

NFC Planar Ferrite Sheet Antenna

Applications

- Mobile devices
- Payment, sharing & pairing and connect to tags

Features

- Frequency 13.56 MHz
- Size 35 x 50 x 0.30 mm
- Sintered ferrite (thickness min 0.30 mm including ferrite, adhesive and antenna flex)
- Magnetic field strength optimized by ferrite material type and thickness selection, and the radiator pattern



Benefits

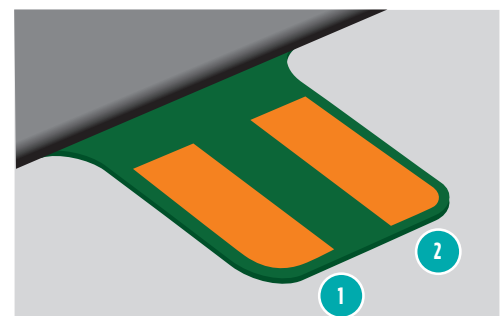
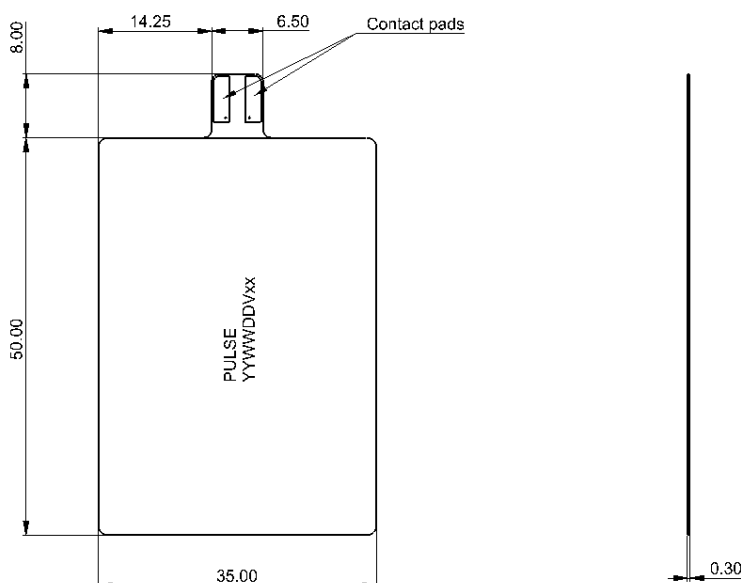
- Good performance on top of metal
- Thin structure
- Easily assembled to device covers
- The best reading position directed towards the back cover
- Well known antenna concept ready for mass production

Electrical specifications @ +25 °C

Note: Electrical characteristics depend from distance of metal objects and the location of the antenna on the handset

Typical performance (Test board size 65x120 mm)					
Frequency Range [MHz]	Reading distance [mm]		Impedance [Ω]	Q-factor	Operating Temperature [$^{\circ}\text{C}$]
13.56MHz	40 EMVCo	28 Card (avg)	50/80	30	-40 to +85

Terminal configuration and dimensions of the antenna



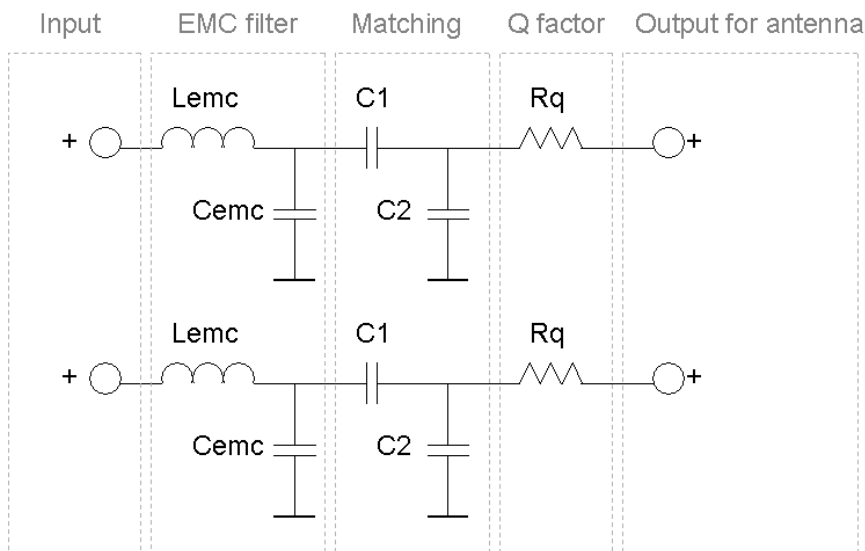
Terminal configuration and dimensions of the antenna

No.	TerminalName	Terminal Dimensions
1	Feed	5.75 x 2 mm
2	Feed	5.75 x 2 mm

Mounting of NFC antenna

1. Recommend mounting of NFC antenna: Inside surface of Battery Cover.
2. Surface texture of face of joint: VDI 3400 NO. 24 (Ra 1.6) of equal
3. Double-curvature on face of joint are not recommended

Recommended matching network



Component	Value	Note
Lmc	560 nH	Filter resonance at 15.4 MHz
Cemc	180 pF	Filter resonance at 15.4 MHz
C1	25 pF	Antenna matching component, value depends on the antenna environment
C2	180 pF (includes C2a and C2b values)	Antenna matching component, value depends on the antenna environment
Rq	0 Ohm	Rq resistors used to lower Q-value if above 35

For More Information

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