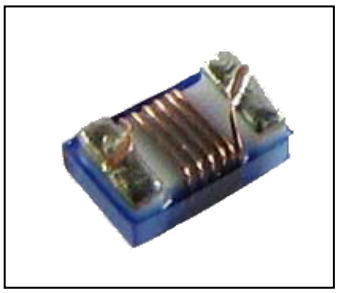
CHIP INDUCTORS

MODEL NO : VSCQI-0805 SERIES



Features :

∗ SMD version.
∗ Ultra-small size.
∗ High SRF and low DCR.
∗ Compliant with RoHS and REACH.
∗ AEC-Q200 compliance.

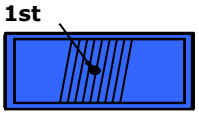
Application :

∗ Automotive.

Electrical Specification :

PART NO	Inductance (nH) NOTE(1)	Tolerance NOTE(2)			Q/MHZ MIN.	SRF (MHz) MIN.	DCR (Ω) MAX.	Irms (mA) NOTE(4)	Color Coding
VSCQI-0805-2N5	2.5		J	K	60/1500	>6000	0.030	1600	Black
VSCQI-0805-5N6	5.6		J	K	98/1500	>6000	0.035	1600	Brown
VSCQI-0805-6N2	6.2		J	K	70/1000	4750	0.035	1600	Red
VSCQI-0805-10N	10		J	K	75/1000	3000	0.050	1600	Gray
VSCQI-0805-12N	12	G	J	K	80/1000	3000	0.050	1600	Orange
VSCQI-0805-15N	15	G	J	K	72/500	2950	0.080	1500	White
VSCQI-0805-16N	16	G	J	K	72/500	2950	0.060	1500	Yellow
VSCQI-0805-18N	18	G	J	K	75/500	2550	0.065	1400	Green
VSCQI-0805-20N	20	G	J	K	70/500	2050	0.065	1400	Blue
VSCQI-0805-22N	22	G	J	K	70/500	2050	0.075	1400	Red
VSCQI-0805-27N	27	G	J	K	75/500	2000	0.075	1300	Violet
VSCQI-0805-30N	30	G	J	K	65/500	1950	0.095	1200	Gray
VSCQI-0805-33N	33	G	J	K	65/500	1800	0.100	1200	Orange
VSCQI-0805-39N	39	G	J	K	65/500	1600	0.100	1100	White
VSCQI-0805-43N	43	G	J	K	65/500	1500	0.110	1100	Yellow
VSCQI-0805-47N	47	G	J	K	65/500	1400	0.105	1200	Green
VSCQI-0805-48N	48	G	J	K	65/500	1400	0.100	1200	Black
VSCQI-0805-51N	51	G	J	K	65/500	1400	0.120	1000	Brown
VSCQI-0805-56N	56	G	J	K	65/500	1400	0.160	900	Blue
VSCQI-0805-82N	82		J	K	65/500	1400	0.200	800	Red
VSCQI-0805-R10	100		J	K	55/500	1300	0.290	700	Black
VSCQI-0805-R12	120		J	K	55/250	1300	0.510	700	Red
VSCQI-0805-R15	150		J	K	55/250	950	0.540	650	Green
VSCQI-0805-R18	180		J	K	55/250	900	0.600	600	Gray

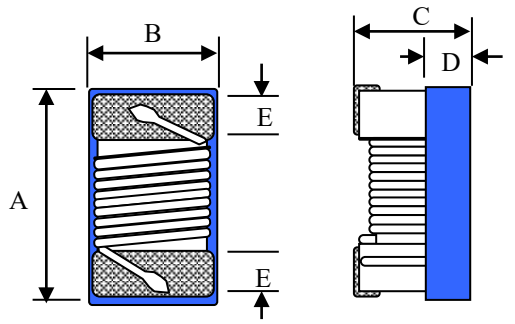
NOTE(1): Measuring frequency : 2.5nH~39nH : 250MHZ
: 43nH~82nH :200MHZ
: 100nH~120nH :150MHZ
:150nH~180nH :100MHZ
NOTE(2): Tolerance: G = ±2% , J = ±5% , K = ±10%
NOTE(3): L , Q、SRF : Agilent/HP E4991A+ Agilent/HP16197A
(The electrical specification test by the smallest gap position) or HP16193A
NOTE(4): ΔT=15℃approximately under the Irms current.
NOTE(5): Operating temperature range from -55℃ to 125℃ (ambient temperature plus self generation of heat)
NOTE(6): Storage time :The recommended storage time of chip inductor is maximum 6 months, and don't suggest to use the parts over 6 months.

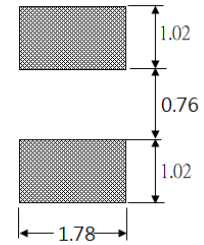


COLOR CODING

2022/10/03 Revise

Physical Dimension : (unit :mm)





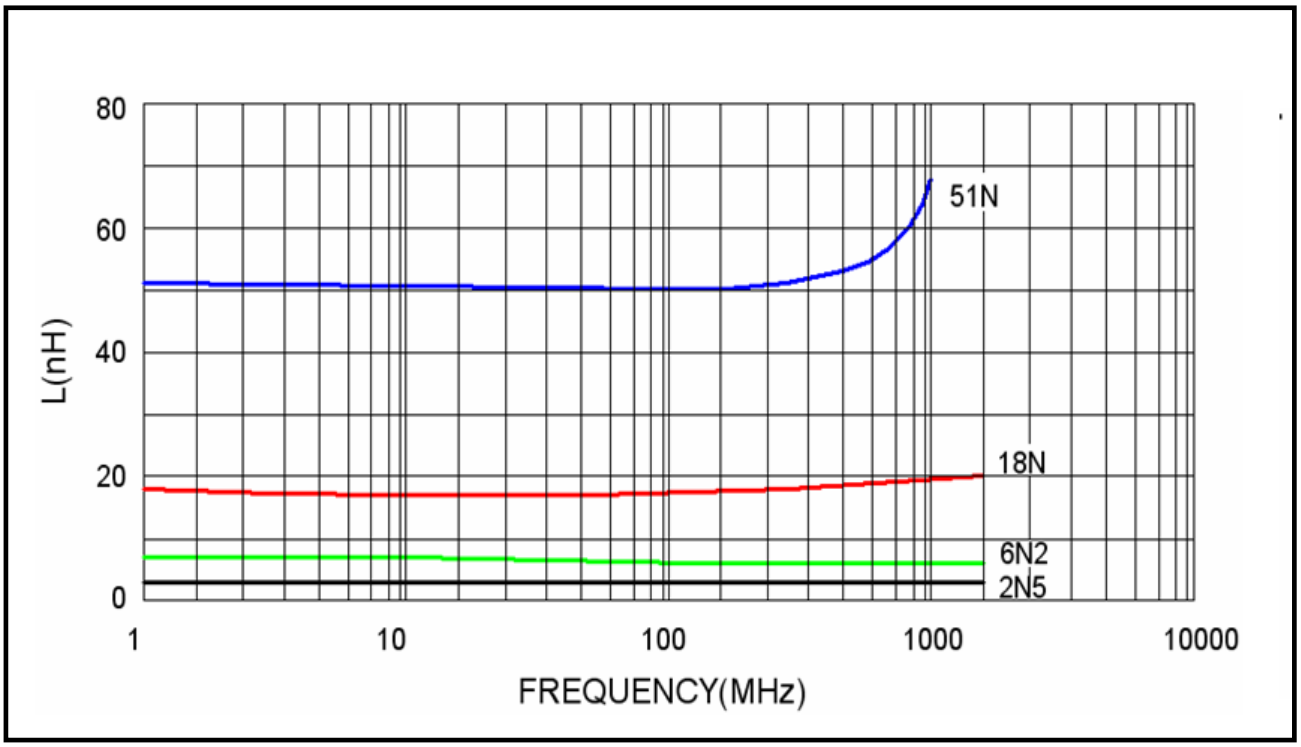
PCB PATTERN

A	2.40 max
B	1.65 max
C	1.45 max
D	0.65 ref.
E	0.44 ref

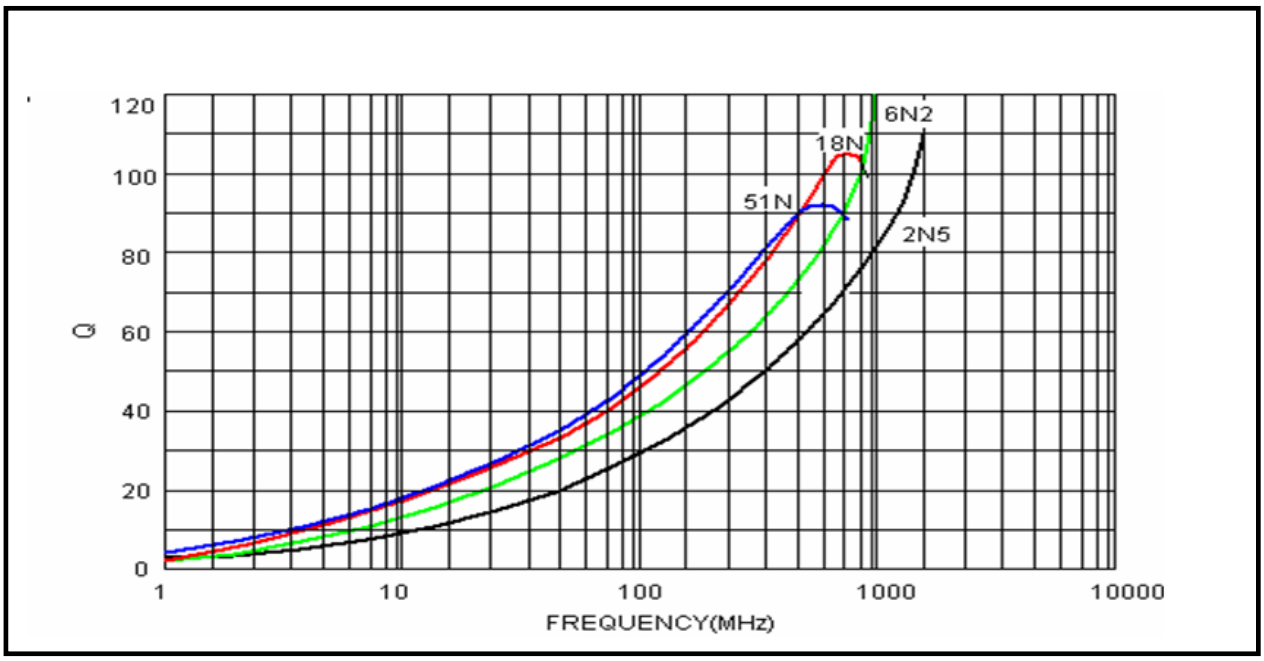
PACKAGING SPEC

1. REEL SIZE & UNITS PER REEL :7",2000PCS.
2. TAPE WIDTH:8.0mm.
3. REEL WIDTH:14.4mm.
4. COMPONENT PITCH:4.0mm.

Inductance v.s Frequency:



Q v.s Frequency:



Cautions and warnings

● Please note the recommendations in our product specification (latest edition) and in the data sheets.

- Particular attention should be paid to the derating curves given there.
- The soldering conditions should also be observed. Temperatures quoted in relation to wave soldering refer to the pin, not the housing.

● If the components are to be washed with varnish it is necessary to check whether the washing varnish agent used has a negative effect on the wire insulation, any plastics that are used, or on glued joints. In particular, it is possible for washing varnish agent residues to have a negative effect in the long-term on wire insulation.

Washing processes may damage the product due to the possible static or cyclic mechanical loads (e.g. ultrasonic cleaning). They may cause cracks to develop on the product and its parts, which might lead to reduced reliability or lifetime.

● The following points must be observed if the components are potted in customer applications:

- Many potting materials shrink as they harden. They therefore exert a pressure on the plastic housing or core. This pressure can have a deleterious effect on electrical properties, and in extreme cases can damage the core or plastic housing mechanically.
- It is necessary to check whether the potting material used attacks or destroys the wire, wire insulation plastics or glue.
- The effect of the potting material can change the high-frequency behavior of the components.
- Many coating material have a negative effect (chemically and mechanically) on the winding wires, insulation materials and connecting points. Customers are always obligated to determine whether and to what extent their coating material influence the component. Customers are responsible and bear all risk for the use of the coating material.

● Ceramics / Ferrites are sensitive to direct impact. This can cause the core material to flake, or lead to breakage of the core.

● Even for customer-specific products, conclusive validation of the component in the circuit can only be carried out by the customer.

Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statement about the suitability of our products for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application**. As a rule, we are either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether a product with the properties described in the product specification is suitable for use in a particular customer application.

2. We also point out that **in individual cases, a malfunction of electronic components of failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they operated as specified**. In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.

3. **The warnings, cautions and product-specific notes must be observed.**

4. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications contained in this publication are still applicable before or when you place an order.
   We also **reserve the right to discontinue production and delivery of products**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.

5. **Our manufacturing sites serving the automotive business apply the IATF 16949 standard**. The IATF certifications confirm our compliance with requirements regarding the quality management system in the automotive industry. Referring to customer requirements and customer specific requirements (“CSR”) PEC always has and will continue to have the policy of respecting individual agreements. Even if IATF 16949 may appear to support the acceptance of unilateral requirements, we hereby like to emphasize that **only requirements mutually agreed upon can and will be implemented in our Quality Management System**. For clarification purposes we like to point out that obligations from IATF 16949 shall only become legally binding if individually agreed upon.