

# SDTR1103

11.8x3.6x2.5(max dimensions coated version)  
(16.2 mH – 340 $\mu$ H)

## SMD Drop Resistant Transponder Coil

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RFID Transponder Inductors

### Features

The SDTR1103 Series of Surface Mount ferrite wound inductor is the best solution when high electrical and mechanical performance is needed. Its length and cross sectional area are optimized to achieve the maximum sensitivity in the coil axis. The construction of the coil offer high mechanical performance due to the plastic base and ferrite laminate.

### Main characteristics:

- High stability in temperature, ranges.
- $\Delta L_s/L_s$  (-40°C $\Rightarrow$ 25°C):-2%max.
- $\Delta L_s/L_s$  (+25°C $\Rightarrow$ +85°C):+0.5%max.
- Typical temperature coefficient  $\Delta L_s/^\circ\text{C}$ : +200 $\pm$ 50ppm/ $^\circ\text{C}$ .
- 40°C to +125°C for TPMS applications.
- 40°C to +85°C for Keyless Entry Systems.

-Mechanical performance.

Drop test: more than 500 times x 1 meter.

-High sensitivity.

75 mV<sub>pp</sub>/A<sub>pp</sub>/m for 7.2 mH (@125 kHz).

135 mV<sub>pp</sub>/A<sub>pp</sub>/m for 16.2 mH (@125 kHz).

-Epoxy coated.

Moulded with epoxy protection, 5 sides protected , high reliability with Pick&Place machines warranted.

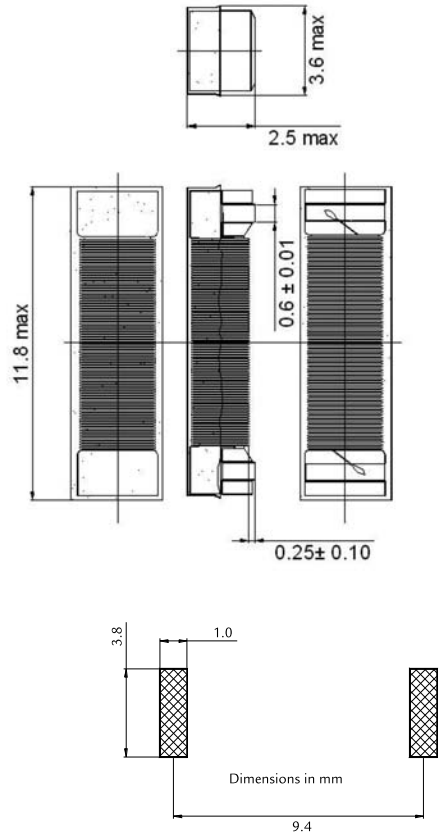
-Taped & Reel: 3000pcs / reel.

-Inductance values from 340 $\mu$ H to 16.2mH for 125KHz operations (contact PREMO RFID for inductance range for other working frequencies such as 20KHz and 40KHz).

### Applications

- Immobilizers.
- Tyre pressure monitoring systems.
- Keyless entry Systems.
- Industrial applications.
- Access control.

### Dimensions



SDTR1103 DIMENSIONS AND RECOMMENDED LAYOUT

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### Electrical specifications

P/N	L (mH) @125KHz	C <sub>res</sub> (pF)	Q @125KHz	SRF (KHz)	RDC (Ω) max	Sensitivity (mV <sub>pp</sub> /A <sub>pp</sub> /m) @125 kHz
SDTR1103-1620+	16.2	100	>30	>200	143	>135
SDTR1103-1080+	10.8	150	>36	>250	105	>100
SDTR1103-0900+	9.00	180	>30	>275	115	>88
SDTR1103-0736+	7.36	220	>32	>300	110	>80
SDTR1103-0720+	7.20	225	>36	>350	105	>75
SDTR1103-0600+	6.00	270	>32	>350	95	>63
SDTR1103-0491+	4.91	330	>31	>380	85	>60
SDTR1103-0477+	4.77	339	>30	>350	87	>59
SDTR1103-0415+	4.15	400	>35	>450	63	>55
SDTR1103-0344+	3.44	470	>41	>500	47	>50
SDTR1103-0289+	2.89	560	>42	>550	44	>45
SDTR1103-0238+	2.38	680	>38	>550	40	>37
SDTR1103-0197+	1.97	820	>35	>400	39	>32
SDTR1103-0162+	1.62	1000	>30	>700	30	>32
SDTR1103-0108+	1.08	1500	>20	>700	35	>24
SDTR1103-0090+	0.90	1800	>18	>750	33	>22
SDTR1103-0073+	0.73	2200	>26	>1000	25	>20
SDTR1103-0060+	0.60	2700	>24	>1500	21	>18
SDTR1103-0049+	0.49	3300	>22	>2000	18	>16
SDTR1103-0041+	0.41	3900	>20	>2000	16	>15
SDTR1103-0034+	0.34	4700	>25	>3000	10	>12

Replace + with the tolerance code letter: A:3%, J:5% , K:10%.

This chart is a reference guide for the most common required values at working frequency of 125 kHz. Any other inductance value at LF or tighter tolerances can be provided. Please contact our sales department for any inquiry.

Sensitivity measured with Helmholtz coils H=8.36 A<sub>pp</sub>/m @125 kHz. Contact us for measurement specification.

Operating and test freq: 125KHz.

SRF: Self-resonant frequency of the coil.

Other tolerances available under customer requirements.

