NANOCRYSTALLINE HIGH FREQUENCY CORES

- Series/Type: VIKANO SUPER 300-1618
- Ordering Code/Part No: VS31618-R139505
- Date: 10.08.2026
- Version: 01

FEATURES

- Excellent Thermal Stability
- Wide Working Temperature Range
- High Magnetic Permeability >200000 at 50Hz
- High Saturation Flux Density
- Low Coercivity
- Low Power Loss
- High Electrical Resistivity

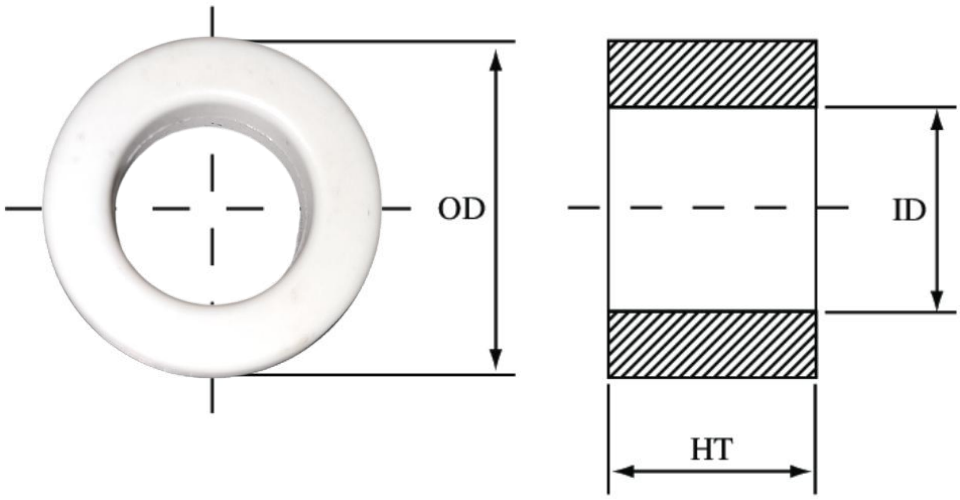
MATERIAL SPECIFICATIONS

- Material: Fe-Based High Frequency Nano-crystalline Ribbon Strip
- Nominal Permeability μ (10KHz): 100,000
- Curie Temperature: 560°C
- Density:7.25g/cm^3
- Resistivity (μ.Ω.cm): 130
- Ribbon Thickness: 17μm (+/-2μm)
- Crystallization Temperature:515°C
- Saturation Induction: 1.2Tesla at 50Hz

CASE/INSULATION MATERIAL SPECIFICATIONS

- Raw Material: PBT-GF30, Arnite® TV4260S-FR(17)
- Make: Envalior (Formerly, DSM Engineering Plastics)
- Colour: Black or White (As per Raw Material Availability)
- UL File No: E47960
- ISO:1043
- Compliances:

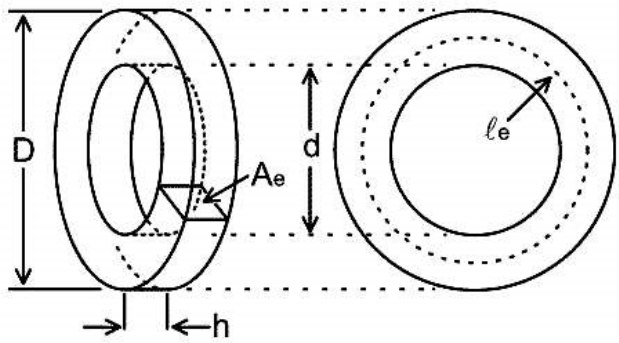
PART#: VS31618-R139505



CORE AND CASE DIMENSIONS

CORE OD MM	CORE ID MM	CORE HT MM	CASE OD MM	CASE ID MM	CASE HT MM
9.50	13.00	5.00	14.40	8.30	6.30

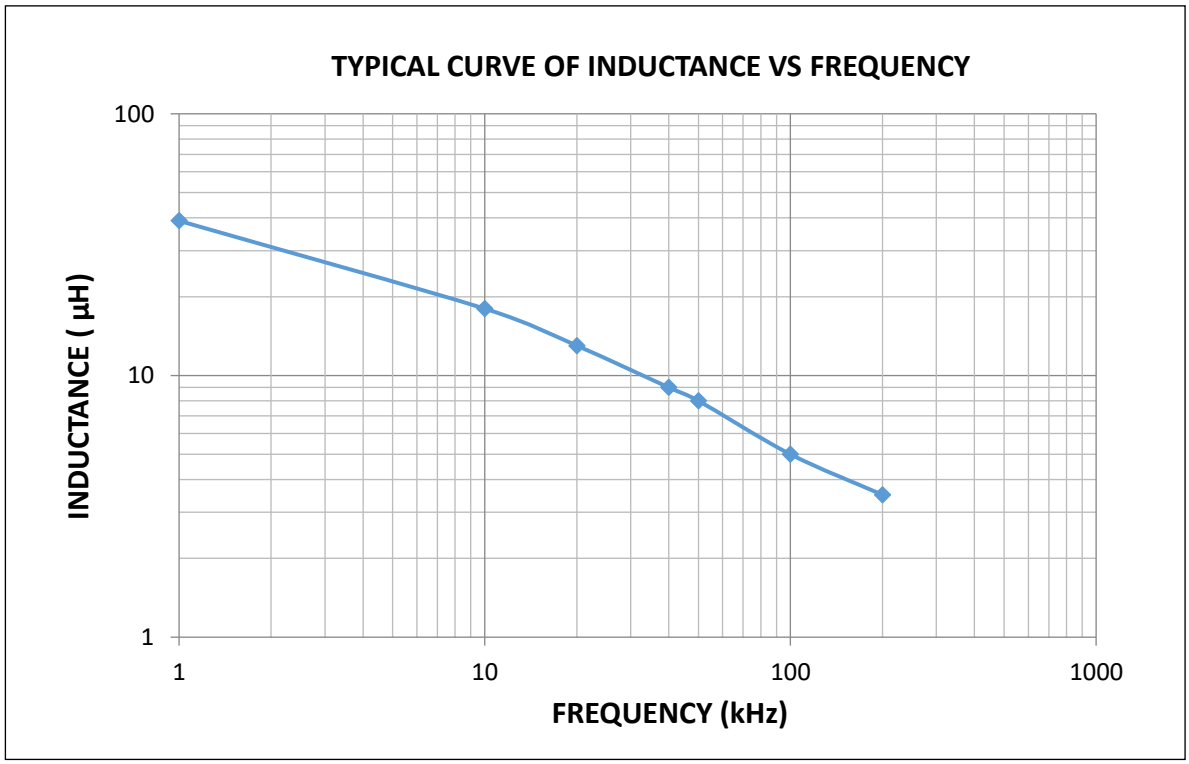
CORE SPECIFICATIONS

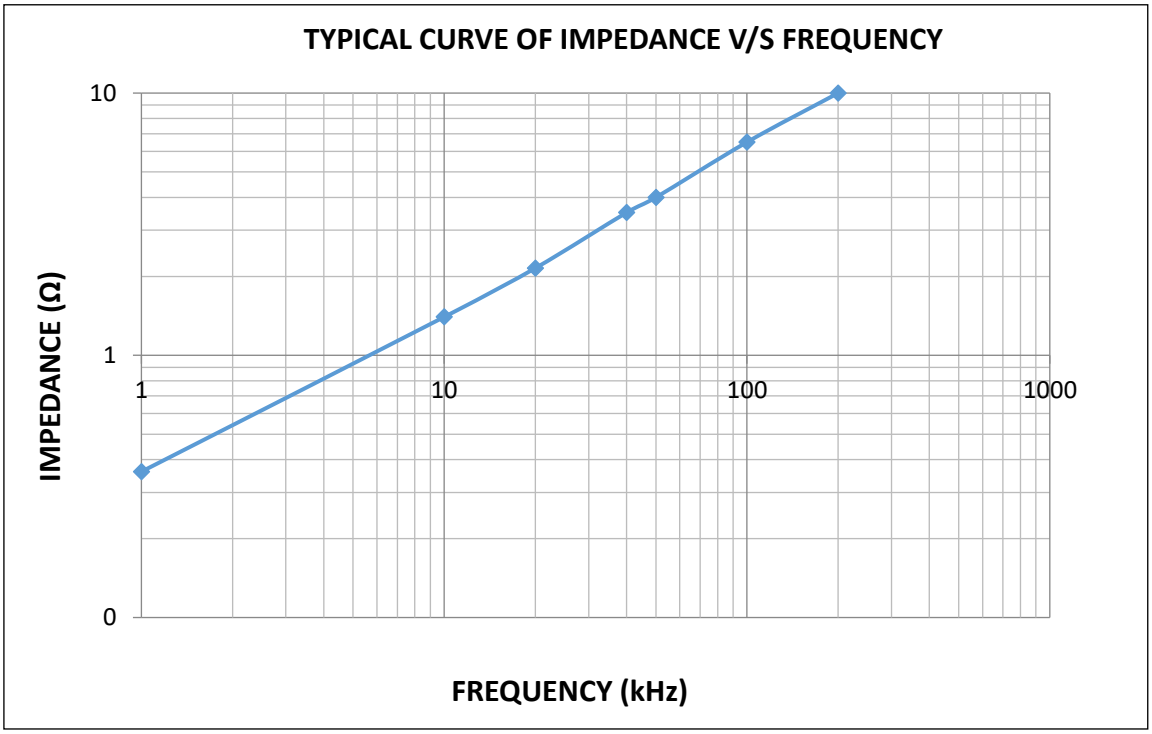


- Outer Diameter D: 13mm (+0.5/-0)mm
- Inner Diameter d: 9.5mm (-0.5/+0)mm
- Height h: 5mm (+0.2/-0)mm
- Cross-Sectional Area Ae: 0.07cm^2
- Mean Magnetic Path Length le: 3.53cm
- Stacking Factor: 83%
- Average Core Weight: 2.0grams
- Operating Temperature: -25°C~+110°C
- Max Temperature:- 130°C
- Als (10kHz/1.0V): 18µH (+30%/-25%)
- $\mu a_{typ.}$(10kHz/1.0V): 90000 (+15%/-35%) (H_peak:3.96 A/m)
- Als (100kHz/1.0V): 4.0µH (+40%/-30%)
- $\mu a_{typ.}$(100kHz/1.0V): 20000 (+30%/-20%) (H_peak:11.96 A/m)
- Finish: Plastic Case/Silicone Rubber

CASE/INSULATION SPECIFICATIONS

- Outer Diameter D: 14.40mm (Max)
- Inner Diameter d: 8.30mm (Min)
- Height h: 6.30mm (Max)
- Nominal Thickness: 1mm
- Min Glass Content: 30.1%
- Flammability at 1.6mm: UL-94, V-0 Pass
- Density: 1690 kg/m^3
- Electrical Strength: 28kV/mm
- Insulation Class: B (130°C)





MOUNTING, INSTALLATION & OPERATING INSTRUCTIONS:

- Can be used for both-Horizontal, Tilted and Vertical Type Mounting
- Suitable for enclosed mounting applications only
- Suitable Mounting Stand and Support Plate to be made for all kinds of mounting
- Copper Wire for winding to be of suitable gauge and flexible.
- Wire Wound Core must be well-fastened on Mounting Apparatus/Fixture
- Area of application must be Dust-Free for optimum performance.
- For Oil-immersed application, use only IEC-60296/ASTM D 3455-02 compatible oil

TYPICAL APPLICATIONS

- Common Mode Noise Suppression
- Motor-bearing current limitation in inverter-motor systems
- Cores for Inductors
- AC-DC Converters, Bi-directional DC-DC Converters
- DC Fast Chargers, DC Power Suppliers

ENVIRONMENTAL CONDITIONS AND STORAGE/HANDLING INSTRUCTIONS

- Non-Hazardous Material.
- Item must be stored in a Cool and Well-Ventilated Area.
- Keep Away from Direct Sunlight or Exposure to Moisture.
- Item must be stored in its Original Packaging only.
- Storage Temperature: 20°C~45°C.
- Humidity: Average < 95%
- Delicate/Fragile Material. To be Handled with utmost Care.
- Do not mishandle/drop the Material. It can result in Core Failures..
- Use Standard P-U/Rubber/ or Suitable Gloves having reasonably good grip while Handling the material/unpacking/etc.
- Material is sealed inside Protective Insulated Housing for optimum performance. Never attempt to open the Housing.

MEAN LIFE EXPECTANCY

- Upto 130,000 Hours or 15 years, whichever is lesser.
- At the end of Service Life, product is to be de-energized and disconnected from its application and separately returned to Vikarsh in appropriately-packed condition for re-processing within established standards.
- Dispose in accordance with local environmental regulations / WEEE directives.
- For Oil-immersed applications, product must be well-dried before being packed for return

SAFETY

- Disconnect the Nano-crystalline Core from the Electrical Circuit before Handling and Inspection
- Insulated Hand-gloves and necessary Protective Equipment must be be worn for Inspection

The following Notes applies to all items and components mentioned in this publication:

1. Some sections of this publication may contain information regarding the possible areas of application of our products and its suitability for use in them. This information is based on our knowledge of this product and its requirements given by customers using these products in similar areas of application and the feedback provided by them after use. Nevertheless we explicitly state that such statements are only a guide and cannot be regarded as legally binding statements on suitability of the product for a specific application.

2. Misoperation or failure of the product before end of its service life cannot be ruled out even if operated as specified. For applications requiring a high level of operational safety especially in areas where risk of malfunction can result in loss of life, health, of bodily injury, it is expected that the customer take appropriate actions and measures (like installation of protective equipment, safe working protocol, etc) to ensure that no bodily injury or damage of any kind in incurred in case of misoperation or failure of the product.

3. Product-specific warnings, caution notes, etc are to be well observed before and during use of the product.

4. Being an Organisation continuously engaged in Design & Development, we continuously strive to improve the quality and operational performance of our products in the field. Consequently, it is likely that the product described in this publication is bound to change/improve from time to time. The same is also true for specifications provided with this product. It is therefore expected that the customer check for changes in the product specifications and its areas of application at the time of order placement for the same.

5. It is equally likely that certain products may be discontinued from production and/or new products introduced in its place. These may be dependent on a number of factors like supply & demand, competitiveness, efficiency, etc. We therefore cannot guarantee that older versions of our product will continue to be available and reserve the right to discontinue production as and when the need may arise. We however clarify that this does not apply to customers with whom we are having individual agreements with for supply of customer-specific products.

6. Unless mentioned otherwise, all Orders we governed by the Terms and Conditions of Supply provided in the Budgetary Offer/Commercial Quotation for the said product.

7. Any Disputes arising from the Sale of the product will be subject to the decision of the courts in Pune Jurisdiction alone.

8. Our Manufacturing facility is ISO-9001, ISO-14001 & ISO-45001 Certified. These certifications confirm our compliance with the requirements stipulated in the Quality Management System and Environment, Health and Safety Standards. As far as customer-specific requirements are concerned, Vikarsh Nano Technology will continue to honour its commitment of respecting individual agreements in true spirit. Only mutually agreed requirements will be implemented in our systems.

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10.08.2026