# NFC Ferrite Antenna (13.56MHz)

### ANFCA-3225-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**

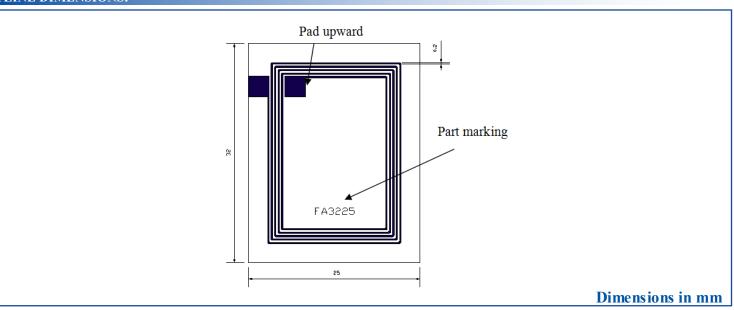
| Item                          | Spec    |
|-------------------------------|---------|
| Operating Frequency (MHz)     | 13.56   |
| Inductance (μH)               | 1.8±10% |
| Q-Factor min.                 | 35      |
| DC Resistance max. $(\Omega)$ | 1.0     |

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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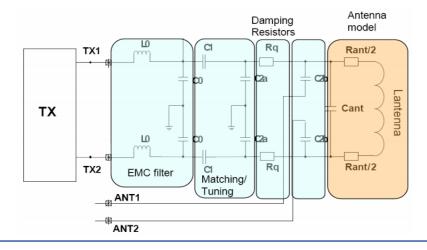




#### MATCHING CIRCUIT AND REFERENCE VALUES

| Component                        | Value for reference only <sup>(1)</sup> | Notes  |
|----------------------------------|---|--|
| LO                               | 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                               | 33pF                                    | 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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