PulseLARSEN Antennas

TECHNICAL DATA SHEET

Description: 13.56MHz NFC Ferrite Antenna with coax feed and U.FL connector

Series: NFC Antenna

PART NUMBER: W3509

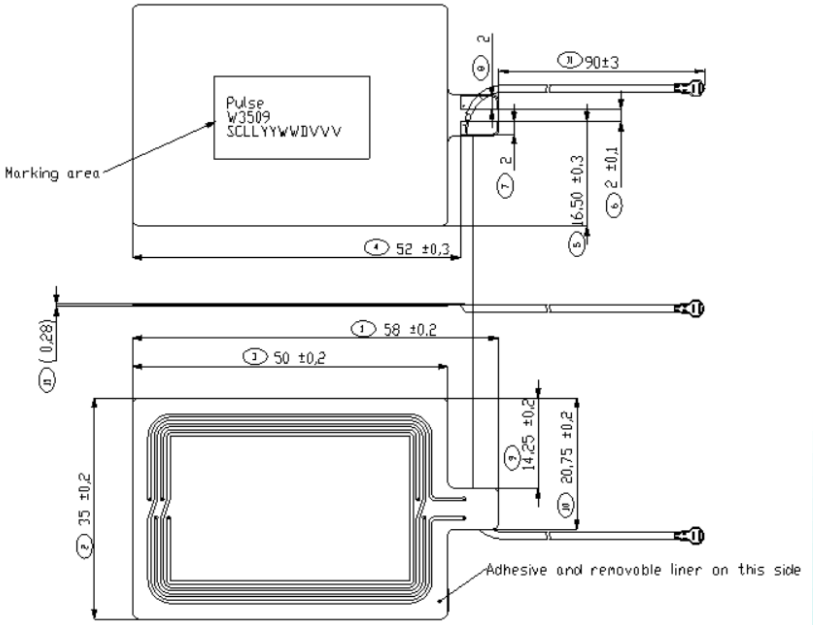


Features:

- Flex PCB antenna
- Coax cable feed with U.FL connector
- Ferrite sheet to enable operation on top of metallic surface
- Mounting with adhesive tape (included)

Applications:

- Near Field Communication
- Pairing, Sharing
- Connection to RFID tags
- Payment, EMVCo
- Phones, Infotainment, PoS terminals, Toys, Asset Tracking



Preliminary

RoHS COMPLIANT

Issue: 1634P

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ELECTRICAL SPECIFICATIONS

Frequency *	13.56 MHz
Reading Distance (EMVCo) *	40 mm
Reading Distance (Grid Scan avg) *	29 mm
Impedance *	50 Ohm
Self Resonance Frequency **	32 MHz
Inductance @ 1MHz **	1.8 uH
Resistance @ 1MHz **	0.9 Ohm
Q-Factor **	35.9
Matched Q-Value ***	5-30

Note:

- Electrical characteristics depend from distance of metal objects and the location of the antenna on the device
- Data shown in above table is measured in free space

* With matching network

** Bare coil without any matching network

*** With matching network adjustable. Typical network picture refer to page 3

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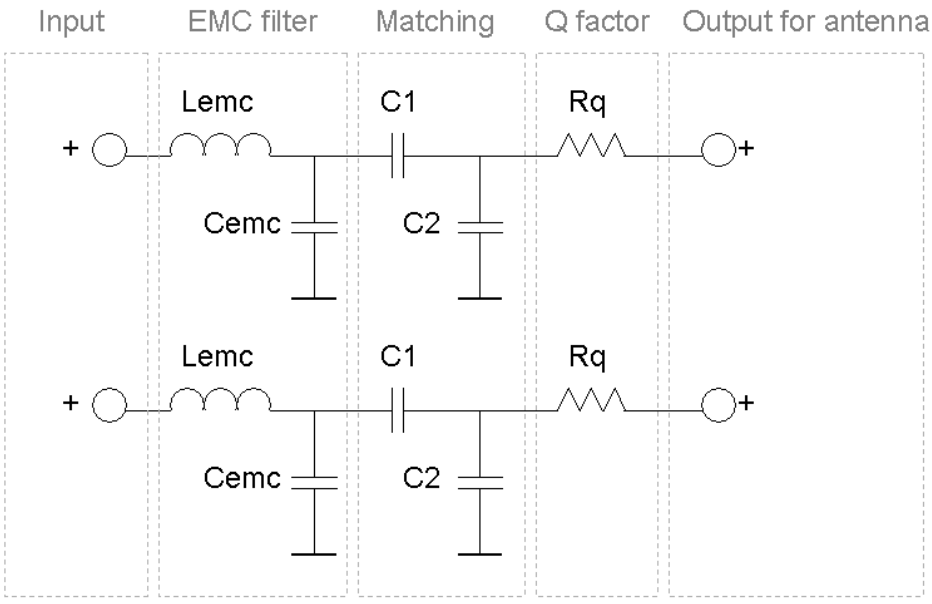
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ELECTRICAL SPECIFICATIONS

Recommended matching network

Component	Value	Note
Lemc	560 nH	Filter resonance at 15.4 MHz
Cemc	180 pF	Filter resonance at 15.4 MHz
C1	22 pF	Antenna matching component, value depends on the antenna environment Antenna matching
C2 Includes C2a and C2b values)	132 pF	Antenna matching component, value depends on the antenna environment Antenna matching
Rq	0Ohm	Rq resistors used to lower Q-value



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MECHANICAL SPECIFICATIONS

Color	Black
Weight	1.7 g
Coil + ferrite dimensions + tape	1.38x1.97x0.012 in (35x50x0.30) mm
Cable length	3.54 (90) in/mm
Cable type	1.13mm OD mini coax
Connector	U.FL compatible
Fixing system	Adhesive tape

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-40 to +85 ° C

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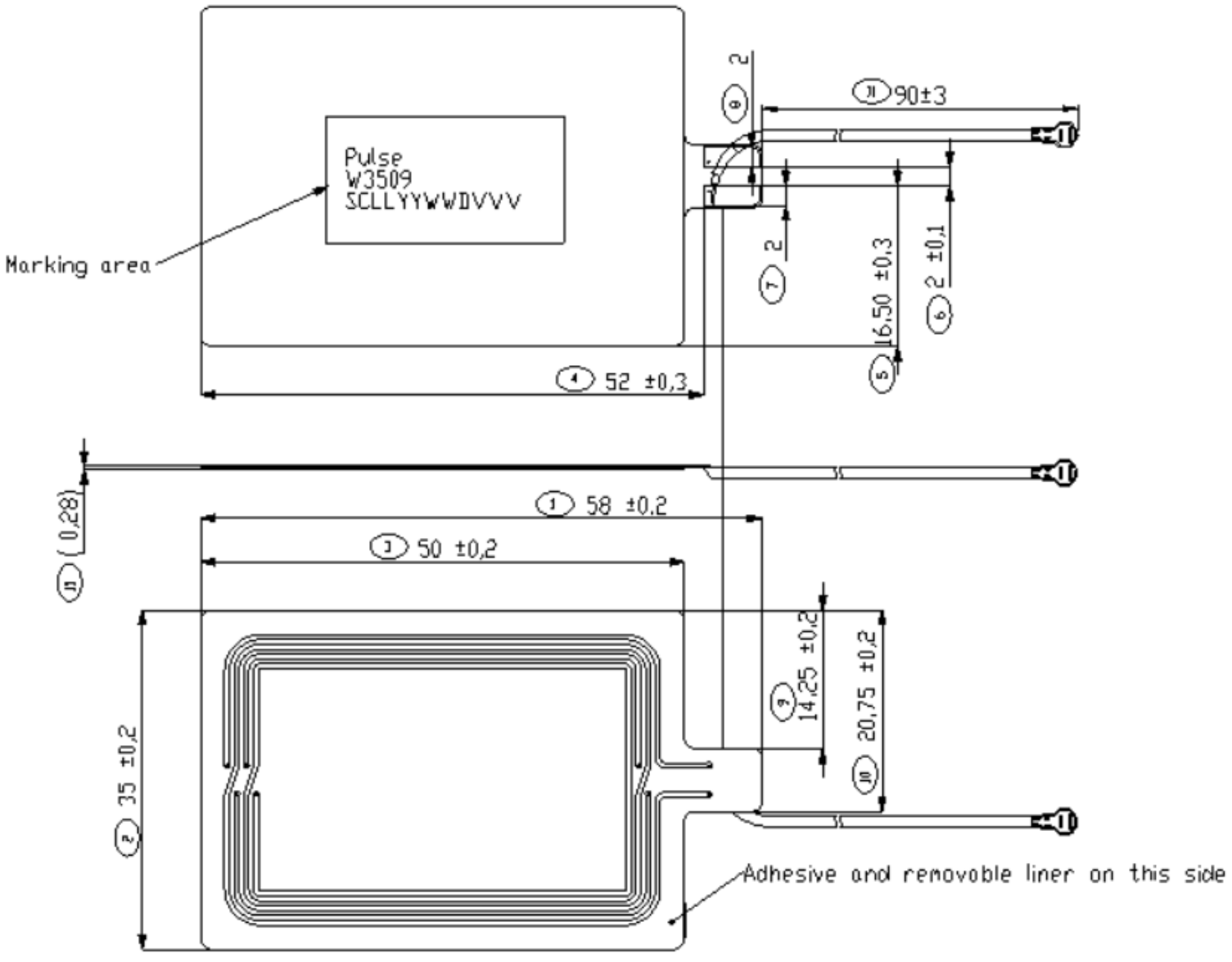
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MECHANICAL DRAWING



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OTHER SPECIFICATIONS

Mounting of NFC Antenna:

1. Recommend mounting of NFC antenna: Inside surface of device cover
2. Surface texture of face of joint: VDI 3400 N0. 24 (Ra 1.6) of equal
3. Double-curvature on face of joint are not recommended

PACKAGING

Pack 100pcs antennae in sealed PE bag, 10 bags in one box

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