# NFC Ferrite Antenna (13.56MHz)

### ANFCA-4040-A02

#### Moisture Sensitivity Level (MSL) – MSL 1

#### **FEATURES:**

- Ultra thin flexible antenna structure (140 240 µm)
- Peel and Stick antenna designs
- Ferrite sheet backing optimizes magnetic fields
- Wide operating temperature range -40°C to +85°C
- Matched to leading NFC controller IC's
- Customized solutions available





#### **APPLICATIONS:**

- Mobiles
- NFC Payment readers
- Electronic wallets
- Health care ID scanners
- NFC data loggers transport
- Ticketing systems
- Museum information systems
- Electronic Parking Payments
- Industrial data collection.

#### > STANDARD SPECIFICATIONS:

#### **Maximum Ratings**

Item	Value
Operating Temperature Range	-40°C to + 85°C
Storage Temperature Range	-40°C to +85°C

#### **Electrical Characteristics**

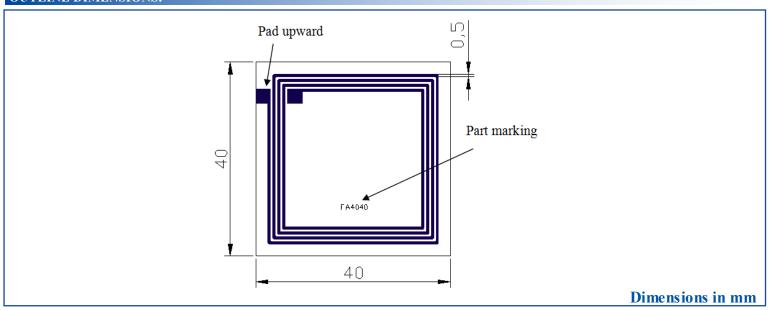
Item	Spec
Operating Frequency (MHz)	13.56
Inductance (μH)	1.7±10%
Q-Factor min.	40
DC Resistance max. $(\Omega)$	1.0

Test equipment: Agilent E4991A / 5071C

#### **Product Customization**

Products can be customized according to customer requirements. Features such as the dimensions or shape of the coil or its inductance can be customized. Please contact ABRACON or authorized distributor / agent for further details.

#### **OUTLINE DIMENSIONS:**







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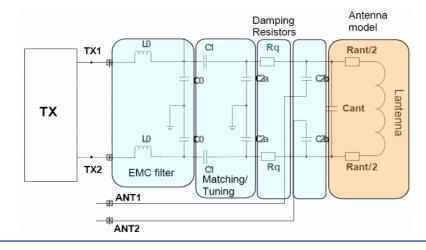




#### MATCHING CIRCUIT AND REFERENCE VALUES

Component	Value for reference only (1)	Notes
L0	560 / 330nH	EMC filter resonance at 15.4MHz (NXP) and 20.6MHz
	(NXP / Broadcom)	(Broadcom).
C0	180pF	EMC filter resonance at 15.4MHz (NXP) and 20.6MHz (Broadcom).
C1	39pF	Antenna matching component, to achieve series resonance at 13.56MHz. (Note: Antenna matching component value may need optimization depending upon antenna environment)
C2 (Includes C2a and C2b values)	82pF	Antenna matching component, to achieve parallel resonance at 15MHz. (Note: Antenna matching component value may need optimization depending upon antenna environment).
Rq	0 Ohm	Damping resistor, the Rq resistor used to lower Q-value if above 35 Ohm, if needed.

Note (1) Values can change depending upon drive circuits, design of the antenna and environment.



Reflow Profile: Not recommended for reflow soldering

Manual Soldering: Recommended Soldering iron temperature setting: 330°C, 3 seconds max, 3 times max.

Packaging: 100pcs per polyphene bag / box

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