

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 on request.

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

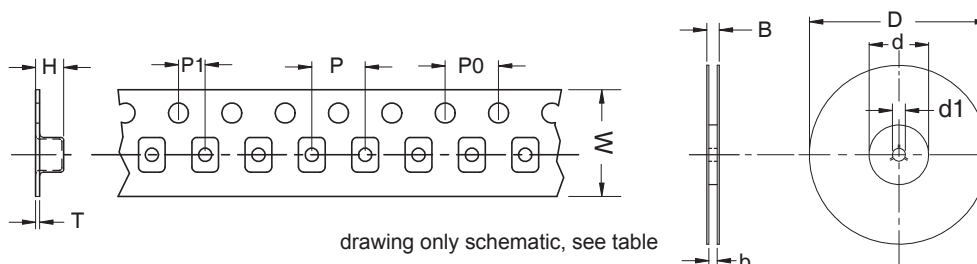
Technical Data

L – Value (rated inductance)	Measured with HP 4194A Impedance / Gain-phase Analyzer at frequency f_L
Q – Factor (min)	Measured with HP 4194A Impedance / Gain-phase Analyzer at frequency f_Q
SRF (min)	Measured with HP 8714 RF Network Analyzer
DCR (max)	Measured at 25°C
Operating Temperature	from -40°C to +125°C
Surface Finishing	Epoxy moulded flat top for perfect pick and place assembly, except 4513FP with sticker
Pad Metallization	Gold flash as top layer, except 4513FP with tin plating
Wire termination	Spot welding
Recommended soldering method	Reflow
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°C ± 5°C for 10 ± 1 seconds Standard: IEC 68-2-20 (Tb)
Resistance to Solvent	Resistant to Isopropyl alcohol for 5 ± 0.5 minutes at 23°C ± 5°C Standard: IEC 68-2-45
Climatic Test	Defined by the following standards IEC 68-2-1 for Cold test: -55°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
Shear Test	Components withstand a pushing force of 10N for 10 ± 1 seconds Standard: IEC 60068-2-21, method Ue3
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: **4408AF-371X-04** (Case Size) (Core Type) - (Inductance Value) (Tolerance) - (Packing Code)

- Case Size - 1206, 1812, 4513, 4408
- Core Type - FTC (Ferrite), AFTC (Ceramic & Ferrite), FP (Plastic Ferrite), AF (Ceramic & Ferrite)
- Tolerances - J (5%), K (10%), M (20%)
- **Bold is standard tolerance**
- Packing Code - 01, 04, 08 (Reel)

Packing Specification



Type	D	d	d1	B	b	W	P	P0	P1	H	T
1206 FTC	180	60	13	12.7	8.4	8	4	4	2	2.5	0.2
1812 AFTC	180	60	13	18.4	15.4	12	8	4	2	4.28	0.28
4513 FP	330	100	13	30.4	24.5	24	8	4	2	2.5	0.35
4408 AF	330	100	13	30.4	24.5	24	8	4	2	2.7	0.35

All dimensions in mm

Technical Data & Packing Spec