

Antenna "3G/4G LTE SMT-DUO MIMO"

Technical description

The ultra-wideband antenna is designed to receive all combinations of 4G signals (LTE-3,7,8,20), as well as 3G UMTS and WiFi 2.4 GHz. The dual-channel antenna (it consists of two single-channel antennas located orthogonally) is designed to receive a signal using the MiMo system (Separation of receiving and transmitting signals). Antenna polarization is linear, the direction of each channel polarization is indicated on the back of the antenna.

The antenna has been tested and has a stable good signal on any combination of 4G signals, showing high data rates.

The antenna has an F-type connector which supports 50- and 75-Ohm antenna operation and basis operation. Characteristics depending on the impedance are presented in tables 1 and 2.

The antenna is made of environmentally friendly materials, the list is given in Table 2.

Table 1 – Main electrical characteristics of antenna operation - 50 Ohm

Frequency range (MHz)	Max gain in the range (dBi)	Matching, Return Loss (Maximum) (dB)	Antenna impedance (Ohm)	Operating temperature (Celsius degrees)
LTE-7 – 1710 - 1880	11	-8	50	-60 to 60
LTE-3 – 2500 - 2690	13	-6	50	-60 to 60
LTE-20(FD800) – 791 - 862	10	-11	50	-60 to 60
WiFi_2.4G – 2400 - 2500	10	-12	50	-60 to 60
UMTS(3G) – 1920 - 2170	8	-10	50	-60 to 60
LTE-8 – 880 - 960	10	-4	50	-60 to 60

Graphs 1 and 2 show the values of the reflection coefficient versus frequency

Fig. 1 - Antenna matching, reflection coefficient (S11) depending on frequency - impedance 50 Ohm (Measurement)

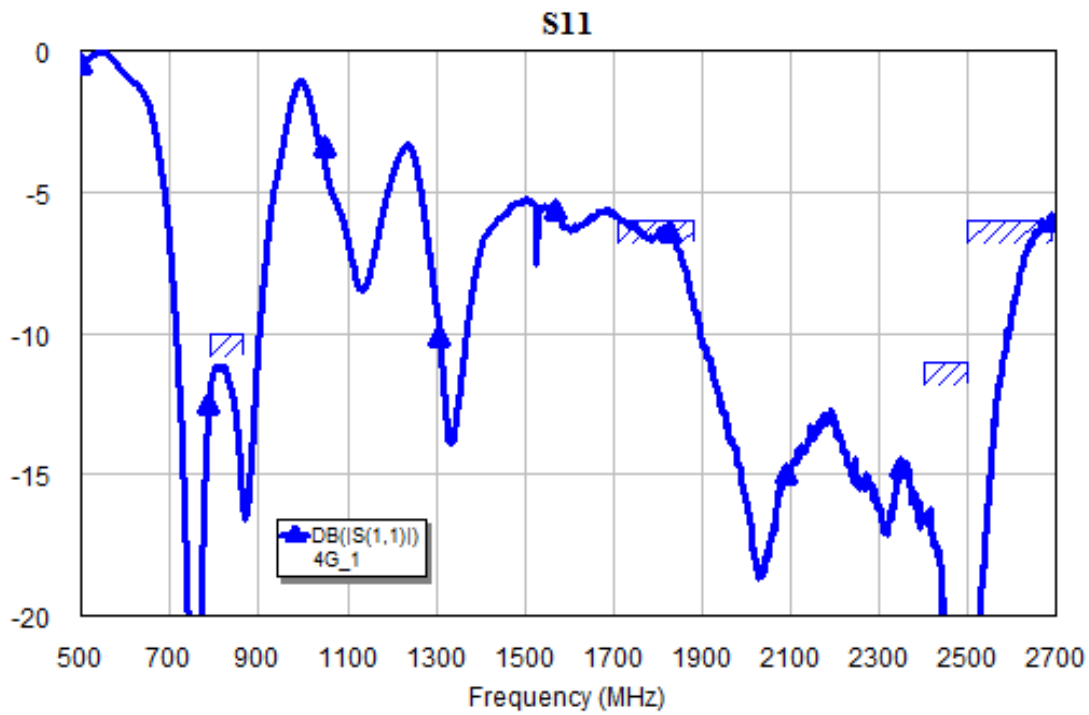


Table 2 - Main electrical characteristics of the antenna - 75 Ohm

Frequency range (MHz)	Max gain in the range (dBi)	Matching, Return Loss (Maximum) (dB)	Antenna impedance (Ohm)	Operating temperature (Celsius degrees)
LTE-7 – 1710 - 1880	11	-4	75	-60 to 60
LTE-3 – 2500 - 2690	13	-8	75	-60 to 60
LTE-20(FD800) – 791 - 862	10	-8	75	-60 to 60
WiFi_2.4G – 2400 - 2500	10	-12	75	-60 to 60
UMTS(3G) – 1920 - 2170	8	-9	75	-60 to 60
LTE-8 - 880-960	10	-3	75	-60 to 60

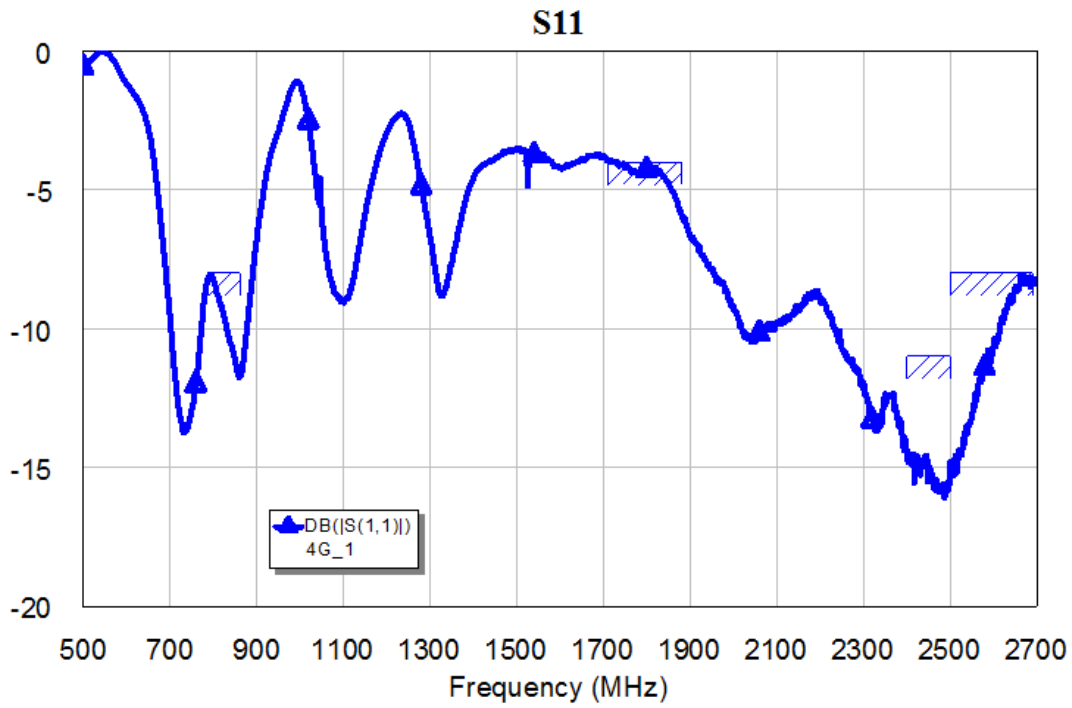


Fig. 2 - Antenna matching, reflection coefficient (S11) depending on frequency - impedance 75 Ohm (Measurement)

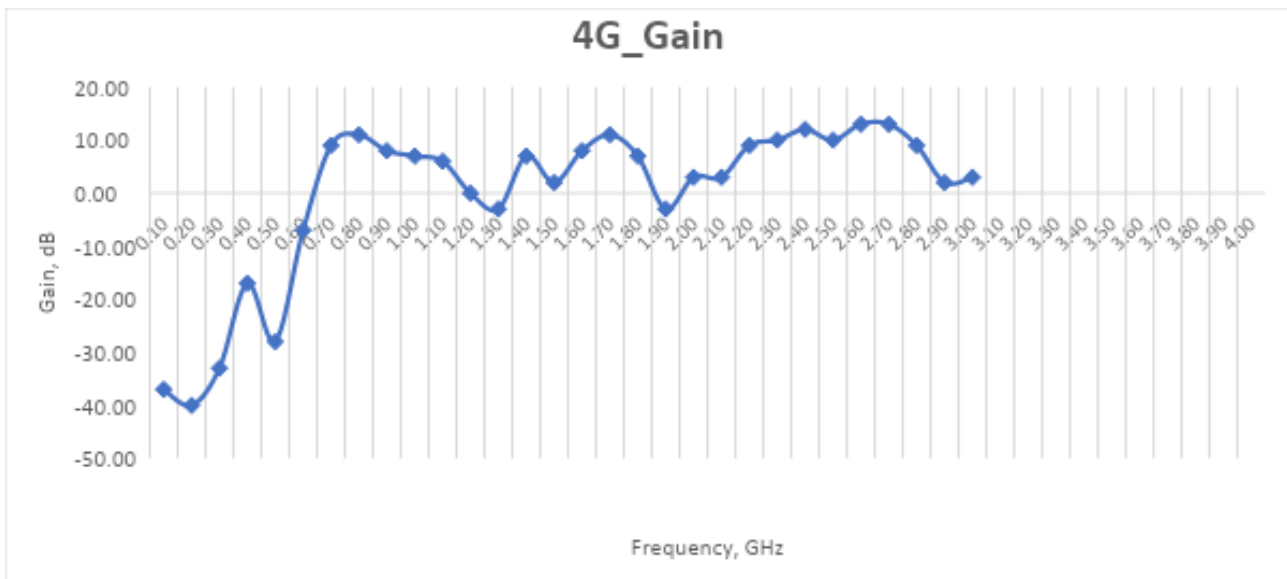


Fig. 3 - Antenna gain depending on frequency (Measurements)

Table 2 - Main physical characteristics of the antenna	
Size	420×220×80 mm
Weight	1440 g
Connector type	F - connector - mother
Materials	<ul style="list-style-type: none"> • Stainless steel • ABS Plastic
Package	<ul style="list-style-type: none"> • Antenna "3G/4G LTE SMT-DUO MIMO" - 1 pc. • Mast attachment unit - 1 pc. • Documentation - 1pc

When operating the antenna with 3G, 4G modems that do not support MIMO technology, you need to use the lower output of the vertical polarization antenna.