



# SCMN4 SERIES

## NANOCRYSTALLINE COMMON MODE CHOKE



### ELECTRICAL SPECIFICATIONS

- **Operating Temperature:** -55°C to +125°C
- **Storage Temperature:** -60°C to +130°C
- **Temperature Rise:** < 30°C
- **Inductance:** Measured at 10kHz, 0.10V
- **DCR:** Measured at room ambient (25°C)
- **Dielectric Withstanding Voltage:** 1000 V<sub>RMS</sub>
- **Overload Current:** 1.5 times rated current
- **Different electrical values available upon request**

### FEATURES

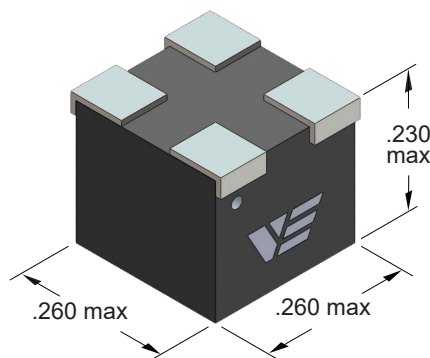
- **Compact**, low profile, ideal for automatic placement
- **Terminations:** HMP solder, Lead Free (RoHS)
- **Resistance to Soldering Heat:** 265°C for 10 seconds
- **Welded Internal Connections** - no reflow risk
- **Moisture, Shock and Immersion Resistant**
- **Magnetically Shielded**
- Built to meet **MIL-STD-981** specifications
- **NASA outgassing compliant per ASTM E595** (TML <1%, CVCN <0.1%)
- **Other termination finishes available**
- **Ideally designed for GaN applications and higher switching frequencies**
- **Designed with nanocrystalline core for superior thermal stability and higher frequency operations**

ALL PARTS AVAILABLE AS CLASS S OR CLASS B

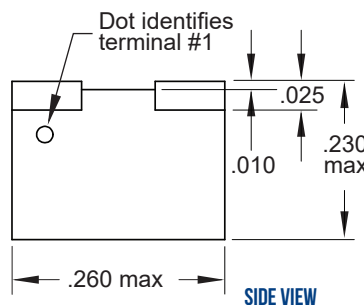
MIL-STD-981

| Inductance Range (mH) | DCR max (Ohms) | Current Rating (A) |
|-----------------------|----------------|--------------------|
| 0.07 - 10.4           | 0.011 - 0.25   | 2.70 - 0.48        |

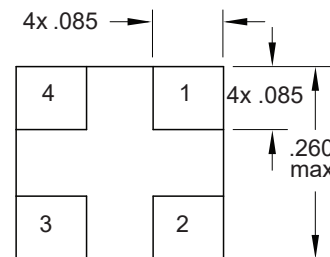
ALL DIMENSIONS: INCHES

THRU-HOLE &  
GULL-WING PACKAGES ALSO  
AVAILABLE

MARKINGS: LASER ETCH OR INK

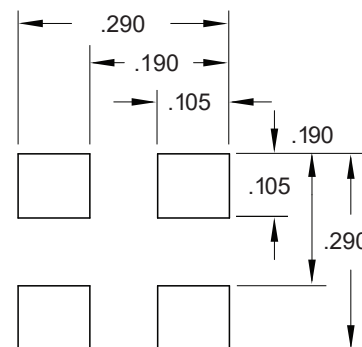


SIDE VIEW

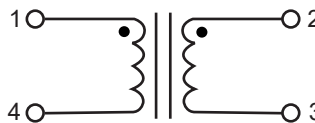


BOTTOM VIEW

| IN    | MM   |
|-------|------|
| 0.290 | 7.37 |
| 0.260 | 6.60 |
| 0.230 | 5.85 |
| 0.190 | 4.83 |
| 0.105 | 2.67 |
| 0.085 | 2.16 |
| 0.025 | 0.64 |
| 0.010 | 0.25 |



RECOMMENDED MOUNTING PAD CIRCUIT SIDE



SCHEMATIC

### CUSTOM DESIGNS & MODIFICATIONS:

Other electrical configurations and performance characteristics are available in various sizes and package types

SCMN4 SERIES





### DATA TABLE

| Vanguard P/N  | Inductance @ 10kHz $\pm$ 40% (mH) | DCR Max (Ohms) | Rated Current (A) |
|---------------|-----------------------------------|----------------|-------------------|
| SCMN4-702*-** | 0.07                              | 0.011          | 2.70              |
| SCMN4-153*-** | 0.15                              | 0.016          | 2.21              |
| SCMN4-273*-** | 0.27                              | 0.021          | 1.91              |
| SCMN4-423*-** | 0.42                              | 0.027          | 1.71              |
| SCMN4-603*-** | 0.60                              | 0.032          | 1.56              |
| SCMN4-823*-** | 0.82                              | 0.037          | 1.45              |
| SCMN4-114*-** | 1.1                               | 0.042          | 1.35              |
| SCMN4-134*-** | 1.3                               | 0.048          | 1.27              |
| SCMN4-174*-** | 1.7                               | 0.053          | 1.21              |
| SCMN4-204*-** | 2.0                               | 0.055          | 1.15              |
| SCMN4-244*-** | 2.4                               | 0.072          | 0.98              |
| SCMN4-284*-** | 2.8                               | 0.074          | 0.94              |
| SCMN4-334*-** | 3.3                               | 0.075          | 0.91              |
| SCMN4-374*-** | 3.7                               | 0.093          | 0.79              |
| SCMN4-434*-** | 4.3                               | 0.099          | 0.76              |
| SCMN4-484*-** | 4.8                               | 0.11           | 0.74              |
| SCMN4-544*-** | 5.4                               | 0.14           | 0.64              |
| SCMN4-604*-** | 6.0                               | 0.15           | 0.62              |
| SCMN4-674*-** | 6.7                               | 0.16           | 0.61              |
| SCMN4-734*-** | 7.3                               | 0.17           | 0.59              |
| SCMN4-814*-** | 8.1                               | 0.22           | 0.51              |
| SCMN4-884*-** | 8.8                               | 0.23           | 0.50              |
| SCMN4-964*-** | 9.6                               | 0.24           | 0.49              |
| SCMN4-105*-** | 10.4                              | 0.25           | 0.48              |

#### VE PART NUMBER STRUCTURE KEY

##### INDUCTANCE (uH) (mH)

702 = 70 uH  
244 = 2.4 mH  
884 = 8.8 mH

#### EXAMPLE: SCMN4-204S-3-T

##### TERMINATION

|   |          |
|---|----------|
| S | SnPb     |
| R | Pure Tin |

##### RELIABILITY

|   |                          |
|---|--------------------------|
| 2 | Group A<br>MIL-STD-981   |
| 3 | Group A+B<br>MIL-STD-981 |
| 7 | Other                    |

##### PACKAGING (Default Bulk)

|   |               |
|---|---------------|
| B | Bulk          |
| T | Tape and Reel |

Tape and reel specs  
Pcs. / reel maximum: (7") 200, (13") 800  
Pitch between parts: 12 mm  
Tape width: 16 mm

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