

RFID transponder coils for LF and HF application

New

Rx-/Tx-Antennas

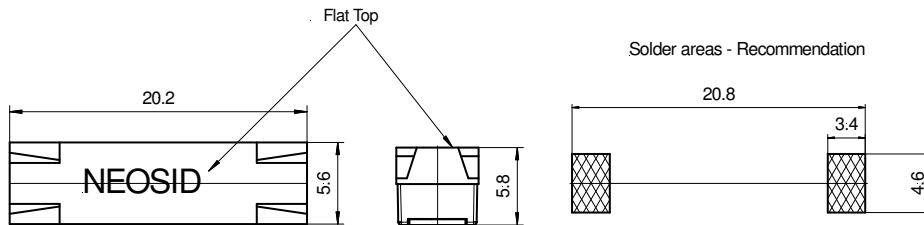
Series Ms 5420

L [mH]	± %	Q ≥	f _{L,Q} [kHz]	f _{res} ≥ [MHz]	R _{DC} ≤ [Ω]	I _{max} [mA]	S *) [mV/A/m]	Art. Nr.:
0.19	5	65	125	2.0	0.9	850	15	88 8056 83
0.4	5	80	125	1.5	1.3	500	25	88 8056 90
0.9	5	80	125	0.8	2.5	350	40	88 8056 80
1.2	5	80	125	0.7	5.0	250	50	88 8056 88
2.38	5	65	125	0.4	9.5	200	80	88 8056 85
2.66	5	60	125	0.36	10,0	200	85	88 8056 84
4.5	8	70	125	0.35	9.5	160	130	88 8056 81
5.6	10	30	125	0.27	14.7	150	170	88 8056 89
7.2	10	30	125	0.25	16.2	100	280	88 8056 86

Gluing with PCB by HSF optional

S-measurement with Helmholtz coil at *)125 kHz, typical value

Applications:
Transponder antenna
Decoupling in RF- and IF-circuits
Use in frequency selective circuits



New

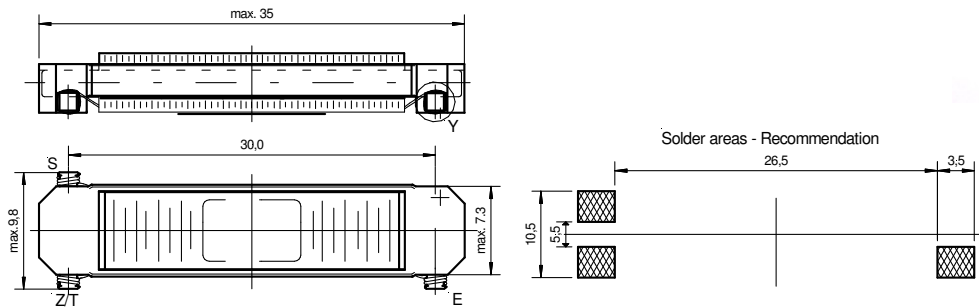
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Series Ms 62

L [mH]	± %	Q ≥	f _{L,Q} [kHz]	f _{res} ≥ [MHz]	R _{DC} ≤ [Ω]	I _{max} [mA]	S [mV/A/m]	Product No.
3.58	5	50	5.5	0.35	2.5	-	-	00 6169 01
3.58	5	90	21.8	0.35	2,5	-	20 ^{*1)}	88 8049 56
0.715	5	170	125	1.2	1.3	-	60 ^{*2)}	88 8049 57
0.960	5	170	125	1.1	1.5	300	60 ^{*2)}	88 8026 39
3	5	60	125	0.4	3.0	-	160 ^{*2)}	88 8022 42
7.2	10	50	125	0.3	5.0	175	-	88 8026 41

Gluing with PCB by HSF optional

S-measurement with Helmholtz coil at ^{*)}125 kHz, ^{**)}21,8 kHz



Applications:
Transponder antenna
Decoupling in RF- and IF-circuits
Use in frequency selective circuits

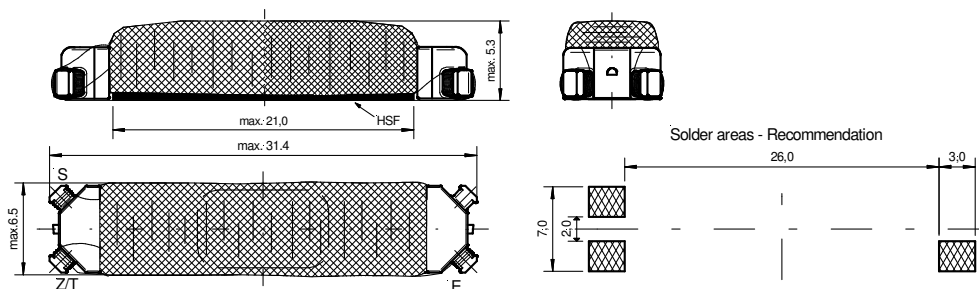


Series Ms 65

L [mH]	± %	Q ≥	f _{L,Q} [kHz]	f _{res} ≥ [MHz]	R _{DC} ≤ [Ω]	I _{max} [mA]	S [mV/A/m]	Product No.
3,74	5	27	5.5	0.4	2.7	100	-	00 6169 51
3.74	5	27	21.8	0.4	2.7	100	18 ^{*1)}	88 8049 58
2.2	5	40	125	0.5	1.7	120	130 ^{*2)}	00 6169 52
1	5	50	125	0.9	1.1	200	70 ^{*2)}	00 6169 53
3	5	50	125	0.45	2.1	100	170 ^{*2)}	00 6169 54
5	5	50	125	0.33	4	90	210 ^{*2)}	88 8026 07

Gluing with PCB by HSF optional

S-measurement with Helmholtz coil at ^{*)}125 kHz, ^{**)}21.8 kHz



Applications:
Transponder antenna
Decoupling in RF- and IF-circuits
Use in frequency selective circuits



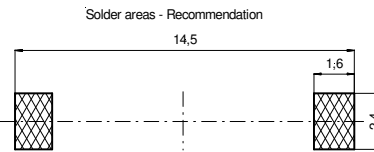
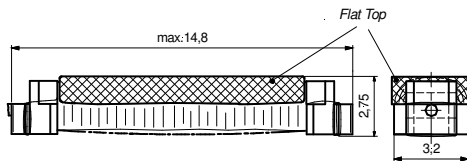
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Series Ms 32c [10µH-39mH]

L [mH]	± %	Q ≥	f _{LQ} [kHz]	f _{res} ≥ [MHz]	R _{DC} ≤ [Ω]	I _{max} [mA]	S [mV/A/m]	Product No.
1.2	5	15	125	0.7	6.5	60	40 ^{*)}	88 8049 60
5.6	5	10	125	0.4	27	30	90 ^{*)}	88 8049 61
8.2	10	6	21.8	0.3	40	20	8 ^{*)}	88 8049 62
8.2	5	-	5.5	0.3	40	20	-	00 6132 60
9.5	10	8	21.8	0.3	48	18	10 ^{*)}	88 8049 63
9.5	10	-	5.5	0.3	48	18	-	88 8049 64
39	10	-	21.8	0.15	175	10	20 ^{*)}	88 8049 65
39	10	-	5.5	0.15	175	10	-	00 6132 70

Gluing with PCB by HSF optional

S-measurement with Helmholtz coil at ^{*)}125 kHz. ^{*)}21.8 kHz



Applications:

Transponder-
Identification- and
Safety-Devices (e.g. for
automotive systems)
Data transmission
5-200 kHz

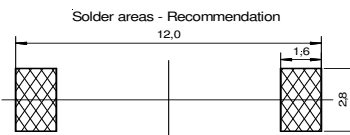
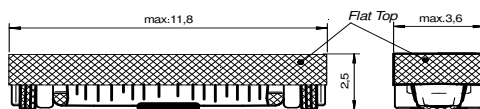


Series Ms 32k [1µH-39mH]

L [mH]	± %	Q ≥	f _{LQ} [kHz]	f _{res} ≥ [MHz]	R _{DC} ≤ [Ω]	I _{max} [mA]	S [mV/A/m]	Product No.
0.4	5	12	125	1.5	2.8	-	11 ^{*)}	88 8049 66
1.6	5	10	125	0.9	11	75	18 ^{*)}	88 8049 67
2.37	5	15	125	0.6	17	65	25 ^{*)}	88 8049 68
4.7	5	15	125	0.5	40	-	40 ^{*)}	88 8025 10
7.2	10	10	125	0.4	62	-	100 ^{*)}	88 8049 69
26	10	4	21.8	0.23	153	15	10 ^{*)}	88 8049 70
26	5	4	5.5	0.23	153	15	-	00 6172 80

Gluing with PCB by HSF optional

S-measurement with Helmholtz coil at ^{*)}125 kHz. ^{*)}21.8 kHz



Applications:

Transponder antenna
Decoupling in RF-and IF-
circuits
Use in frequency
selective circuits

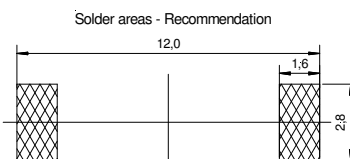
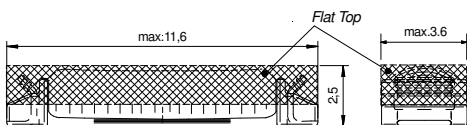


Series Ms 32ka [1µH-39mH]

L [mH]	± %	Q ≥	f _{LQ} [kHz]	f _{res} ≥ [MHz]	R _{DC} ≤ [Ω]	I _{max} [mA]	S [mV/A/m]	Product No.
0.049	+2/-4	20	125	100	1.5	-	-	00 6172 75
0.190	5	35	125	2.6	3	-	7 ^{*)}	88 8025 00
2.38	5	45	125	0.6	23	50	33 ^{*)}	00 6172 40
2.66	5	55	125	0.6	26	50	35 ^{*)}	00 6172 44
4.7	5	40	125	0.45	40	-	50 ^{*)}	88 8025 05
7.2	10	40	125	0.35	56	25	65 ^{*)}	00 6172 43

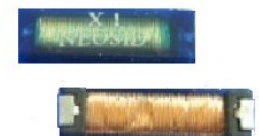
Gluing with PCB by HSF optional

S-measurement with Helmholtz coil at ^{*)}125 kHz. ^{*)}21.8 kHz



Applications:

Transponder antenna
Decoupling in RF-and IF-circuits
Use in frequency selective
circuits



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Series Ms 18k [1µH-14mH]

L [mH]	± %	f _L [kHz]	f _{res} ≥ [MHz]	R _{DC} [Ω] ±10%	I _{max} [mA]	S [mV/A/m]	Product No.
1.1	10	125	1.4	11	45		88 8049 42
1.8	10	125	1.0	22	35		88 8049 43
3.0	10	125	0.5	36	25		88 8049 44
4.7	10	125	0.45	38	-	40 ^{*)}	88 8046 10
14	10	21.8	0.25	144	10		88 8049 45
14	10	5.5	0.25	144	10		88 8049 46

[µH]	± %	[kHz]	[mΩ]	Product No.
1	15	13.56	80	88 8032 37

S-measurement with Helmholtz coil at *)125 kHz. **)21.8 kHz



Applications:

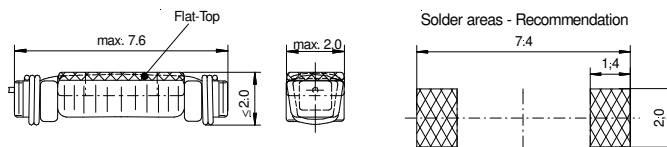
- Transponder antenna
- Decoupling in RF-and IF-circuits
- Use in frequency selective circuits



Series Ms 2074 [1µH-12mH]

L [mH]	± %	f _L [kHz]	f _{res} ≥ [MHz]	R _{DC} [Ω] ±10%	I _{max} [mA]	Product No.
0.49	10	125	2.45	11	70	88 8049 47
1.6	10	125	1.45	22	35	88 8049 48
2.6	10	125	1.1	36	30	88 8049 49
10.8	10	21.8	0.6	144	15	88 8049 50
10.8	10	5.5	0.6	144	15	88 8049 51

[µH]	± %	[MHz]	[mΩ]	Product No.
1.88	10	13.56	100	88 8025 69
5.82	10	13.56	230	88 8025 70



Applications:

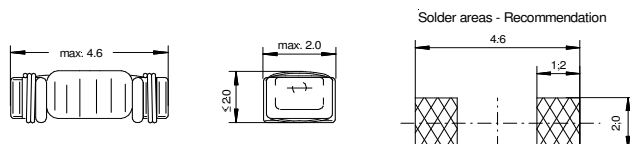
- Transponder antenna
- Decoupling in RF-and IF-circuits
- Use in hearing aids
- Use in frequency selective circuits



Series Ms 2046 [1µH-2.7mH]

L [mH]	± %	f _L [kHz]	f _{res} ≥ [MHz]	R _{DC} [Ω] ±10%	I _{max} [mA]	Product No.
0.26	10	125	4.2	11	90	88 8049 52
0.46	10	125	3.0	22	75	88 8049 53
0.82	10	125	2.2	36	50	88 8049 54
2.7	10	125	1.0	85	25	88 8049 55

[µH]	± %	[MHz]	[MHz]	[mΩ] ±30	Product No.
1.88	10	13.56	300	190	88 8025 72
5.82	10	13.56	30	270	88 8025 73



Applications:

- Transponder antenna
- Decoupling in RF-and IF-circuits
- Use in hearing aids
- Use in frequency selective circuits



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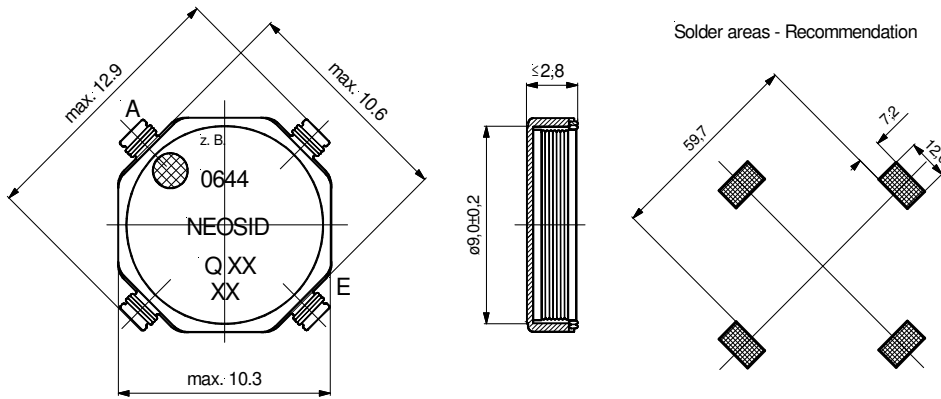
Z-Antenna

Series SM-W 902 [1µH-65mH]

L [mH]	± %	Q ≥	f _{LQ} [kHz]	f _{res} ≥ [MHz]	R _{DC} ≤ [Ω]	I _{max} [mA]	S [mV/A/m]	Product No.
0.11	10	50	125	9	0.8	270	-	88 8049 71
1.2	10	55	125	1.5	5.8	60	8 ^{*)}	88 8049 72
2.2	6	80	125	1.2	10	45	17 ^{*)}	00 6161 21
7.2	10	60	125	0.9	30	25	50 ^{*)}	00 6161 23
52.3	10	15	21.8	0.4	190	10	-	88 8049 73
52.3	10	8	5.5	0.4	190	10	-	88 8049 74
5	10	15	21.8	0.3	220	6	16 ^{*)}	88 8049 75
65	10	8	5.5	0.3	220	6	-	88 8049 76

S-measurement with Helmholtz coil at *)125 kHz. **)21.8 kHz

Applications:
Keyless entry systems
Safety systems RFID

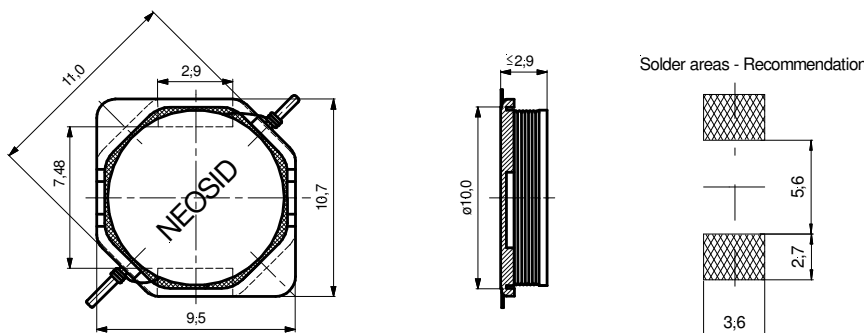


Series SM-W903 [1µH-65mH]

L [mH]	± %	Q ≥	f _{LQ} [kHz]	f _{res} ≥ [MHz]	R _{DC} ≤ [Ω]	I _{max} [mA]	S [mV/A/m]	Product No.
3.9	10	80	125	1.0	13.5	270	-	88 8031 00
2.37	6	80	125	1.1	12	40	17 ^{*)}	00 6161 56
1.2	10	55	125	1.5	5.8	60	8 ^{*)}	88 8049 77
2.2	6	80	125	1.2	11	45	17 ^{*)}	00 6161 51
3.45	3	75	125	-	15.5	30	-	00 6161 55
7.2	6	60	125	0.9	35	25	50 ^{*)}	00 6161 54
52.3	10	15	21.8	0.4	190	10	-	00 6161 52
52.3	10	8	5.5	0.4	190	10	-	88 8049 78
65	10	15	21.8	0.3	230	6	16 ^{*)}	00 6161 53
65	10	8	5.5	0.3	230	6	-	88 8049 79

S-measurement with Helmholtz coil at *)125 kHz. **)21.8 kHz

Applications:
Keyless entry systems
Safety systems RFID



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3D-Antenna

Series 3D-11

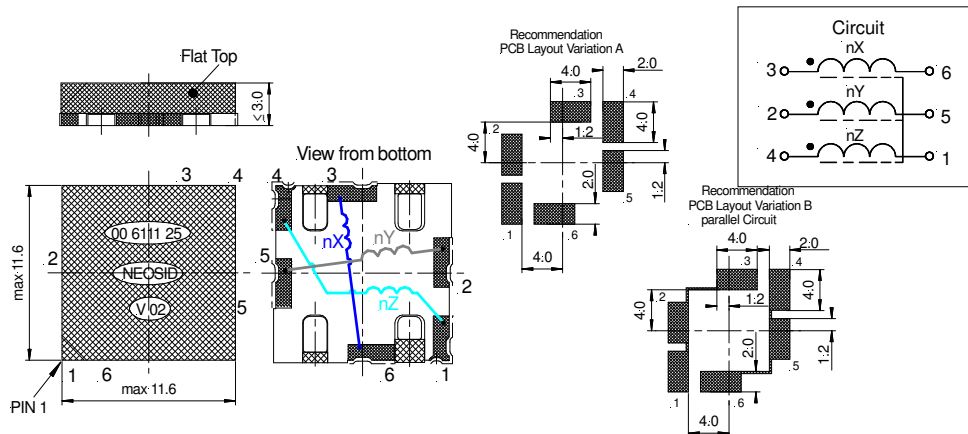
L _x [mH]	Q _x ≥	R _{DC x} [Ω] ≤	L _y [mH]	Q _y ≥	R _{DC y} [Ω] ≤	L _z [mH]	Q _z ≥	R _{DC z} [Ω] ≤	3xS [mV/A/m]	f _{L,Q} [kHz]	Product No.:	Variation
11.5	5	260	11.5	5	260	15.5	5	440	9 ^{*1)}	21.8	00 6111 21	A
4.82	15	120	4.82	15	120	5.87	15	150	75 ^{*2)}	125	00 6111 25	A
2.38	15	100	2.38	15	100	3.45	15	100	40 ^{*2)}	125	88 8015 08	A
2.47	15	70	2.47	15	70	2.47	15	70	40 ^{*2)}	125	88 8023 56	A
4.7	15	160	4.7	15	160	4.7	15	160	58 ^{*2)}	125	88 8015 91	A
7.1	15	200	7.1	15	200	9.0	15	200	90 ^{*2)}	125	88 8015 69	A

L_{x,z}-tolerance ±5%

[μH]	Q _x ≥		[μH]	Q _y ≥		[μH]	Q _z ≥		L _p [μH]	MHz	Product No.:	Variation
17.46	20	-	17.46	20	-	17.46	20	-	5.82	13.56	88 8023 89	B

L_{x,z}-tolerance ±15%

S-measurement with Helmholtz coil at ^{*)}125 kHz. ^{*)}21.8 kHz



Applications:

- Keyless entry systems
- Keyless go
- Safety systems RFID

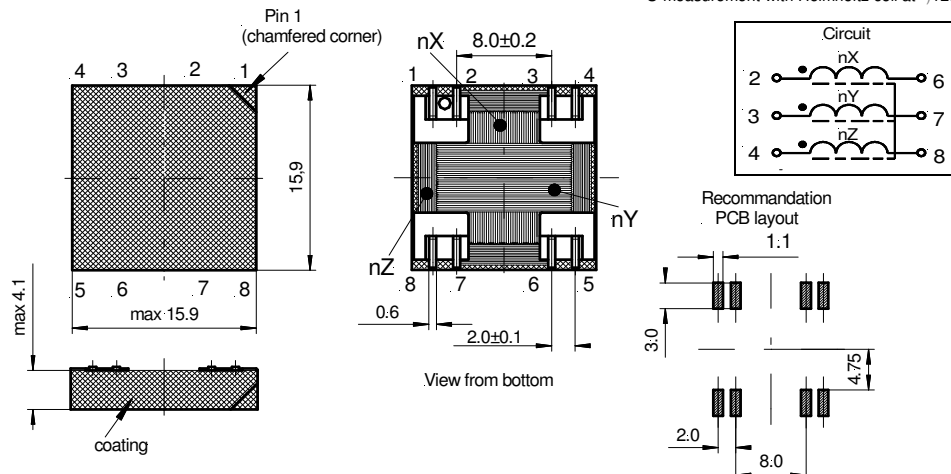


Series 3D-15

L _x [mH]	Q _x ≥	R _{DC x} [Ω] ≤	L _y [mH]	Q _y ≥	R _{DC y} [Ω] ≤	L _z [mH]	Q _z ≥	R _{DC z} [Ω] ≤	f _{L,Q} [kHz]	3xS [mV/A/m]	Product No.:	L _{x,z} ± [%]
4.7	11	140	4.7	11	140	4.7	26	115	125	120 ^{*)}	00 6115 25	5
4.5	25	80	4.5	25	80	5.0	25	120	125	115 ^{*)}	00 6115 26	5
2.38	17	80	2.38	17	80	3.45	26	80	125	62 ^{*)}	00 6115 27	5
2.47	23	45	2.47	23	45	2.47	25	72	125	62 ^{*)}	00 6115 28	5
2.47	27	45	2.47	27	45	2.8	26	72	125	62 ^{*)}	00 6115 29	5

L _x [μH]	Q _x ≥	R _{DC x} [Ω] ≤	L _y [μH]	Q _y ≥	R _{DC y} [Ω] ≤	L _z [μH]	Q _z ≥	R _{DC z} [Ω] ≤	[MHz]	Product No.:	L _{x,z} ± [%]
5.82	30	1.5	5.82	25	1.6	5.82	12	1.3	13.56	88 8025 74	15

S-measurement with Helmholtz coil at ^{*)}125 kHz. ^{*)}21.8 kHz



Applications:

- Keyless entry systems
- Keyless go
- Safety systems RFID



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Transponderantennen für RFID

Wir fertigen komplizierte Ferrite in einem speziellen Spritzgussverfahren und haben somit weitaus größere Möglichkeiten der Formgebung.

So ist es je nach Einsatzmöglichkeit, Anwendungsgebiet und Konstruktionskonzept eine Vielfalt an Formen machbar. Dies ermöglicht es uns, kundenspezifische RFID Transponder-Spulen herzustellen.

Kennzeichen

- ✓ Geringe Höhe
- ✓ Automatisch bestückbar
- ✓ Für Reflow- und Dampfphasenlötung
- ✓ Ansaugfläche ASF
- ✓ Verklebung mit PCB durch HSF (Heiß-Siegel-Fläche) für optimale Falltesteigenschaften
- ✓ Betriebstemperaturbereich -40°C bis +125°C

Anwendungen

- ✓ Transponder-. Identifikation- und Sicherheitssysteme (z.B. Automotive)
- ✓ Schlüssellose Eintrittssysteme
- ✓ RFID Sicherheitssysteme

RFID Transponder Coils

We manufacture intricate ferrites in a special injection-molding process, which opens up far more options when it comes to shaping.

This means that a multitude of shapes is feasible, depending on the application envisaged and the design concept.

This enables us to produce transponder coils for customer's specification.

Features

- ✓ Low height
- ✓ Suitable for automatic insertion
- ✓ For reflow and vapor phase soldering
- ✓ Pick and place area ASF
- ✓ Gluing with PCB by HSF (hot melting dot) for optimal drop test performance
- ✓ Operating temperature range -40°C to +125°C

Applications

- ✓ Transponder-. Identification- and Safety-Devices (e.g. for automotive systems)
- ✓ Keyless entry systems
- ✓ Safety systems RFID

