

## **Transponder Coils (for RFID)**

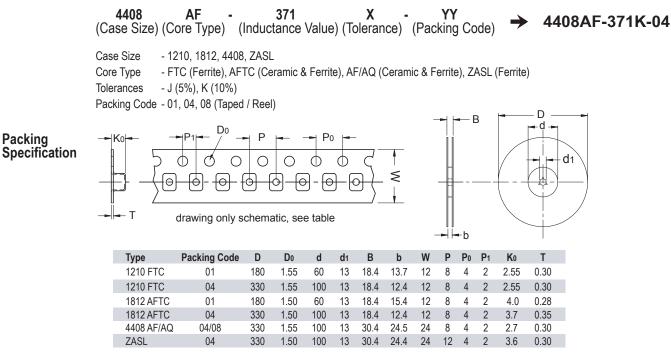
Our surface mount transponder coils (wire wound) series cover a wide range of electrical performances. Its length and cross section area are optimized for best sensitivity in the coil axis. Customized inductance values are available upon request.

Applications

ns Used for wireless data transmission in low frequency RFID products, such as immobilizers, TPMS and keyless entry. Other industrial applications include access control and tracking devices.

Technical Data	L – Value (rated inductance)	Measured with Bode 100 Vector Network Analyzer or equivalent at frequency $f_L$
	Q – Factor (min)	Measured with Bode 100 Vector Network Analyzer or equivalent at frequency $f_Q$
	SRF (min)	Measured with HP 8753ES Network Analyzer or equivalent
	DCR (max)	Measured at 25°C
	Operating Temperature	-40°C to +150°C (Including component self-heating) For FTC from -40°C to +125°C
	Pad Metallization	Gold flash as top layer, except ZASL with tin plating
	Wire termination	Spot welding, except ZASL
	Recommended soldering method	Reflow
	Moisture Sensitivity Levels (MSL)	MSL Level 1, indicating unlimited floor life at ≤ 30°C / 85% relative humidity
	Solderability	Using lead free solder (Sn 99.9) at 260°C ± 5°C for 5 ± 0.5 seconds, min 90% solder coverage of metallization Standard: IEC 68-2-20 (Ta)
	Resistance to Soldering Heat	Resistant to $260^{\circ}C \pm 5^{\circ}C$ for $10 \pm 1$ seconds Standard: IEC 68-2-20 (Tb)
	Resistance to Solvent	Resistant to Isopropyl alcohol for $5 \pm 0.5$ minutes at $23^{\circ}C \pm 5^{\circ}C$ Standard: IEC 68-2-45
	Climatic Test	Defined by the following standards IEC 68-2-1 for Cold test: -40°C for 96 hours IEC 68-2-2 for Dry heat test: 125°C for 96 hours IEC 60068-2-78 for Humidity test: 40°C at RH 95% for 4 days
	Thermal Shock Test	Temperature cycle: -40°C to +125°C to -40°C Max/Min temperature duration: 15 min Temperature transition duration: 5 min Cycles: 25 Standard: MIL-STD-202G
	Adhesion of Soldered Component (Shear Test)	Components withstand a pushing force of 10N for $10 \pm 1$ seconds Standard: IEC 60068-2-21, method Ue <sub>3</sub>
	Mechanical Shock	Mil-Std 202 Method 213 Condition C 3 axis, 6 times, total 18 shocks 100 G, 6 ms, half-sine
	Vibration	Mil-Std 202 Method 204 20 mins at 5G 10 Hz to 2000 Hz 12 cycles each of 3 orientations

## Ordering Code Example: <u>4408AF-371X-YY</u>





## **FASTRON's Component Key Characteristics**



Approved according to AEC-Q200



Approved according to AEC-Q200 with High Temperature



Suitable for High Temperature



Part is RoHS conform and Halogen free



Mechanical Shock and Vibration Proof



Designed for High Q-values



Exceptionally High Q-values



Optimized for High Currents



**Optimized for High Voltages**