



RFID Transponder Coils – 4312RV



The 4312RV series of transponder coils is designed for RFID applications at 125 kHz. It is Coilcraft's smallest transponder coil developed specifically for the harshest mechanical environments.

The coil is wound on a plastic base, providing great durability and allowing this part to withstand physical shock. With operating temperature range to 125°C, these parts are ideal for use in a wide range of automotive applications. The uniquely shaped termination provides excellent board adhesion.

In addition to our standard models, Coilcraft can also design transponder coils to operate at other frequencies.

To request free evaluation samples, contact Coilcraft or visit www.coilcraft.com.

Part number ¹	Inductance ² at 125 kHz ±2% (mH)	Q min ²	Read distance ³ (inches/cm)	Sensitivity ⁴ (mV/μT)	Matching capacitor ⁵ (pF)	DCR max ⁶ (Ohms)	SRF typ ⁷ (kHz)
4312RV-404XGL_	0.40	21	19.65/49,91	9.14	4050	11.5	6340
4312RV-105XGL_	1.00	21	24.25/61,60	15.26	1621	29	4150
4312RV-245XGL_	2.38	26	28.35/72,01	24.72	681	55	2470
4312RV-495XGL_	4.90	24	32.85/83,44	42.45	331	103	1270
4312RV-725XGL_	7.20	30	35.05/89,03	60.02	225	128	1465
4312RV-905XGL_	9.00	32	35.80/91,00	78.10	180	150	1200

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

4312RV-725XGLD

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.

- Inductance and Q measured using Agilent/HP 4192A impedance analyzer at 125 kHz. For recommended test procedures, contact Coilcraft.
- Read distance measured using the KEELOQ® Transponder Evaluation Kit part number DM303005 from Microchip. Distance was recorded as the voltage across the resonant circuit dropped below 10 mV.
- Sensitivity measured in accordance with Coilcraft application note "Measuring Sensitivity of Transponder Coils."
- Matching capacitor value required for parallel resonant circuit operating at 125 kHz.

6. DCR measured on micro-ohmmeter.

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

8. **Ambient temperature range:** -40°C to +125°C

9. **Storage temperature range:** Component: -40°C to +125°C
Packaging: -40°C to +80°C

10. **Resistance to soldering heat:** Three reflows at >217°C for 90 seconds (+260°C ±5°C for 20 – 40 seconds), allowing parts to cool to room temperature between.

11. Electrical specifications at 25°C.

12. Temperature coefficient of inductance: +300 to +1100 ppm/°C.

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

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Specifications subject to change without notice.
Please check our website for latest information.

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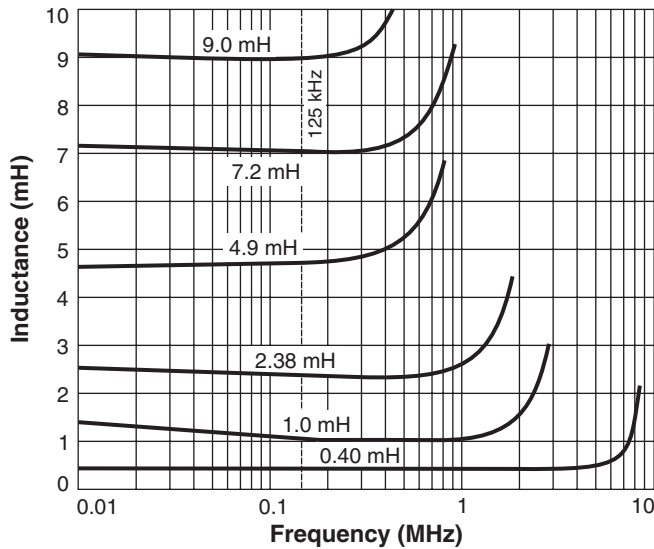
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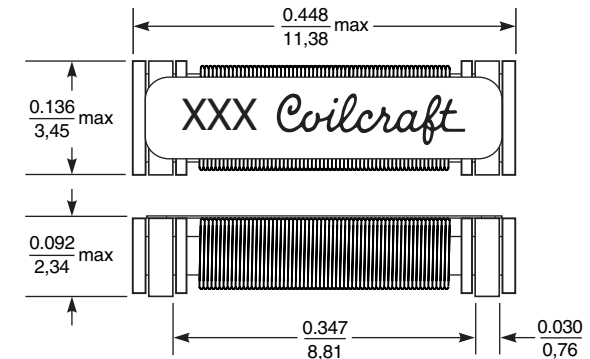


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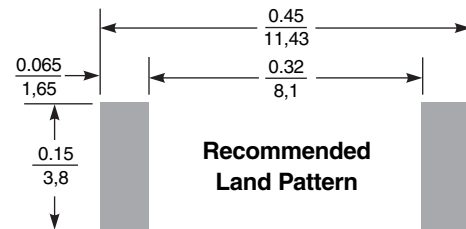
Typical L vs Frequency



Dimensions



Note: Unless otherwise indicated, all part dimensions $\pm 0.002/0,05$



Weight: 210 – 240 mg

Terminations: Gold over nickel over phos bronze

Tape and reel: 3000/7" reel 24 mm tape width

For packaging data see Tape and Reel Specifications section.

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