

# Transponder Coils

## TPL series

Type:            TPL1183427  
                     TPL1183525

Issue date:     September 2011

- All specifications are subject to change without notice.
  - Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
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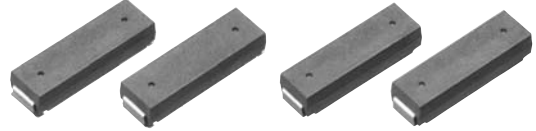
# Transponder Coils

Conformity to RoHS Directive

## TPL Series TPL1183427/1183525

### FEATURES

- Because it is complete resin mold, it is high reliability (Because re-mold is possible in customer specially).
- Terminals are high reliability by a spring structure. It has been especially superior in bending and anti-drop proof.
- It maintains stable electrical signal to have employed sectional winding to coil. Because it is a high SRF design structure, a stable electrical characteristic is provided.
- Terminals are lead-free.



### APPLICATIONS

Receiving LF Antenna coils for the in-car devices shown below

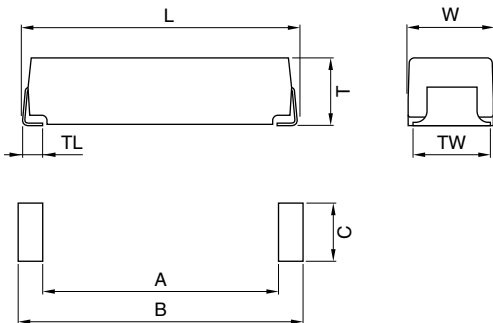
- Tire-pressure monitoring system (TPMS)
- Keyless entry system
- Immobilizer

and other electronic devices.

### SPECIFICATIONS

Operating temperature range	-40 to +125°C [Including self-temperature rise]
Storage temperature range	-40 to +125°C

### SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



Type	L	W	T	TL	TW	A	B	C	Weight(g)
TPL1183427	11.8±0.4	3.4±0.4	2.75±0.3	0.8	2.4	9.9	13.5	2.7	0.33
TPL1183525	11.8±0.5	3.5±0.4	2.4±0.3	0.8	3.2	9.9	13.5	3.5	0.31

Dimensions in mm

### PACKAGING STYLE AND QUANTITIES

Packaging style	Type	Quantity
Taping	TPL1183427	2500 pieces/reel
	TPL1183525	2500 pieces/reel

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## ELECTRICAL CHARACTERISTICS

Inductance*1 (mH)[125kHz]	Inductance tolerance*2 (%)	Q typ. [125kHz]	Self-resonant frequency (kHz)typ.	DC resistance ( $\Omega$ )typ.	Part No.
7.20	$\pm 5$	66	690	50	TPL1183427-722J-720N
2.61	$\pm 5$	50	650	26	TPL1183525-262J-261N

\*1 This inductance value is an example of the current commercial product.

If a different inductance is needed, please contact us.

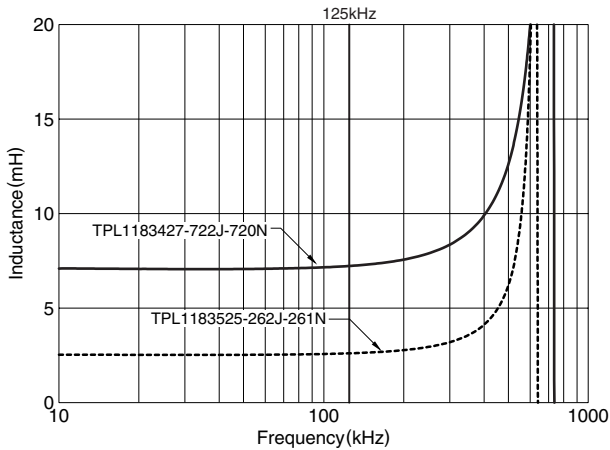
\*2 Available for an inductance tolerance of less than  $\pm 5\%$ .

- Test equipment L, Q, SRF: 4194A IMPEDANCE ANALYZER(HP)  
16047E TEST FIXTURE(Agilent) with TDK original base  
Rdc: AX-114N DIGITAL OHM METER(ADEX)

• If an ultrasonic process is used, confirm the condition settings in order to prevent disconnection.

## TYPICAL ELECTRICAL CHARACTERISTICS

### INDUCTANCE vs. FREQUENCY CHARACTERISTICS



### Q vs. FREQUENCY CHARACTERISTICS

