

Transponder coil Ms 44 – the logical answer

Single-axis transponder coils for secure signal transmission

1-axis transponder coils in various sizes and designs are successfully used in electronic circuits for contactless identification, positioning systems, sensor technology and for representing communication interfaces, e.g. in RFID technology or access control systems.

A ferrite core developed and produced by NEOSID is used as the winding core for the transponder coils. We can choose from over 15 different ferrite materials. Depending on the application, nickel-zinc (NiZn), manganese-zinc (MnZn) or a composite material is used. With our highly developed injection moulding process, we create ferrite core geometries that are optimally designed for their field of application.

The entire core of the axial components consists of softmagnetic ferrite material. This results in components with very high efficiency and a high inductance-to-volume ratio. This technical advantage is particularly important in miniaturisation, for example in RFID transponders or medical devices.

An overview of the entire product family is provided by the product information [X/Y/Z-, 3D RFID transponder antennas for LF and HF bands](#).



Ms 32c(14.8 x 3.2 x 2.75mm)



Ms 32ka(11.6 x 3.6 x 2.5mm)



Ms 5420(20.8 x 5.9 x 6.0mm)

Selection from our product range

Our product variety – your advantage

Whether you need a standard solution or a customised design, we offer a wide selection of coil configurations. From miniature versions for compact assemblies to powerful special coils for harsh environments. Our high in-house production depth – from ferrite core production and winding to final testing – enables seamless quality control and maximum flexibility for customised products.

Ms 44 – a new dimension



Ms 44(14.8 x 4.4 x 2.3mm)

With the new Ms 44, we present a pin-compatible alternative to the 185.4xx / 186.4xx design from Kaschke/Bourns. This size is a perfect complement to our proven Ms 32ka and Ms 5420 transponder coils. The design impresses with its mechanical stability and offers high receiving and transmission characteristics. Production takes place on automatic machines, which ensure consistently high quality standards. On the following pages you will find the technical data sheet for this new transponder coil. The current data sheet shows various inductance values. If you require a different value, we can supply samples at short notice

Suitable replacement types for numerous transponder coils in various designs from Kaschke/Bourns are available in our range.

Customised component designs are our speciality! Thanks to our special injection moulding process for ferrite cores, we produce components that are precisely tailored to your application – individually according to the defined task and exactly within the specified installation space.

Tell us your requirements – we will develop the right solution for you!

Have we sparked your interest? Then contact us about the latest generation of transponder coils.

NEOSID Pemetzrieder GmbH & Co. KG

Langenscheid 26-30

58553 Halver

Germany

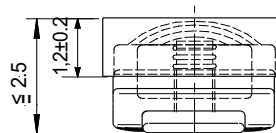
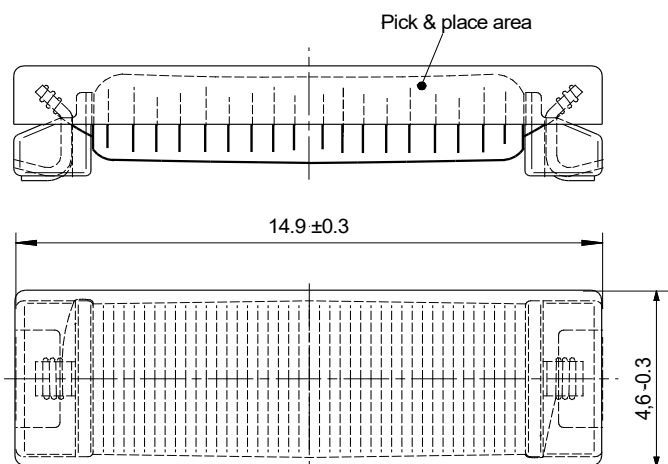
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Ms 44 / L - SMD – Inductor Coil

00617x xx Rev. 0



Print
e. g.:



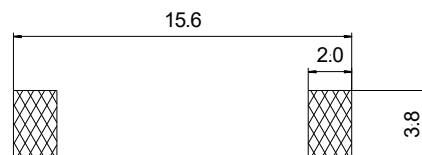
Marking: Production date acc. DIN EN 60062.

Dimensions: mm

Circuit



Solder pad recommendation



Solderable acc. IPC/JEDEC J-STD-020F

Electrical data:

L [mH] bei U=0.1V	± %	R ≤ [Ω]	f _{res} ≥ [kHz]	Q typ	f _{LQ} [kHz]	S _{yp} *1 [mV/A/m]	I _{max} [mA]	Art. Nr.: 00617x ..	Remarks
1.056	5	7.7	950	73	125	35	120	.. 00	
1.6	5	12	710	70	125	43	80	.. 01	
2.38	5	23	560	57	125	55	65	.. 02	
2.66	5	24	510	58	125	57	60	.. 03	
7.2	8	40.5	340	70	125	100	40	.. 04	

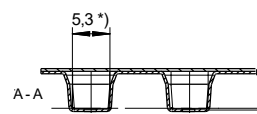
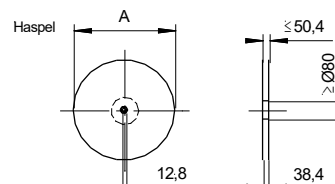
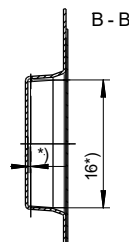
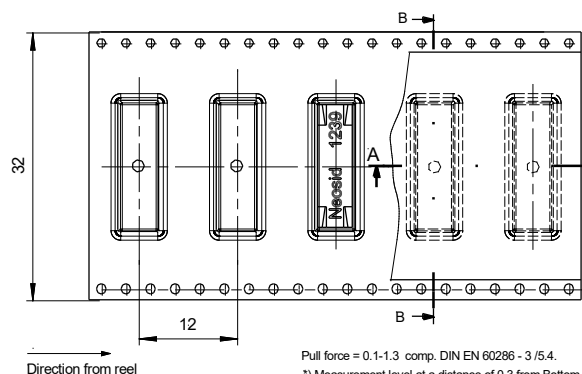
*1: S_{yp} gemessen bei 125 kHz mit Helmholtz-Spule

Temperature range: -40°C to + 125°C

max. Löttemperatur: T_C = 260°C

Storage- and Transport conditions (in tape & reel): +10°...+40°C ;
≤70% rel. humidity, dark transport- and storage conditions.

Packaging in T & R,
PU = 1700 Pcs./Reel

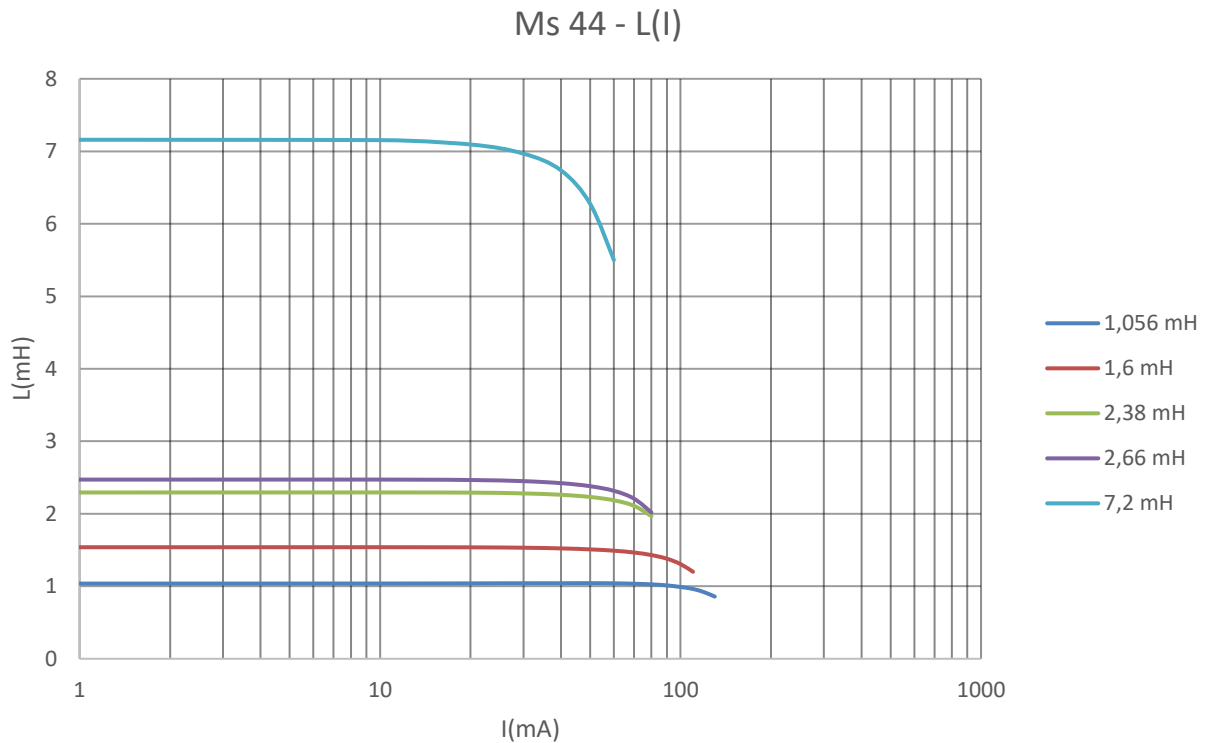


Ao	Bo	Do	Do	E	F	S	Ko	Po	P1	P2	T	W
5,3	16	1,5	2,0	1,75	20,2	40,4	2,8	4,0	12,0	2,0	0,4	44

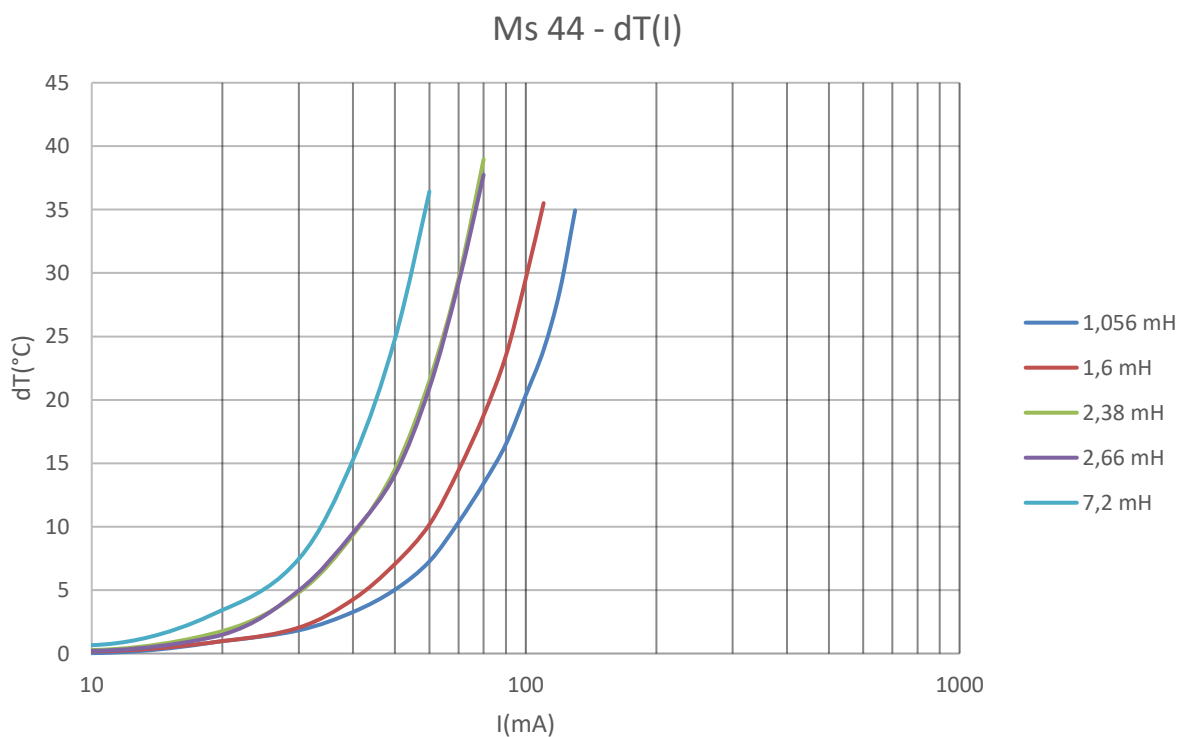
Blister tape according to DIN EN 60286/3:2014.

Elektrical Data (typical)

L(I)-Measurement: (30 s delay)

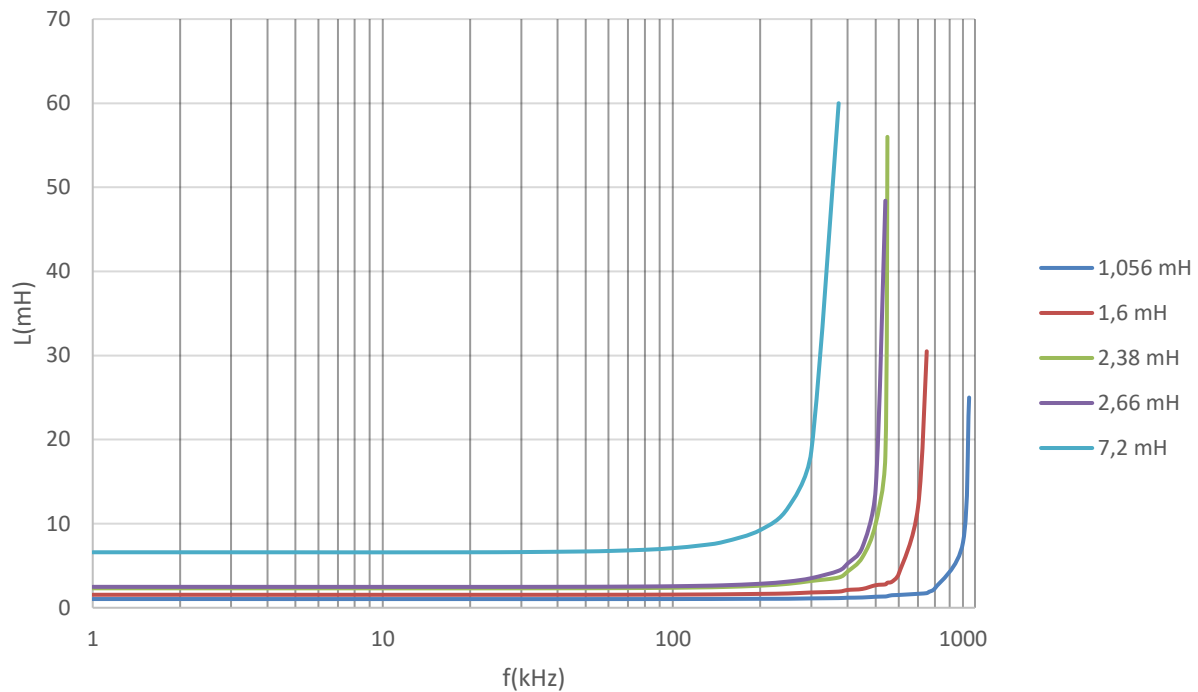


dT(I)-Measurement: (30 s delay)



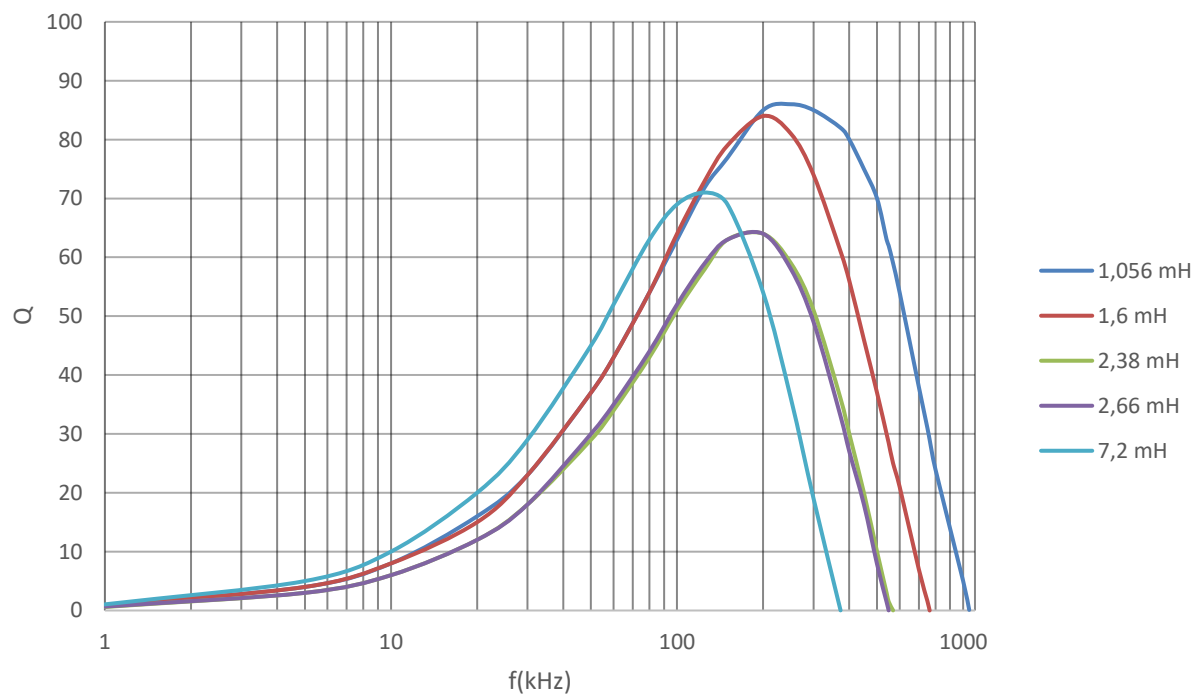
L(f)-Measurement:

Ms 44 - L(f)



Q(f)-Measurement:

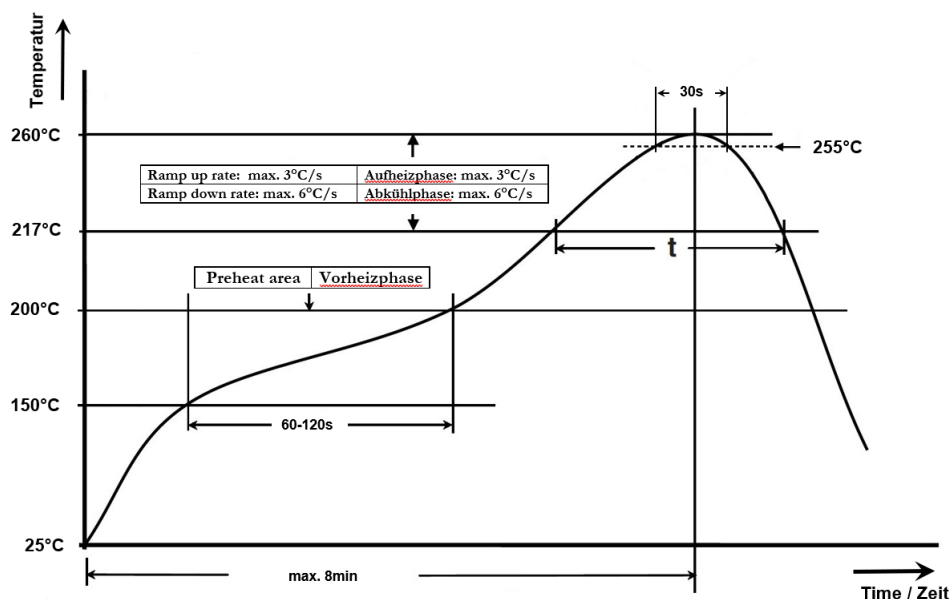
Ms 44 - Q(f)



Soldering Conditions

Recommended soldering method:	Reflow
Resistance to soldering heat:	$T_C = 260\text{ °C}$, 10 s

As part of our internal soldering tests, these Neosid components successfully passed the process suitability testing at the required temperature in accordance with IPC / JEDEC J-STD-020F.



X-/Y- Coils

We manufacture sophisticated ferrite cores for inductive components using a specialized injection molding process, which gives us significantly greater design flexibility in terms of shape and geometry. Depending on the application, area of use, and design concept, a wide variety of core shapes can be realized. This enables us to produce custom X-/Y-coils according to your specific requirements and specifications.

Features

- ✓ Compact design
- ✓ Suitable for automated assembly (supplied in T&R packaging)
- ✓ Vacuum pick-up area (ASF) for SMD assembly as a partial encapsulation
- ✓ Optional heat-seal area (HSF) for optimized mounting on the PCB
- ✓ Wide inductance range
- ✓ High Q factors
- ✓ High sensitivity
- ✓ Suitable for reflow soldering
- ✓ Operating temperature range: -40°C to +125°C
- ✓ Excellent vibration and drop-test performance
- ✓ Custom X-/Y-coil designs available according to customer specifications and application requirements.

Applications

- ✓ Transponder antenna applications
- ✓ Decoupling of RF and IF circuits
- ✓ Use in frequency-selective and resonant circuits