

Features

1. Coil body of ceramic material.
2. Contact area of pure tin with a nickel barrier layer.
3. Windings are created by laser-cutting of the copper layer and are –for protection – completely lacquer-coated.
4. Lead Free (RoHS Compliance)

Applications

Typical applications are resonant circuits or impedance matching for video cameras, mobile telephones and antenna amplifiers etc

Ordering Information

| | | | | |
|-------------|------------|----------|----------|-----------|
| 5516 | 270 | * | * | 51 |
| (1) | (2) | (3) | (4) | |

(1) Series

- 5516 : Size 0603(1608) Laser trimmed.

(4) Delivery Form

4 : coated, taped on 8 mm cardboard tape
packing unit reels Φ 180mm, 10.000 pcs.

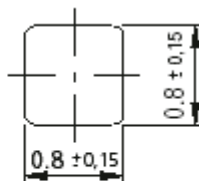
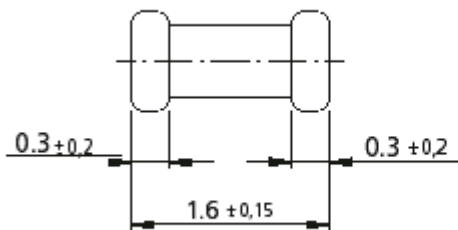
(2) Inductance Value

example: $27 \times 10^x = 27 \times 10^0 = 27(\text{nH})$

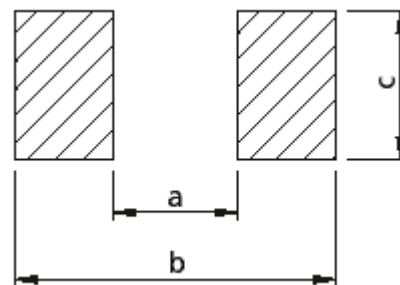
(3) Inductance Tolerance

| | |
|------------------|---------------|
| 8 : ± 0.2 nH | 3 : $\pm 5\%$ |
| 9 : ± 0.3 nH | 4 : $\pm 2\%$ |

Shape and Dimensions (mm)



Pad Layout Recommendation



| a | b | c |
|-----------|-----------|-----------|
| 0,8...1,0 | 2,0...2,6 | 0,7...0,9 |

Dimensions [mm]

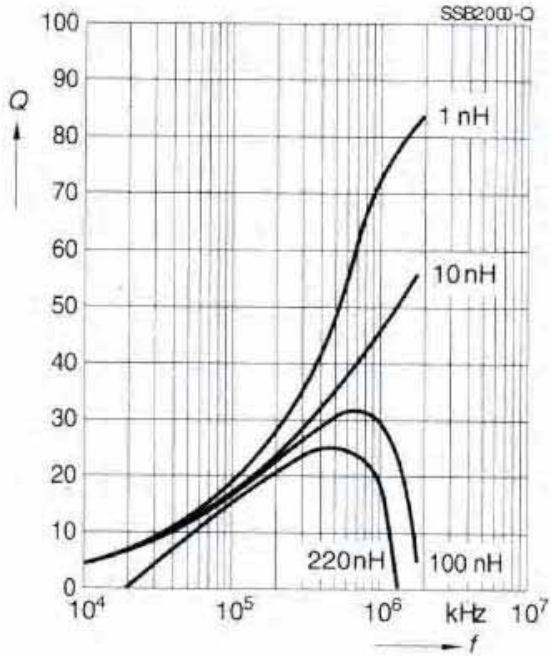
Electrical Parameters

| Order No. | L [nH] | Q _{min} | Q _{typ} @800MHz | f _{L,Q} [MHz] | f _{res,min} [MHz] | D.C.R. max. [mΩ] | I _{N,max} [mA] | Tol. [%] |
|----------------|-----------|------------------|-----------------------------|---------------------------|-------------------------------|---------------------|----------------------------|---------------|
| 5516 010 ** 51 | 1,0 | 7 | 60 | 100 | 16000 | 20 | 1800 | ±0,2 / 0,3 nH |
| 5516 012 ** 51 | 1,2 | 8 | 60 | 100 | 15000 | 25 | 1800 | ±0,2 / 0,3 nH |
| 5516 015 ** 51 | 1,5 | 8 | 50 | 100 | 13000 | 30 | 1500 | ±0,2 / 0,3 nH |
| 5516 018 ** 51 | 1,8 | 12 | 50 | 100 | 12000 | 33 | 1500 | ±0,2 / 0,3 nH |
| 5516 022 ** 51 | 2,2 | 14 | 50 | 100 | 10000 | 35 | 1500 | ±0,2 / 0,3 nH |
| 5516 027 ** 51 | 2,7 | 14 | 40 | 100 | 10000 | 40 | 1400 | ±0,2 / 0,3 nH |
| 5516 033 ** 51 | 3,3 | 14 | 40 | 100 | 9000 | 60 | 1200 | ±0,2 / 0,3 nH |
| 5516 039 ** 51 | 3,9 | 14 | 40 | 100 | 8000 | 65 | 1100 | ±0,2 / 5 % |
| 5516 047 ** 51 | 4,7 | 14 | 40 | 100 | 7000 | 100 | 800 | ±0,2 / 5 % |
| 5516 056 ** 51 | 5,6 | 14 | 40 | 100 | 6000 | 150 | 700 | ±0,2 / 5 % |
| 5516 068 ** 51 | 6,8 | 14 | 40 | 100 | 6000 | 150 | 700 | ±0,2 / 5 % |
| 5516 082 ** 51 | 8,2 | 14 | 40 | 100 | 6000 | 180 | 650 | ±0,2 / 5 % |
| 5516 100 ** 51 | 10 | 14 | 40 | 100 | 5000 | 200 | 600 | 2 % / 5 % |
| 5516 120 ** 51 | 12 | 14 | 40 | 100 | 5000 | 350 | 450 | 2 % / 5 % |
| 5516 150 ** 51 | 15 | 14 | 40 | 100 | 4500 | 400 | 420 | 2 % / 5 % |
| 5516 180 ** 51 | 18 | 14 | 40 | 100 | 4000 | 450 | 400 | 2 % / 5 % |
| 5516 220 ** 51 | 22 | 14 | 40 | 100 | 4000 | 500 | 360 | 2 % / 5 % |
| 5516 270 ** 51 | 27 | 14 | 35 | 100 | 3000 | 550 | 350 | 2 % / 5 % |
| 5516 330 ** 51 | 33 | 14 | 35 | 100 | 3000 | 600 | 300 | 2 % / 5 % |
| 5516 390 ** 51 | 39 | 14 | 35 | 100 | 2000 | 800 | 270 | 2 % / 5 % |
| 5516 470 ** 51 | 47 | 14 | 35 | 100 | 2500 | 950 | 250 | 2 % / 5 % |
| 5516 560 ** 51 | 56 | 14 | 35 | 100 | 2500 | 1200 | 230 | 2 % / 5 % |
| 5516 680 ** 51 | 68 | 14 | 35 | 100 | 2000 | 1300 | 220 | 2 % / 5 % |
| 5516 820 ** 51 | 82 | 14 | 35 | 100 | 2000 | 1500 | 200 | 2 % / 5 % |
| 5516 101 ** 51 | 100 | 14 | 30 | 100 | 1800 | 1800 | 160 | 2 % / 5 % |
| 5516 121 ** 51 | 120 | 5 | 30 | 25,2 | 1800 | 3000 | 130 | 2 % / 5 % |
| 5516 151 ** 51 | 150 | 5 | 30 | 25,2 | 1600 | 5000 | 120 | 2 % / 5 % |
| 5516 181 ** 51 | 180 | 4 | 25 | 25,2 | 1400 | 6000 | 110 | 2 % / 5 % |
| 5516 221 * *51 | 220 | 4 | 25 | 25,2 | 1300 | 7000 | 110 | 2 % / 5 % |

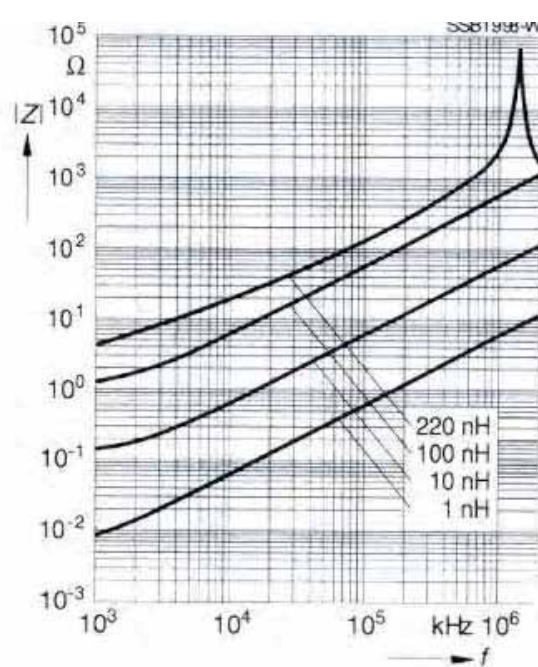
All values on ceramic core.

Electrical Characteristic Curves

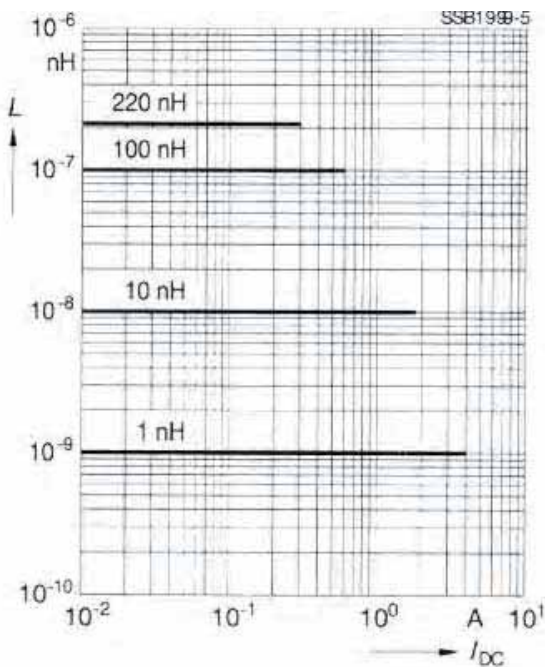
Q factor versus frequency



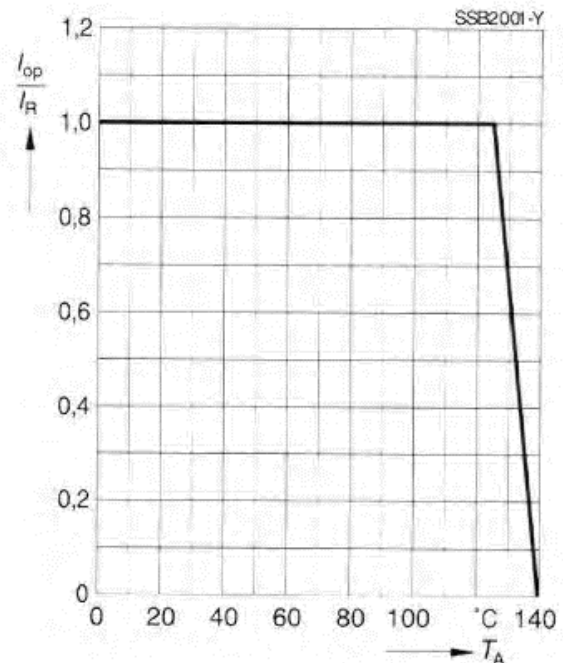
Impedance |Z| versus frequency



Inductance L versus DC Current



I_{op}/I_R versus ambient temperature



Climatic category acc. to DIN IEC 68-1:55/125/56

Test equipment : Inductance and Q: Agilent 4291A+16096A.

Resonant Frequency : Agilent 8720.

D.C.R. : Burst Resistomat 2329.(at20°C)