

Z Axis RFID Coil PA6512-AE



This part is optimized for use for the Z axis in Near Field Communications systems.

Evaluation was done using the STMicroelectronics CR95HF NFC Transceiver Reference board with the PA6512 connected to the STMicroelectronics M24LRxxE Dynamic NFC/RFID Tag.

The PA6512-AE requires 85% less board space (123 mm² vs. 800 mm²) compared with antennas designed for a PCB, yet still has approximately 50% of the read distance.



Part number ¹	Inductance ² (μH)	Read distance ³ (inches/mm)	DCR max ⁶ (Ohms)	Inductance at 13.56 MHz (μH)
PA6512-AE_	4.7 ±20%	1.15/29,3	0.028	4.6

1. When ordering, please specify **packaging** code:

PA6512-AED

Packaging: **D** = 13" machine-ready reel. EIA-481 embossed plastic tape (1000 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

B = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from B to D.

- Inductance measured at 100 kHz, using an Agilent/HP 4284A impedance analyzer or equivalent.
- Read distance measured using the ST Microelectronics CR95HF RF transceiver demo board.
- DCR measured using a Keithley 580 micro-ohmmeter or equivalent.
- Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

Terminations Tin over nickel over phos bronze

Core material Ferrite

Environmental RoHS compliant, halogen free

Weight 1.1 g

Ambient temperature -40°C to +85°C

Storage temperature Component: -40°C to +125°C.

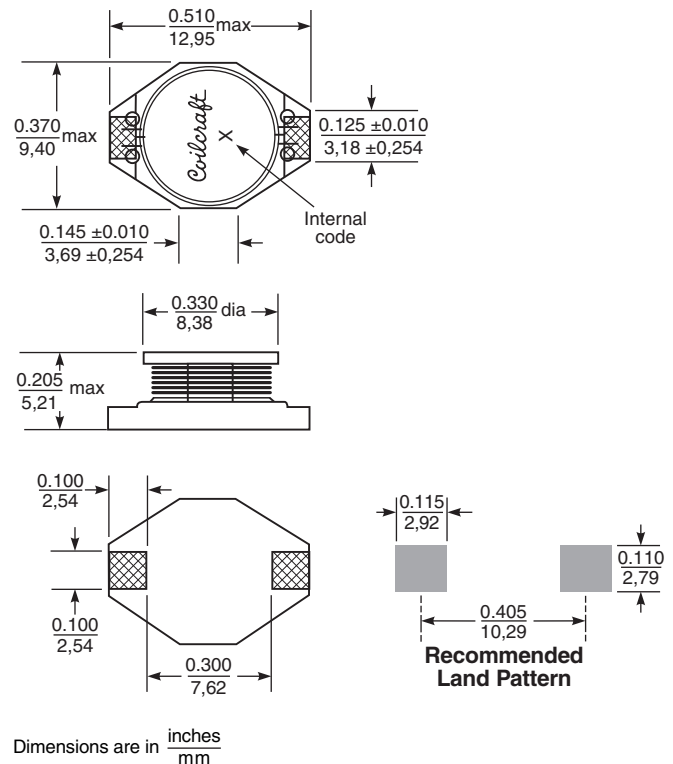
Tape and reel packaging: -40°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Packaging 1000 per 13" reel Plastic tape: 24 mm wide, 0.33 mm thick, 12 mm pocket spacing, 5.8 mm pocket depth

PCB washing Tested with pure water or alcohol only. For other solvents, see Doc787_PCB_Washing.pdf.



Dimensions are in $\frac{\text{inches}}{\text{mm}}$

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