

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

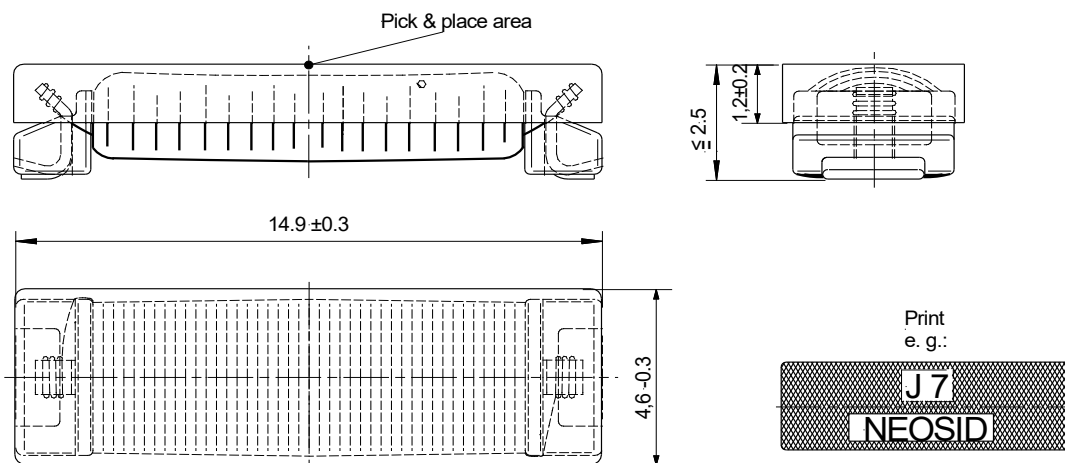
Tel.: +49 (0) 2353 / 71 - 22

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For UK local support: SALES@BEC.CO.UK, Tel: +44 7774 754604

Ms 44 / L - SMD – Inductor Coil

00617x xx Rev. 0



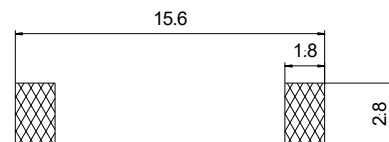
Marking: Production date acc. DIN EN 60062.

Dimension: mm

Circuit



Solder pad recommendation



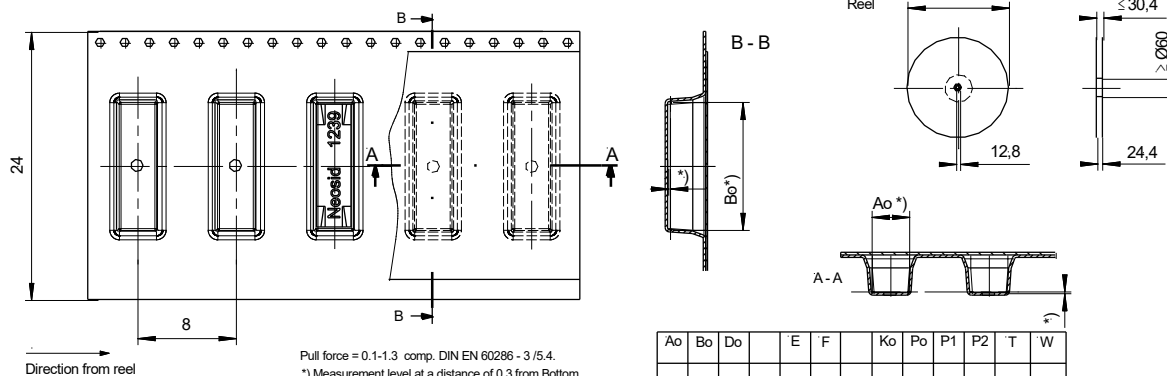
Solderable acc. IPC/JEDEC J-STD-020F

Electrical data:

L	±	R ≤	f _{res} ≥	Q typ	f _{LQ}	S _{typ} *1	I _{max}	Art. Nr.:	Remarks
[mH]	%	[Ω]	[kHz]		[kHz]	[mV/A/m]	[mA]	00617x ..	
bei U=0,1V									
1.056	5	7.7	1000	73	125	35	120	.. 00	
1.6	5	12	714	70	125	43	80	.. 01	
2.38	5	23	573	57	125	55	65	.. 02	
2.66	5	24	532	58	125	57	60	.. 03	
7.2	8	40.5	347	70	125	100	40	.. 04	

*1: S_{typ} measured at 125 kHz in Helmholtz Coil

Temperature range: -40°C to + 125°C

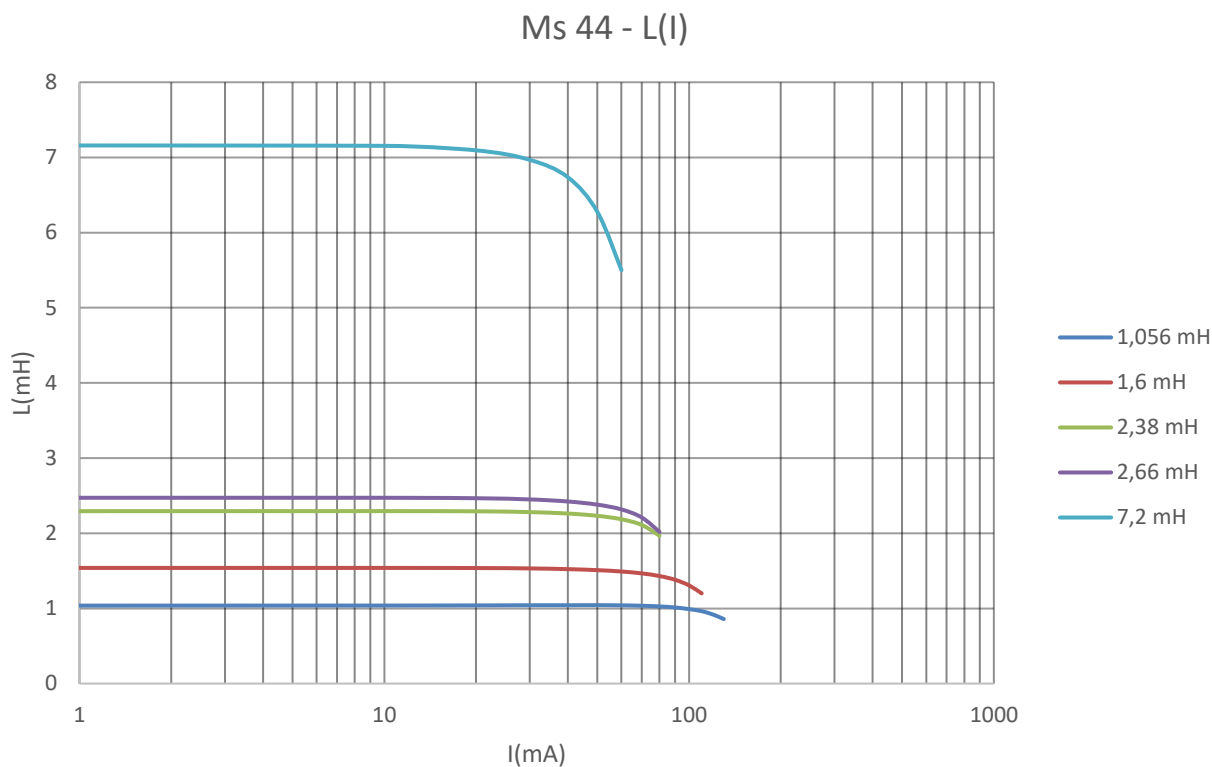
max. Soldering temperature: T_C = 260°CStorage- and Transport conditions (in tape & reel): +10°...+40°C ;
≤70% rel. humidity, dark transport- and storage conditions.Packaging in T & R,
VU = 2800 Pcs./ReelPull force = 0.1-1.3 comp. DIN EN 60286 - 3/5.4.
(*) Measurement level at a distance of 0.3 from Bottom.

Ao	Bo	Do	E	F	Ko	Po	P1	P2	T	W
4.9	15.4	1.5	1.75	11.5	2.8	4.0	8.0	2.0	0.4	24

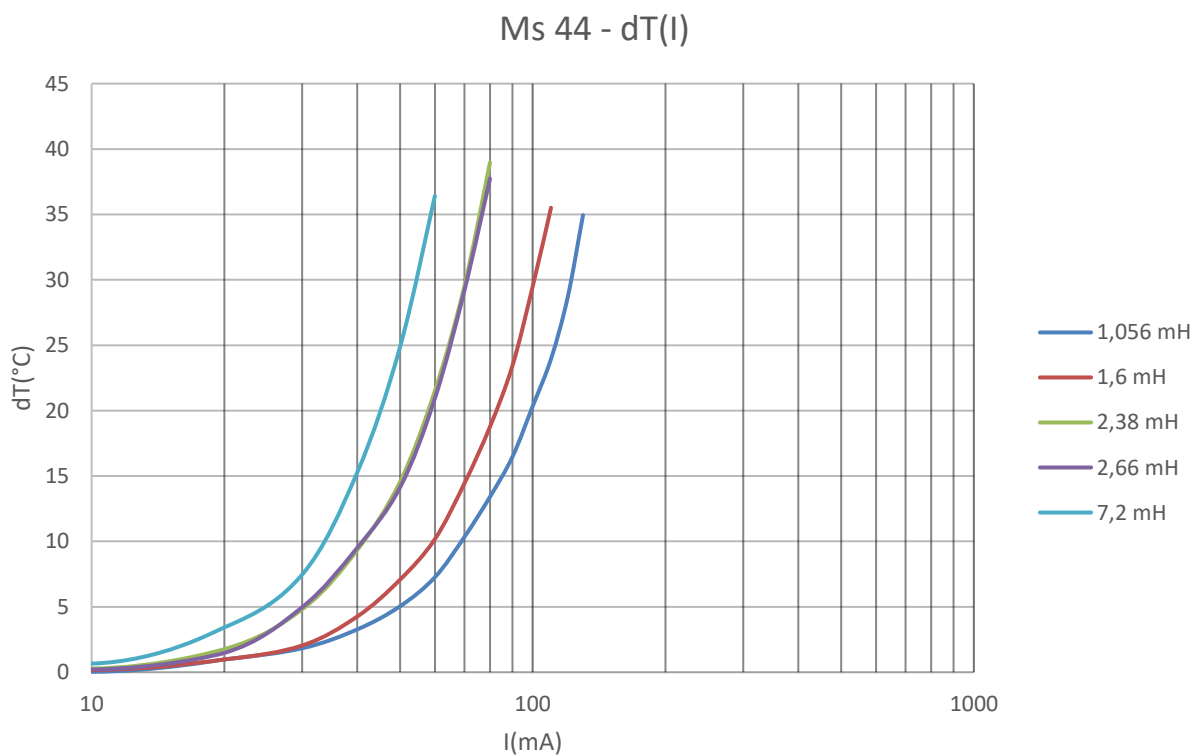
Blister tape according to DIN EN 60286/3:2014.

Electrical values (typical)

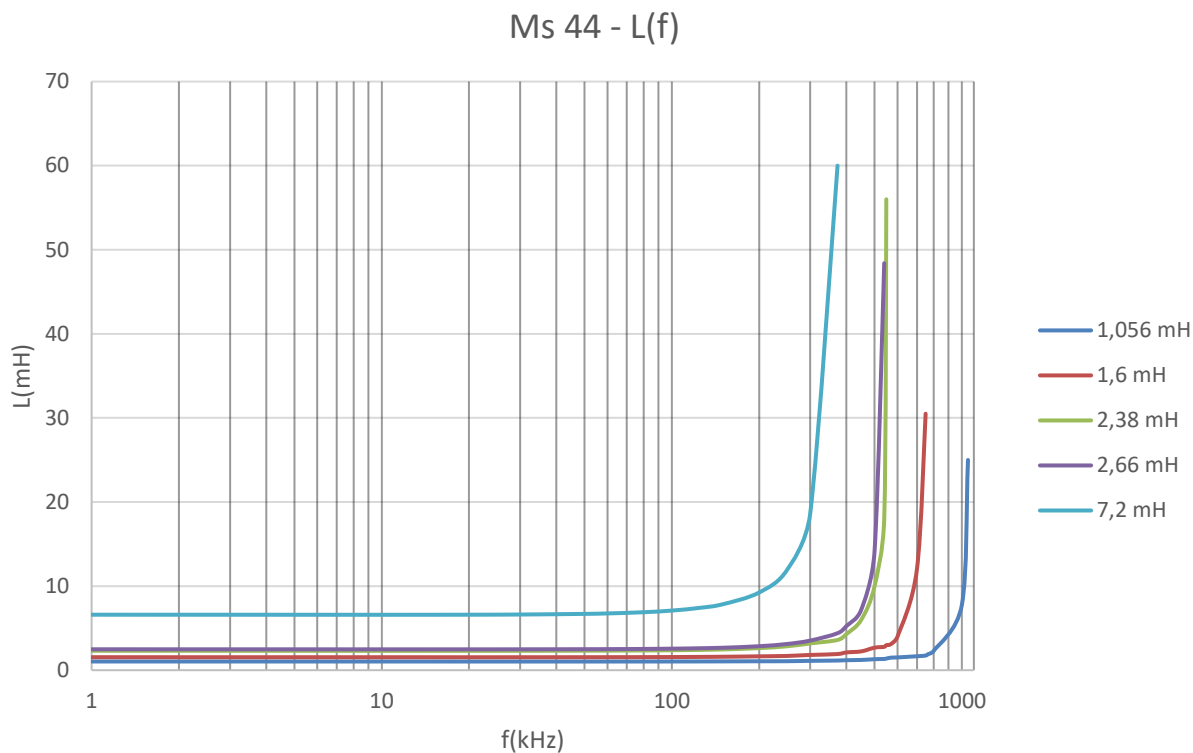
L vs I values (30 s delay)



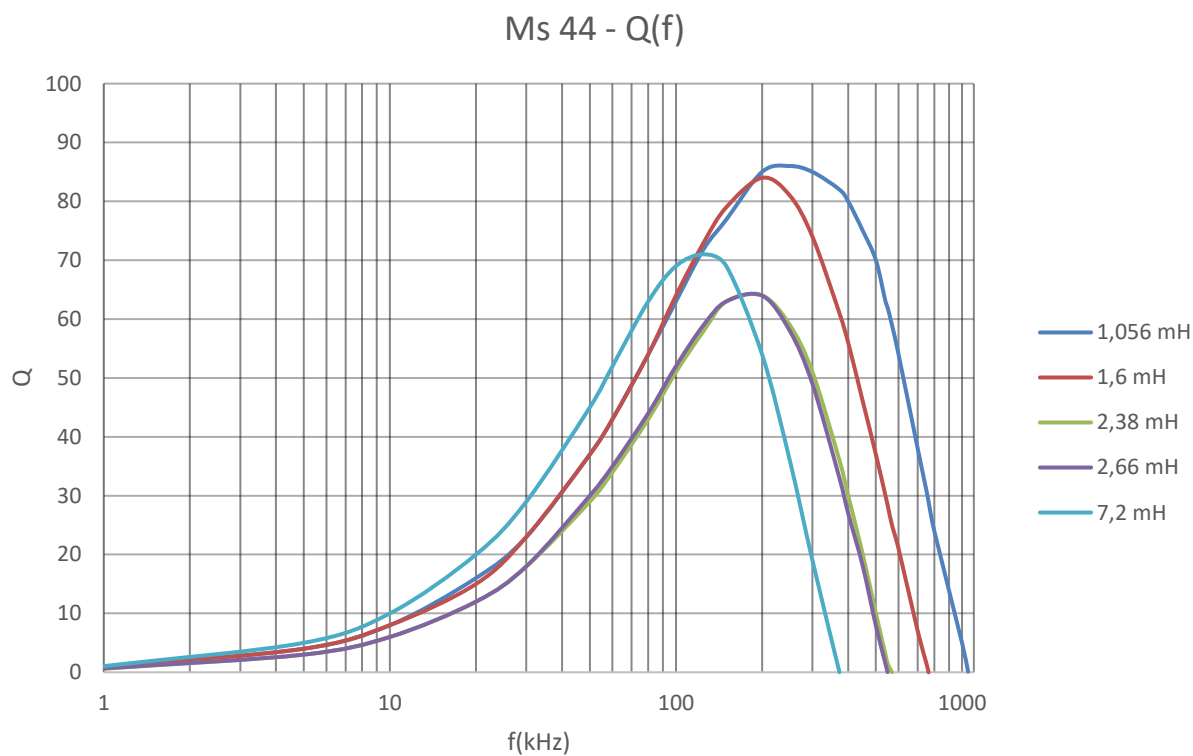
dT vs I values (30 s delay)



L vs f values:



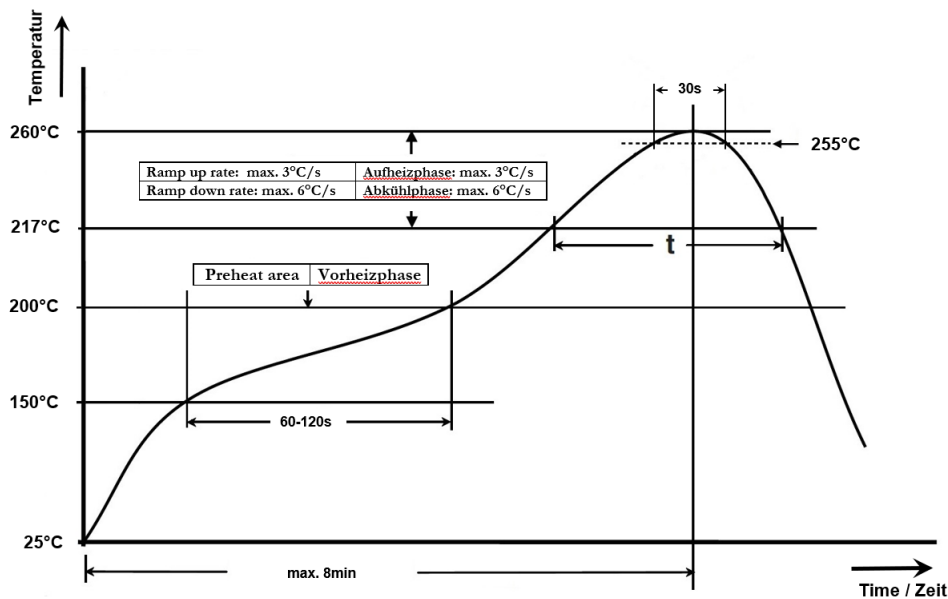
Q vs f values:



Soldering conditions

Recommended soldering technique	Reflow
Soldering heat resistance	$T_C = 260\text{ °C}$, 10 s

In our internal soldering tests, these NEOSID components passed the suitability test for the soldering process at the required temperature in accordance with IPC / JEDEC J-STD-020F.



X/Y coils

We manufacture intricately designed ferrite cores for inductive components using a special injection moulding process, which gives us far greater design flexibility. This means that a wide variety of shapes are possible, depending on the intended use, area of application and design concept.

This enables us to manufacture customised X/Y coils according to your specifications.

Characteristics

- ✓ Compact size
- ✓ Automatically mountable (delivered in blister packaging)
- ✓ Pick-and-place surface (ASF) for SMD mounting as semi-encapsulated
- ✓ For optimised mounting on the circuit board, available on request with additional glueing (HSF)
- ✓ Large inductance range
- ✓ High Q values
- ✓ High sensitivity
- ✓ Suitable for reflow soldering
- ✓ Operating temperature range -40°C to +125°C
- ✓ Good vibration and drop test properties

Anwendungen

- ✓ Transponder antennas e.g. for RFID applications
- ✓ Decoupling components in HF and IF circuits
- ✓ Use in selective circuits