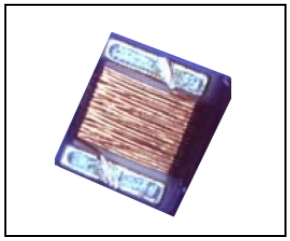
CHIP INDUCTORS

MODEL NO : VSCQI-1008 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		
									1st	2nd	3rd
VSCQI-1008-4N1	4.1		J	K	75/1500	6000	0.05	1600	Black	Yellow	Black
VSCQI-1008-7N8	7.8	S	J	K	70/500	3800	0.05	1600	Black	Violet	Gray
VSCQI-1008-10N	10		J	K	60/500	3600	0.06	1600	Brown	Black	Black
VSCQI-1008-12N	12		J	K	60/500	2800	0.06	1500	Brown	Red	Black
VSCQI-1008-15N	15		J	K	60/500	2700	0.08	1400	Brown	Green	Black
VSCQI-1008-18N	18	G	J	K	62/350	2700	0.07	1400	Brown	Gray	Black
VSCQI-1008-22N	22	G	J	K	62/350	2050	0.07	1400	Red	Red	Black
VSCQI-1008-27N	27	G	J	K	75/350	1700	0.095	1300	Red	Violet	Black
VSCQI-1008-33N	33	G	J	K	75/350	1700	0.09	1300	Orange	Orange	Black
VSCQI-1008-36N	36	G	J	K	75/350	1500	0.12	1300	Orange	Blue	Black
VSCQI-1008-39N	39	G	J	K	75/350	1300	0.09	1300	Orange	White	Black
VSCQI-1008-47N	47	G	J	K	75/350	1450	0.12	1200	Yellow	Violet	Black
VSCQI-1008-56N	56	G	J	K	75/350	1200	0.12	1200	Green	Blue	Black
VSCQI-1008-68N	68	G	J	K	80/350	1150	0.13	1100	Blue	Gray	Black
VSCQI-1008-82N	82	G	J	K	80/350	1060	0.16	1100	Gray	Red	Black
VSCQI-1008-R10	100	G	J	K	62/350	1000	0.18	1000	Brown	Black	Brown
VSCQI-1008-R12	120	G	J	K	50/100	870	0.18	1000	Brown	Red	Brown
VSCQI-1008-R15	150	G	J	K	50/100	850	0.23	1000	Brown	Green	Brown
VSCQI-1008-R18	180	G	J	K	50/100	800	0.30	1000	Brown	Gray	Brown
VSCQI-1008-R22	220	G	J	K	50/100	750	0.35	1000	Red	Red	Brown
VSCQI-1008-R27	270	G	J	K	48/100	630	0.40	900	Red	Violet	Brown
VSCQI-1008-R30	300	G	J	K	48/100	600	0.45	900	Orange	Black	Brown
VSCQI-1008-R33	330	G	J	K	48/100	570	0.47	900	Orange	Orange	Brown
VSCQI-1008-R39	390	G	J	K	48/100	500	0.62	900	Orange	White	Brown

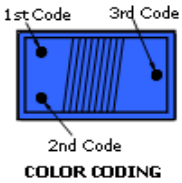
>>PEC-Coil>>

遠見電子股份有限公司

Providence Electronics Corp.

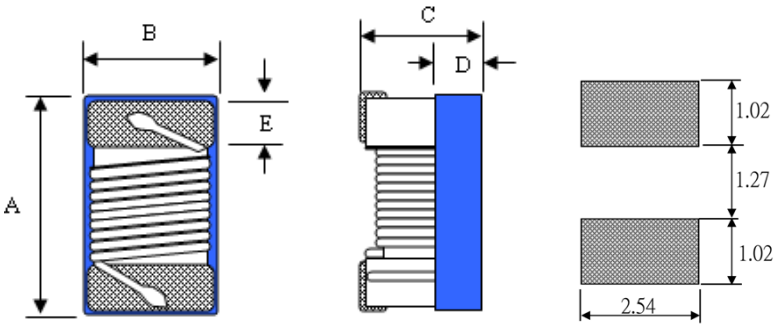
PART NO	Inductance (nH) NOTE(1)	Tolerance NOTE(2)			Q/MHZ MIN.	SRF (MHz) MIN.	DCR (Ω) MAX.	Irms (mA) NOTE(4)	Color Coding		
									1st	2nd	3rd
VSCQI-1008-R43	430	G	J	K	48/100	390	0.70	900	Yellow	Orange	Brown
VSCQI-1008-R56	560	G	J	K	48/100	380	1.25	420	Green	Blue	Brown

NOTE(1): Measuring frequency : 4.1nH ~ 100 nH : 50MHZ
: 120nH~ 560 nH : 25MHZ
NOTE(2): Tolerance: S = ±0.3% ,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

Physical Dimension : (unit :mm)



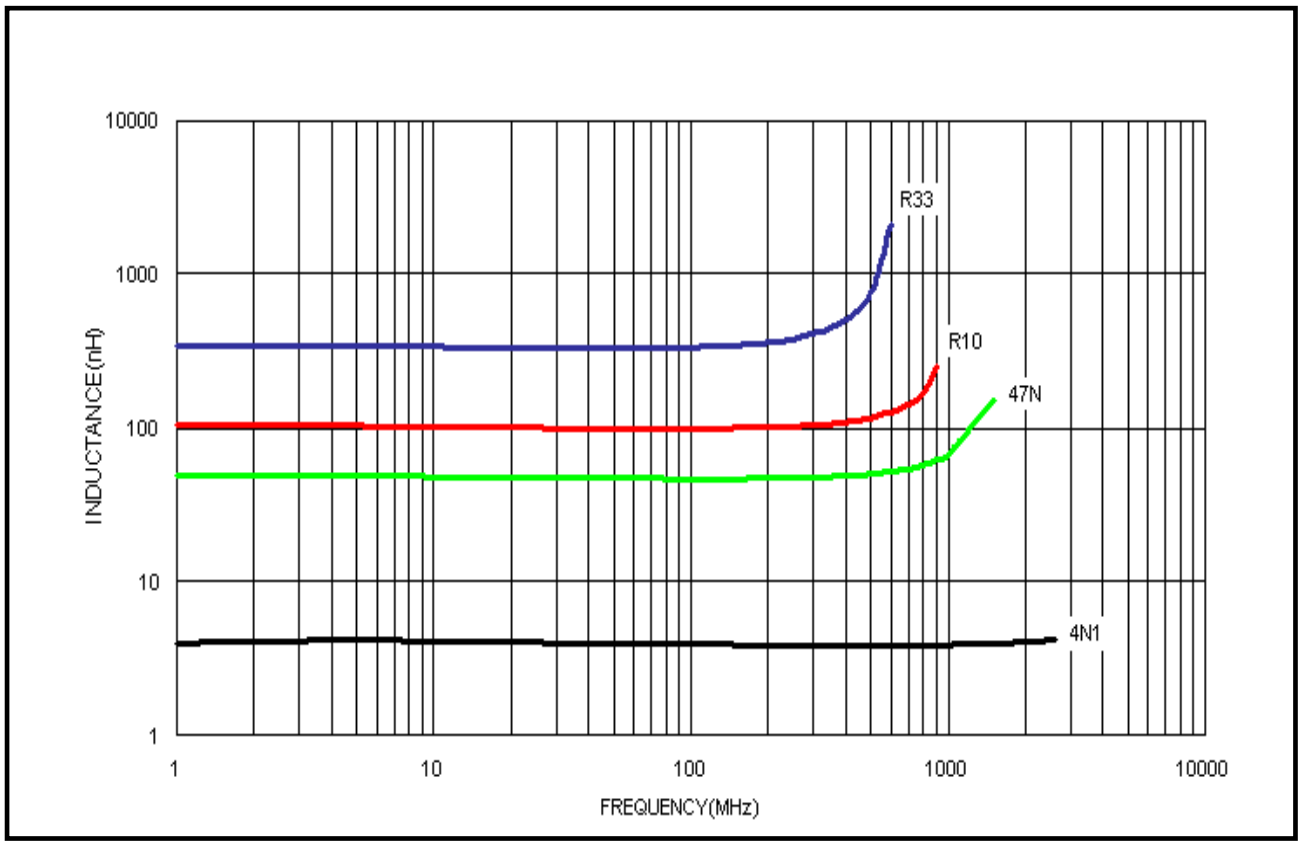
PCB PATTERN

A	2.90 max
B	2.54 max
C	2.03 max
D	1.30 ref.
E	0.45 ±0.1

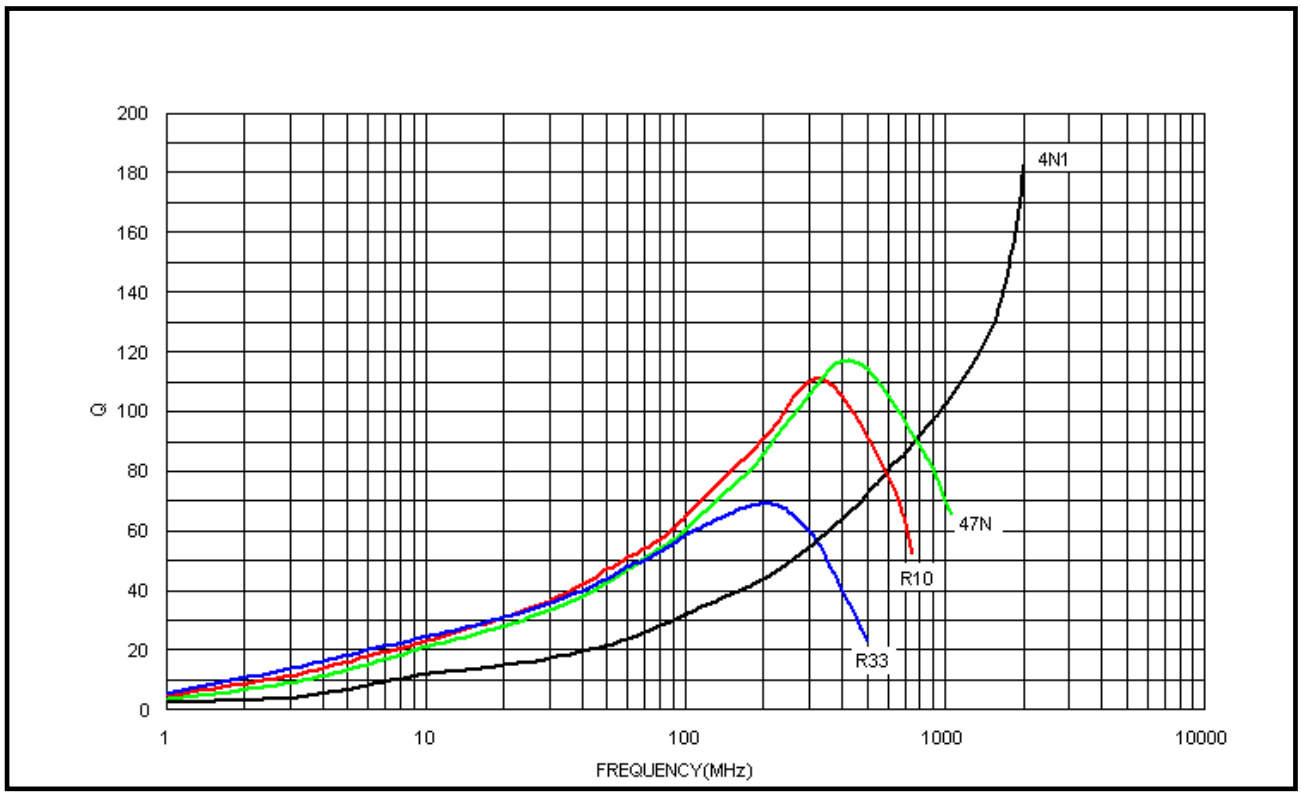
PACKAGING SPEC

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.