



# RFID Transponder Coils – 4308TC



**NOTE:** This product has been replaced by the 4308RV series. The new series is footprint compatible and offers better read distances and an expanded temperature range.

Coilcraft's family of antenna coils are rugged, high performance devices intended for RFID applications at 125 kHz.

These low profile parts have an extended length that allows longer read ranges and higher sensitivity. The coil is constructed of ferrite laminated onto a ceramic base, which makes it more rugged and impact resistant than all-ferrite constructions. An encapsulated top ensures reliable pick and place operations.

In addition to the standard models shown, Coilcraft can design transponder coils designed to operate at other frequencies.

Part Number <sup>1</sup>	Inductance <sup>1</sup> @ 125 kHz ±5% (mH)	Q min <sup>2</sup>	Read distance <sup>3</sup> (inches/cm)	Matching capacitor <sup>4</sup> (pF)	DCR max <sup>5</sup> (Ohms)	SRF min <sup>6</sup> (kHz)	Color code
4308TC-404XJL_	0.40	15	20/52	4000	7.4	4500	Yellow Black Yellow
4308TC-904XJL_	0.90	15	26/67	1800	22	4000	White Black Yellow
4308TC-115XJL_	1.08	15	27/70	1500	25	4000	Brown Brown Green
4308TC-205XJL_	1.97	17	31/80	820	34	2400	Red Black Green
4308TC-245XJL_	2.38	17	32/83	680	39	2200	Red Yellow Green
4308TC-335XJL_	3.30	17	35/90	490	51	1800	Orange Orange Green
4308TC-415XJL_	4.15	17	35/90	390	74	1700	Yellow Brown Green
4308TC-495XJL_	4.90	17	36/91	330	96	1300	Yellow White Green
4308TC-685XJL_	6.80	17	37/95	240	112	1000	Blue Gray Green
4308TC-715XJL_	7.10	17	38/97	220	115	1000	Violet Brown Green
4308TC-815XJL_	8.10	17	37/95	200	123	960	Gray Brown Green

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

**4308TC-815XJL D**

**Packaging:** **D** = 13" machine-ready reel. EIA-481 embossed plastic tape (3000 parts per full reel).

**B** = Less than full reel. In tape, but not machine ready.

To have a leader and trailer added (\$25 charge), use code letter D instead.

2. Inductance and Q measured using Agilent/HP 4192A impedance analyzer. For recommended test procedures, contact Coilcraft.

3. Read distance measured using the KEELOQ<sup>®</sup> Transponder Evaluation Kit part number DM303005 from Microchip. Distance was recorded as the voltage across the resonant circuit dropped below 10 mV.

4. Matching capacitor value required for parallel resonant circuit operating at 125 kHz.

5. DCR measured on micro-ohmmeter.

6. SRF measured using Agilent/HP 8753D network analyzer.

7. Operating temperature range -40°C to +85°C.

8. Electrical specifications at 25°C.

See Qualification Standards section for environmental and test data.

**Coilcraft**<sup>®</sup>

Specifications subject to change without notice.

Please check our website for latest information. Document 223-1 Revised 02/09/05

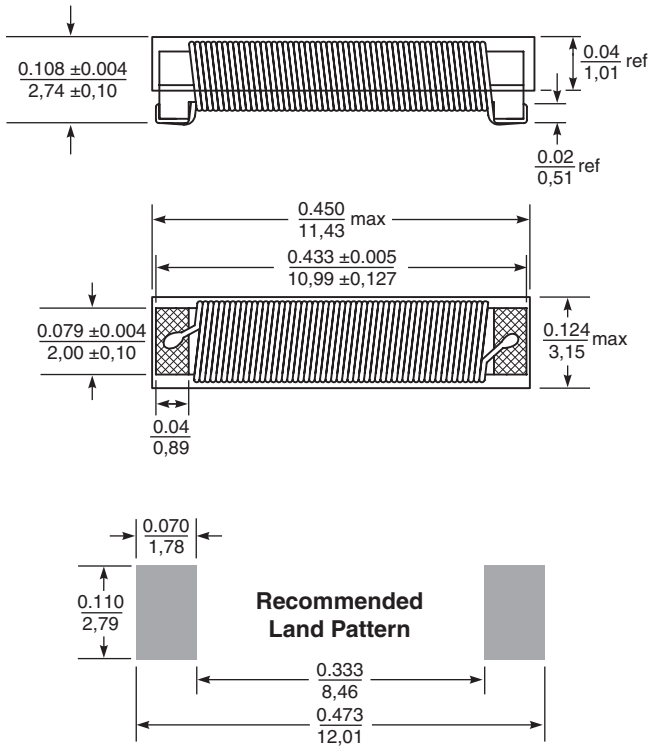
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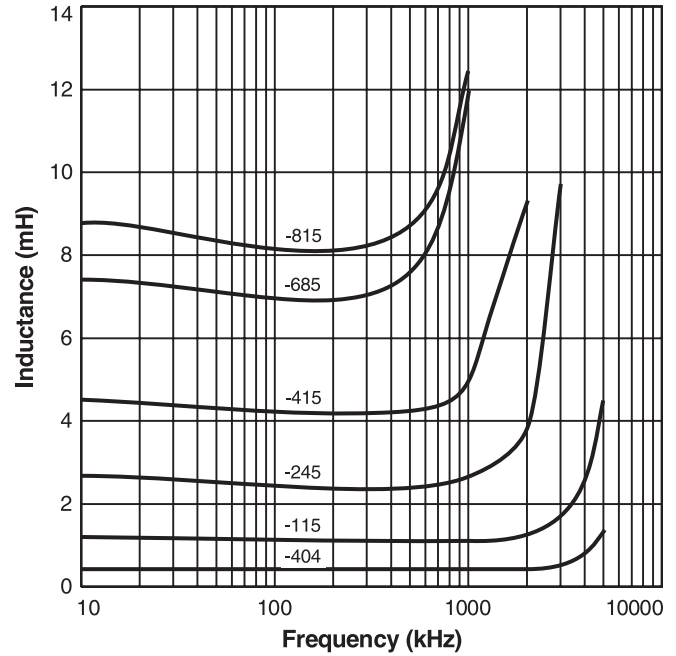


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## Dimensions



## Typical L vs Frequency



**Terminations:** Silver-palladium-platinum-glass frit  
**Tape and reel:** 3000/13" reel 24 mm tape width  
 For packaging data see Tape and Reel Specifications section.



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