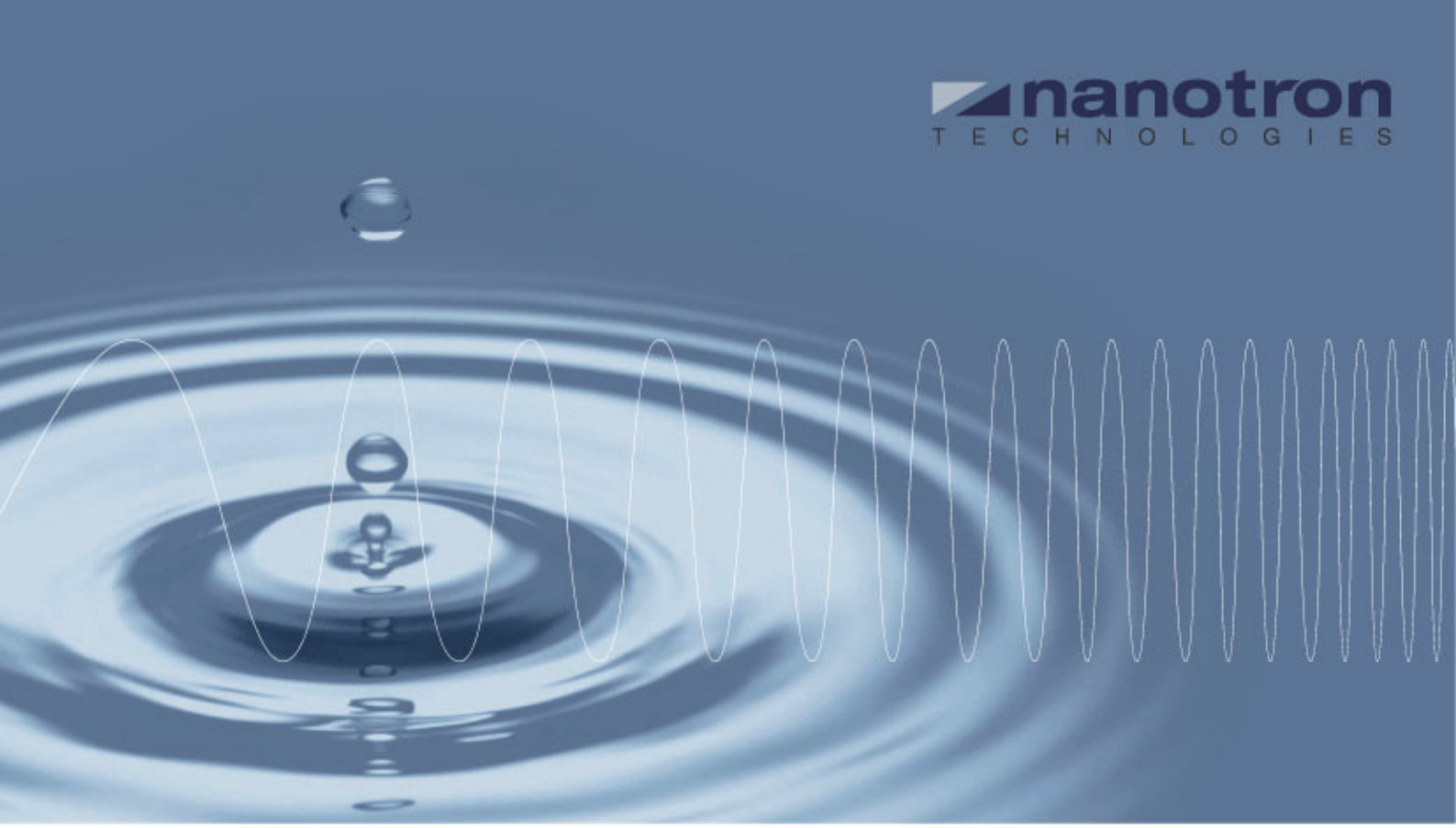

FCC Required Exhibit 17

nanoNET TRX Antenna Specification (AntSpec)

FCC ID: SIFNANONET-TRX

Document Information

Document title:	nanoNET TRX Antenna Specification (AntSpec)
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Disclaimer

Nanotron Technologies GmbH reserves the right to make changes without further notice to the product to improve reliability, function or design. *Nanotron Technologies GmbH* does not assume any liability arising out of the application or use of any product or circuits described herein.

Trademarks

All product names mentioned herein are the trademarks of their respective owners.

Life Support Policy

These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. *Nanotron Technologies GmbH* customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify *Nanotron Technologies GmbH* for any damages resulting from such improper use or sale.

Address Information

Nanotron Technologies GmbH
Alt-Moabit 61
10555 Berlin
Germany

Tel: +49 (0) 30 - 399954-0
Fax: +49 (0) 30 - 399954-188
Email: info@nanotron.com
Web: www.nanotron.com

CAUTION! Electrostatic Sensitive Device. Precaution should be used when handling the device in order to prevent permanent damage.

Regulatory Information

Electromagnetic Interference / Compatibility

Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility.

To avoid electromagnetic interference and/or compatibility conflicts, do not use this device in any facility where posted notices instruct you to do so. In aircraft, use of any radio frequency devices must be in accordance with applicable regulations. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy. With medical devices, maintain a minimum separation of 6 inches (15 cm) between pacemakers and wireless devices and some wireless radios may interfere with some hearing aids. If other personal medical devices are being used in the vicinity of wireless devices, ensure that the device has been adequately shielded from RF energy. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

EC Declaration of Conformity

The *2.4GHz Chirp Spread Spectrum (CSS) Low-Power RF Transceiver*, model number *nanoNET TRX* has been certified to comply with the requirements of the R&TTE Directive
1999/5/EC and the standards EN 300 328 V 1.4.1:2003, EN 301 489-17 V1.2.1, and
EN 60950-1:2001.

CE 0681

FCC User Information

Statement according to FCC part 15.19:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Statement according to FCC part 15.21:

Modifications not expressly approved by this company could void the user's authority to operate the equipment.

RF exposure mobil:

The internal / external antennas used for this mobile transmitter must provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

Statement according to FCC part 15.105:

This equipment has been tested and found to comply with the limits for a Class A and Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation and against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions as provided in the user manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his or her own expense.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to connected.
- Consult the dealer or an experienced technician for help.

1. Antenna Specifications for Model 17010.11

This section provides the specifications for the antenna used by the nanoNET TRX, namely, Antenna Model 17010.11, as shown below:

Figure 1: Model 17010.11

Electrical Items	Specifications
Model	17010.11
Type of antenna	Sleeve dipole antenna
Frequency range	2.40~2.48 GHz
Electrical length	1 / 2 λ
Nominal impedance	50 Ω
Polarization	Vertical
V.S.W.R	Less than 2.0
Gain	2.15 dBi

Mechanical Items	Specifications
Element	ø 0.1x7 CuAg -wire
Sleeve	Urethane (black)
Connector	SMA-male (right angle)
Antenna total length	90 ± 2mm

2. Vertical Diagram for Model 17010.11

The following shows the vertical diagram for the antenna model 17010.11 measured at 2.40 GHz, 2.45 GHz, and 2.50 GHz

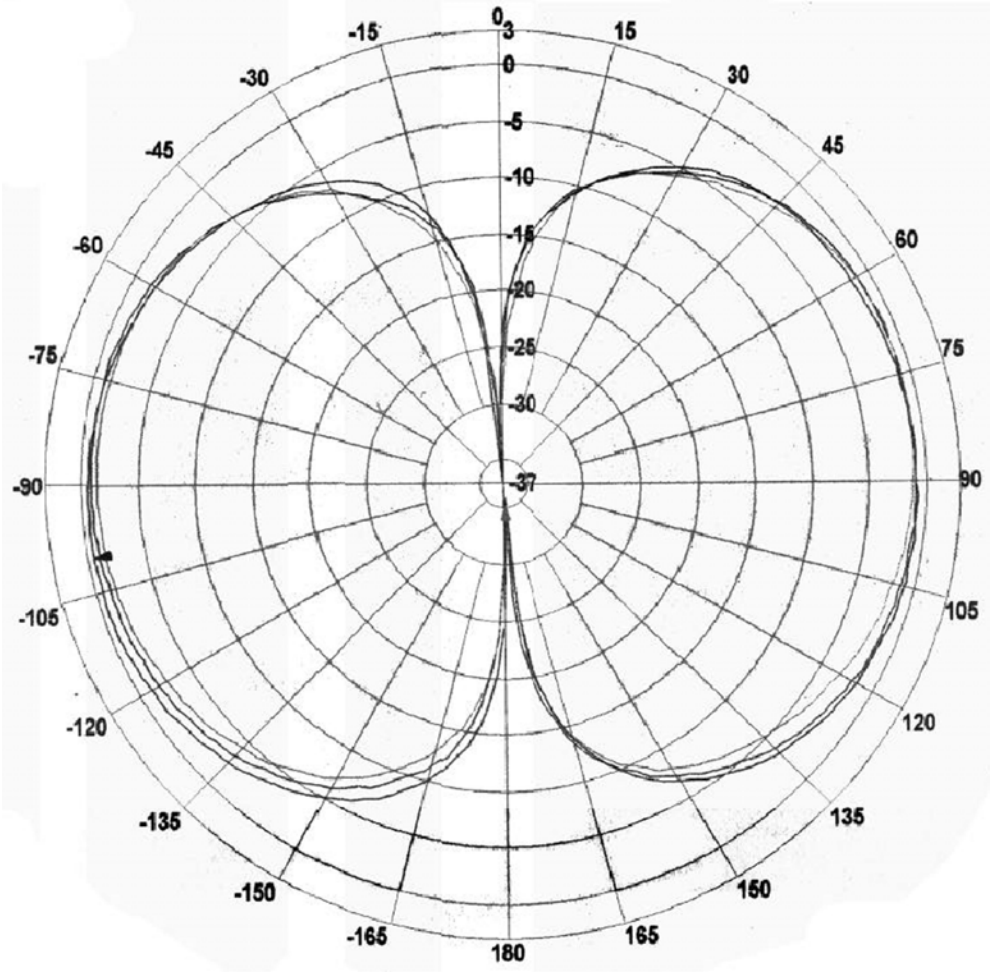

Figure 2: Vertical Diagram for Antenna model 17010.11

Beam Peak Values

Frequency	[dB]	at [deg]
2.40 GHz	-0.61	-99.94
2,45 GHz	-0.74	81.95
2,50 GHz	-0.64	67.96

Null Depth Values

Frequency	[dB]	at [deg]
2.40 GHz	-38.47	-4.00
2,45 GHz	-53.94	-2.00
2,50 GHz	-41.44	177.90

3. Azimuth Diagram for Model 17010.11

The following shows the Azimuth diagram for the antenna model 17010.11 measured at 2.40 GHz, 2.45 GHz, and 2.50 GHz

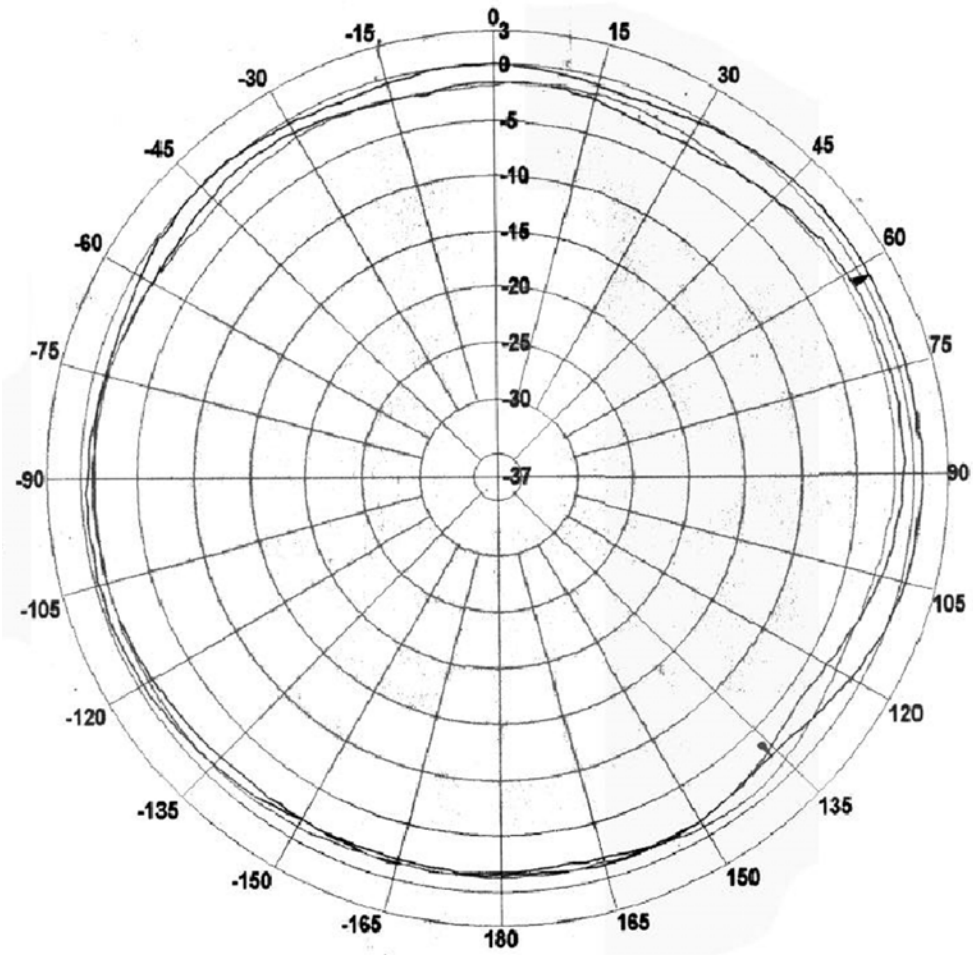

Figure 3: Azimuth Diagram for Antenna model 17010.11

Beam Peak Values

Frequency	[dB]	at [deg]
2.40 GHz	0.85	61.97
2,45 GHz	-0.38	111.94
2,50 GHz	-0.69	143.92

Null depth values

Frequency	[dB]	at [deg]
2.40 GHz	-2.26	135.92
2,45 GHz	-3.57	125.93
2,50 GHz	-2.59	113.94