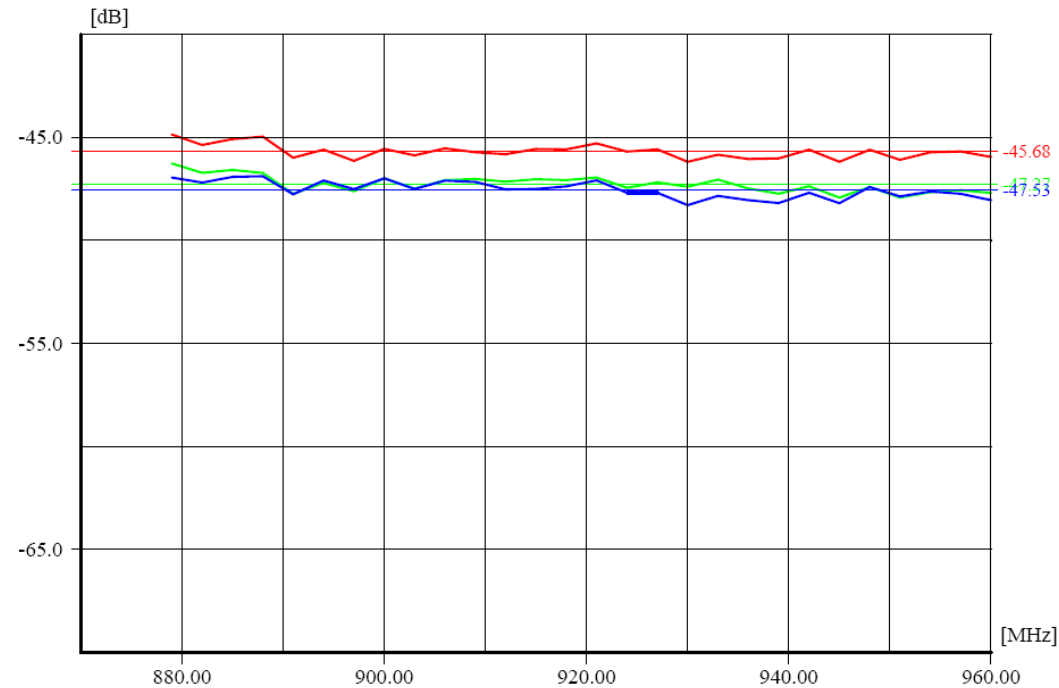
■ Horizontal Pattern



■ Vertical Pattern

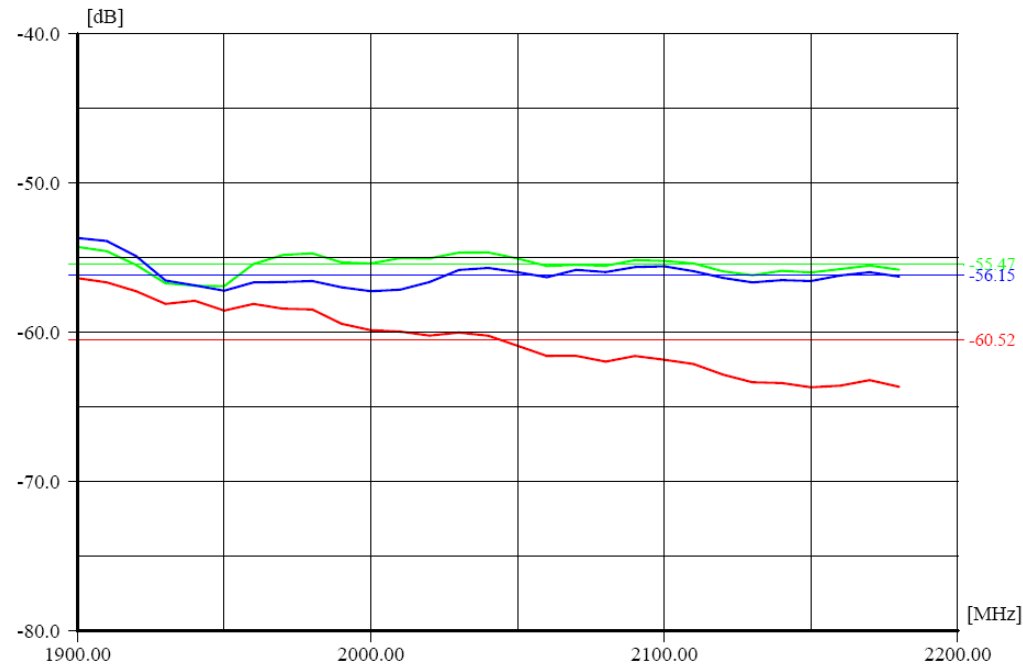


GSM Antenna / Gain 870MHz- 960Mhz



	1	2	3
Polarisation	vertikal	vertikal	vertikal
Antenne:			
- Name	Dachantenne 2TM-GP	Dachantenne 2TM-GP	REF BMW 1GHz
- Bem. 1	TM1	TM2	Dachmitte
Fahrzeug:			
- Typ	BMW F01	BMW F01	BMW F01
- Kennzeichen	M-BV-7538	M-BV-7538	M-BV-7538
Bemerkungen:			
- Bem. 1	TM2 50R	TM1 50R	
- Bem. 2	GPS offen	GPS offen	
Datum	02.09.08, 11:20:11	02.09.08, 11:28:09	02.09.08, 12:07:42
Datei	TM1 1GHz BMW F01.mdd	TM2 1GHz BMW F01.mdd	REF BMW 1GHz.mdd

GSM Antenna / Gain 1900MHz- 2200Mhz



	1	2	3
Polarisation	vertikal	vertikal	vertikal
Antenne:			
- Name	Dachantenne 2TM-GP	Dachantenne 2TM-GP	REF BMW 2GHz
- Bem. 1	TM1	TM2	Dachmitte
Fahrzeug:			
- Typ	BMW F01	BMW F01	BMW F01
- Kennzeichen	M-BV-7538	M-BV-7538	M-BV-7538
Bemerkungen:			
- Bem. 1	TM2 50R	TM1 50R	
- Bem. 2	GPS offen	GPS offen	
Datum	02.09.08, 11:23:41	02.09.08, 11:30:54	02.09.08, 12:11:37
Datei	TM1 2GHz BMW F01.mdd	TM2 2GHz BMW F01.mdd	REF BMW 2GHz.mdd



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