ANT-FLEXI-TR-01

Antenna

Datasheet

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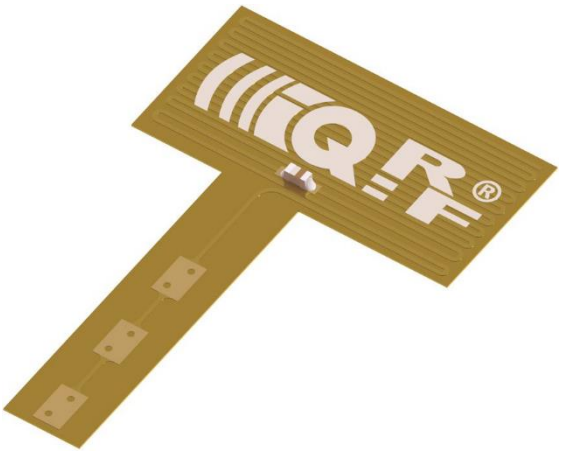
Description

Antenna 868 MHz and 916 MHz for IQRF transceivers TR-7xD.
Designed as shortened ¼ wave whip printed on a flexible film.



Features

- Optimized for IQRF transceivers TR-7xD
- Omnidirectional
- Adaptable terminal length
- Bending the terminal enables a trade-off between strict rules for optimal antenna design and RF range needed for the given application.

Applications

- IQRF wireless platform
- 868 MHz band (EU and other countries) and 916 MHz (USA and other countries)
- Products in space-constrained enclosures

RF parameters

Frequency	
Nominal	868 MHz and 916 MHz bands
Operating	863 MHz to 870 MHz 902 MHz to 928 MHz
Gain	4.45 dBi for 868 MHz and antenna terminal length 13.5 mm 2.6 dBi for 868 MHz and antenna terminal length 9.45 mm 1.6 dBi for 868 MHz and antenna terminal length 5.5 mm From 4.45 dBi to 0.7dBi for 916 MHz and antenna terminal length 13.5 mm. See *Diagram 2*.
Input impedance	50 Ω
Max. RF power	100 mW
Polarization	Vertical (when the antenna is mounted vertically)
Radiation pattern	Omnidirectional in the horizontal plane (when the antenna is mounted vertically)

Mechanical parameters

Material	Polyimide film, thickness 0.1 mm
Terminal	Gold-plated, adaptable length in 3 steps: 13.5 mm, 9.45 mm or 5.5 mm
Connection	Soldering
Dimensions	14.9 mm x 22.25 mm, can be shortened down to 18.20 mm or 14.25 mm
Weight	0.03 g
Ambient temperature	-40 to +85 °C

All parameters are for guidance only and should be considered as typical.

RF characteristics

The diagrams below relate to the following arrangement: TR-76D transceiver with ANT-FLEXI-TR-01 antenna soldered, plugged in DK-EVAL-04A kit, either directly or (in Fig. 3) alternatively through the KON-TR-01 range extender.

Refer to the datasheet of the given TR transceiver, chapter *RF range*.

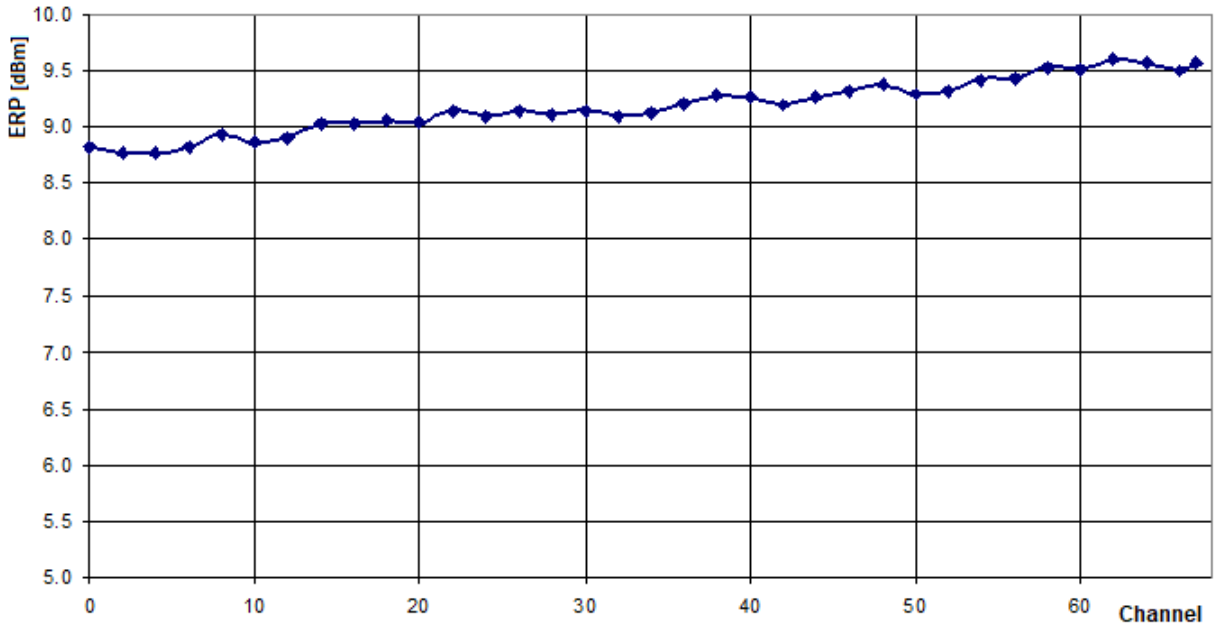


Diagram 1: Effective radiated power vs. RF channel, 868 MHz band

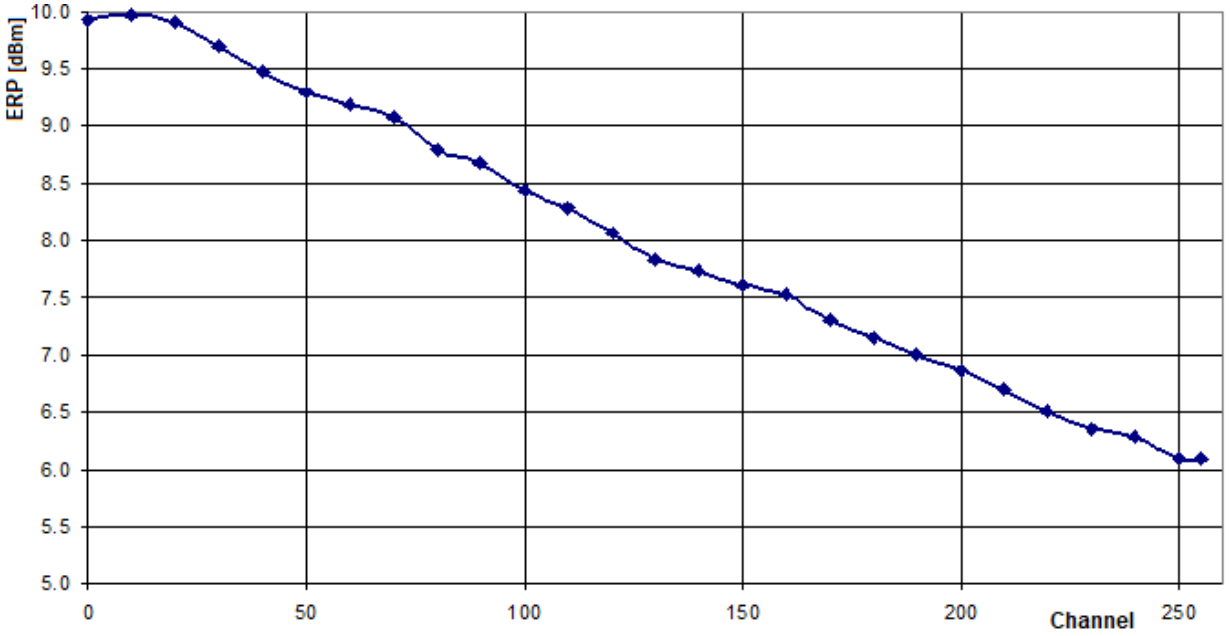


Diagram 2: Effective radiated power vs. RF channel, 916 MHz band

For RF channels refer to the IQRF OS User's guide, *Appendix 2 – Channel maps*.

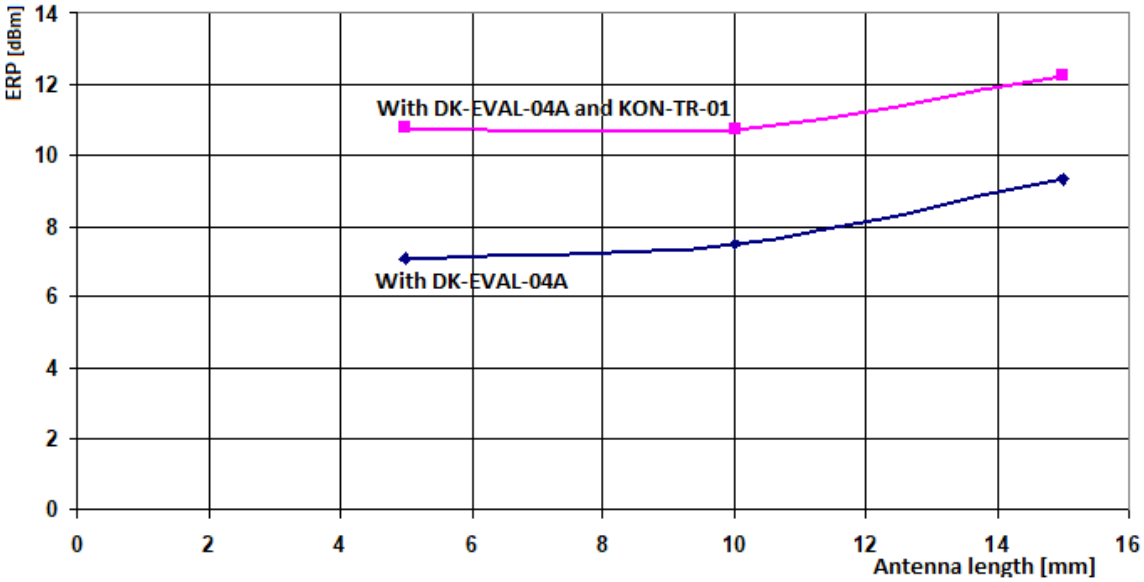


Diagram 3: Effective radiated power vs. antenna length (5.5 mm, 9.45 mm or 13.5 mm), 868 MHz, channel 52

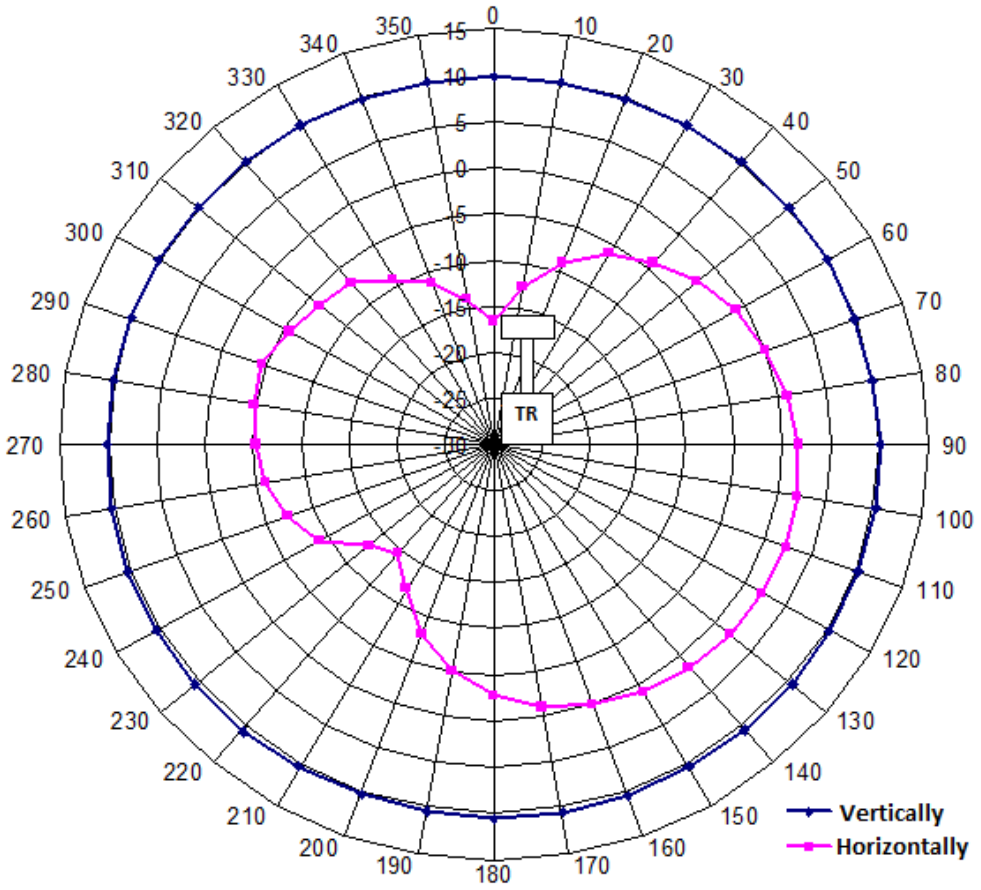
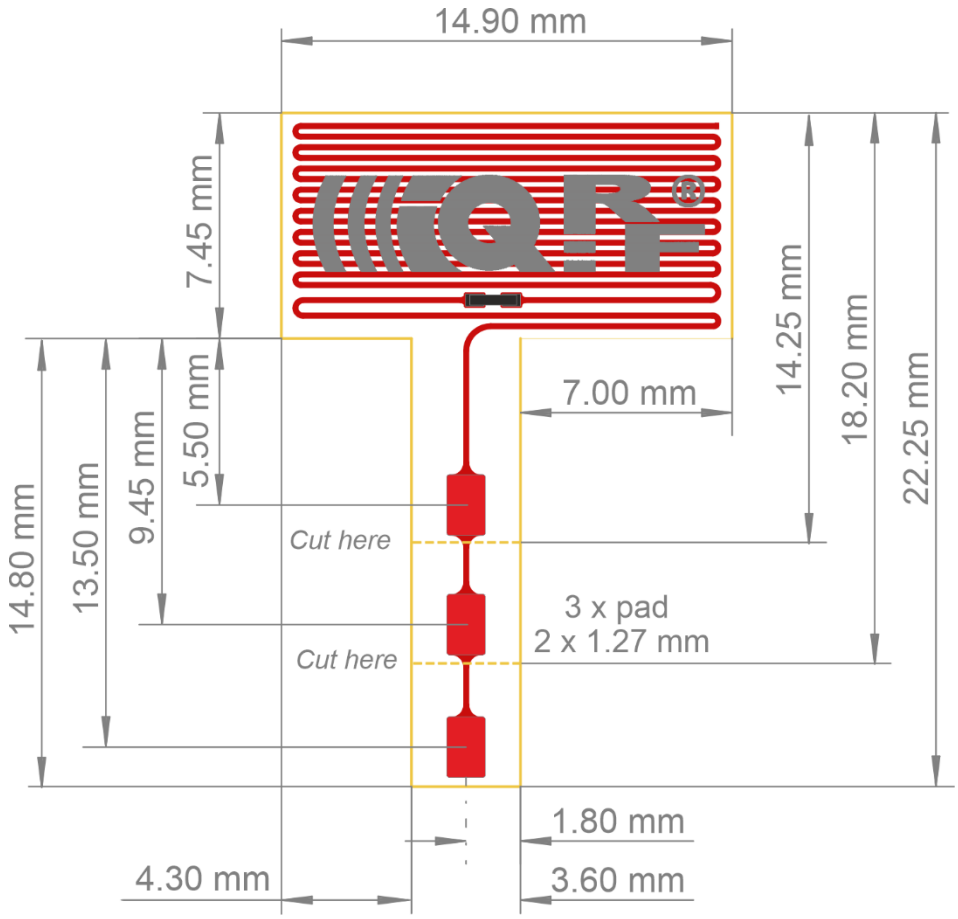


Diagram 4: Effective radiated power [in dBm] vs. antenna orientation [in degrees] (radiation patterns)

Mechanical drawing



Product information

Ordering code

ANT-FLEXI-TR-01	Antenna 868 MHz and 916 MHz for TR-7xD

Document history

200707	Chapters *Features* and *Applications* slightly extended.
200701	First release

Sales and Service

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