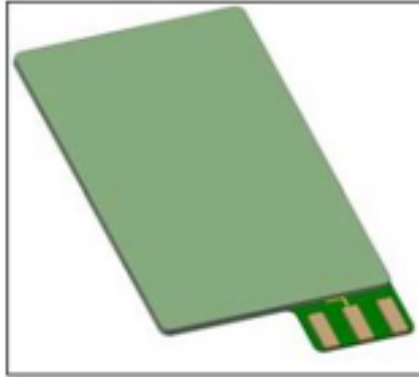


Flexible 13.56MHz RFID Antenna

Pulse Part Number CW3550/ CW3551



Features

- Near Field Communication (NFC)
- Thin profile without ferrite sheet (CW3551)
- Capability to operate on top of metals (CW3550)
- Compact size W x L (50 x 30mm)
 - CW3550 Height 1mm
 - CW3551 Height 0.15mm
- Weight
 - CW3550 4.5g
 - CW3551 1g

Applications

- Handsets
- NFC terminals
- CW3550 with ferrite when antenna is placed on top of metallic surface
- CW3551 without ferrite when antenna is used in metallic free environment

Electrical Specifications

Note: Electrical characteristics depend on the transmitting power strength, distance of metal objects and the location of the antenna on the device.

Antenna dimension [mm]	Transmission power [dbm]	Operating frequency [MHz]	H-field min. [A/m]	Reading distance [mm]	Q factor	Impedance [Ω]	Operating temperature [$^{\circ}$ C]
50 x 30 x 1.0	+23	13.56	1.5	17	32*	50	-40 to +85

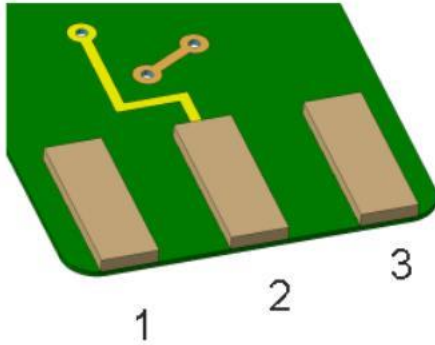
Note 1: * Q factor is measured from the bare antenna with damping resistors

Note 2: CW3551 performance is similar as in CW3550 when it is used on metal free environment

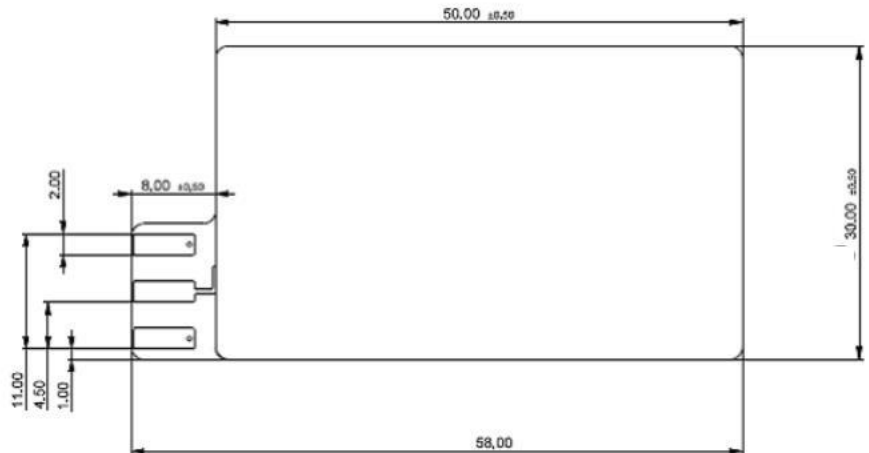
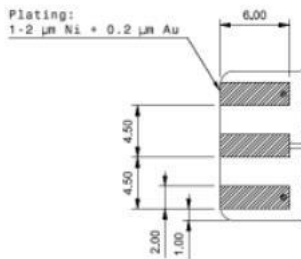
Flexible 13.56MHz RFID Antenna

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Terminal configuration and dimension of the antenna



No.	Terminal name	Terminal dimensions
1&3	Feed	6 x 2 mm
2	Ground (optional)	6 x 2 mm
Ni/Au plating on contact areas		



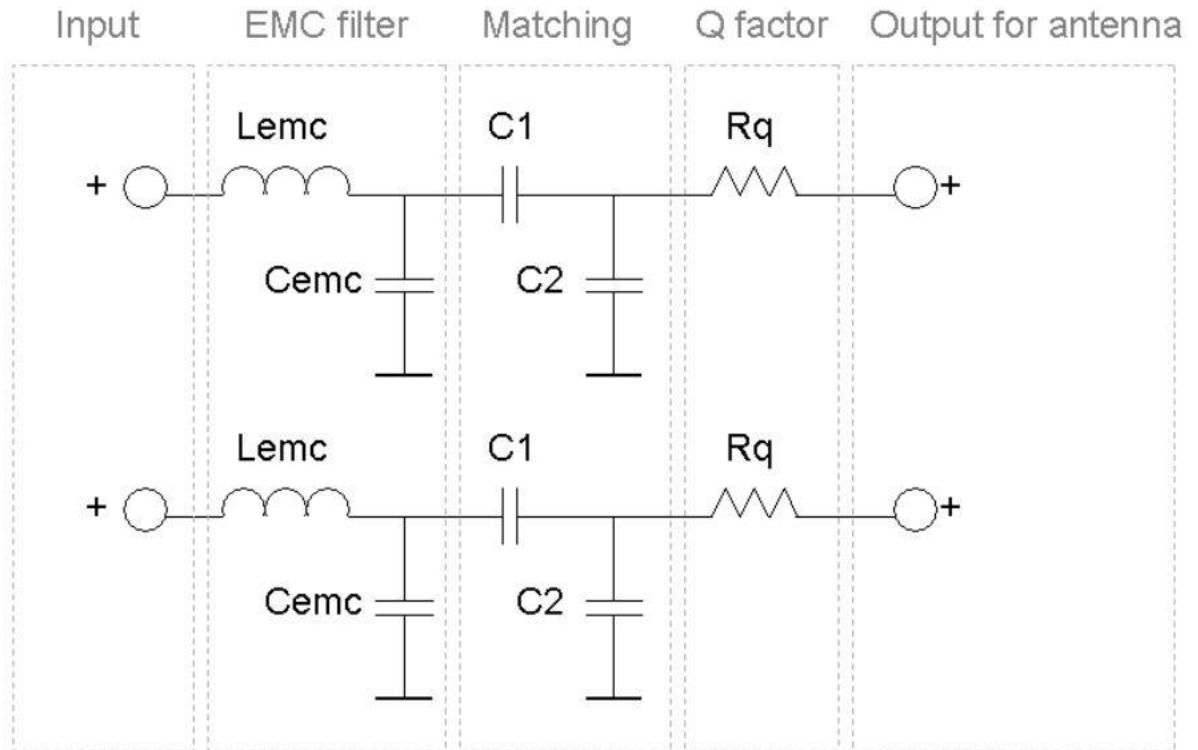
Mounting of RFID antenna

1. Recommend mounting of RFID antenna: Inside surface of device plastic cover.
2. Recommended surface texture of face of joint: VDI 3400 N0. 24 (Ra 1.6)
3. Double-curvature on face of joint is not acceptable.

Flexible 13.56MHz RFID Antenna

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Recommended matching network for electrical characteristic measurement



Component	Value	Note
Lemc	560 nH	Filter resonance at 14.4 MHz
Cemc	220 pF	Filter resonance at 14.4 MHz
C1	-	Match the antenna, value depends on the application
C2	-	Match the antenna, value depends on the application
Rq	1.3 ohm	Reduces Q factor to 32