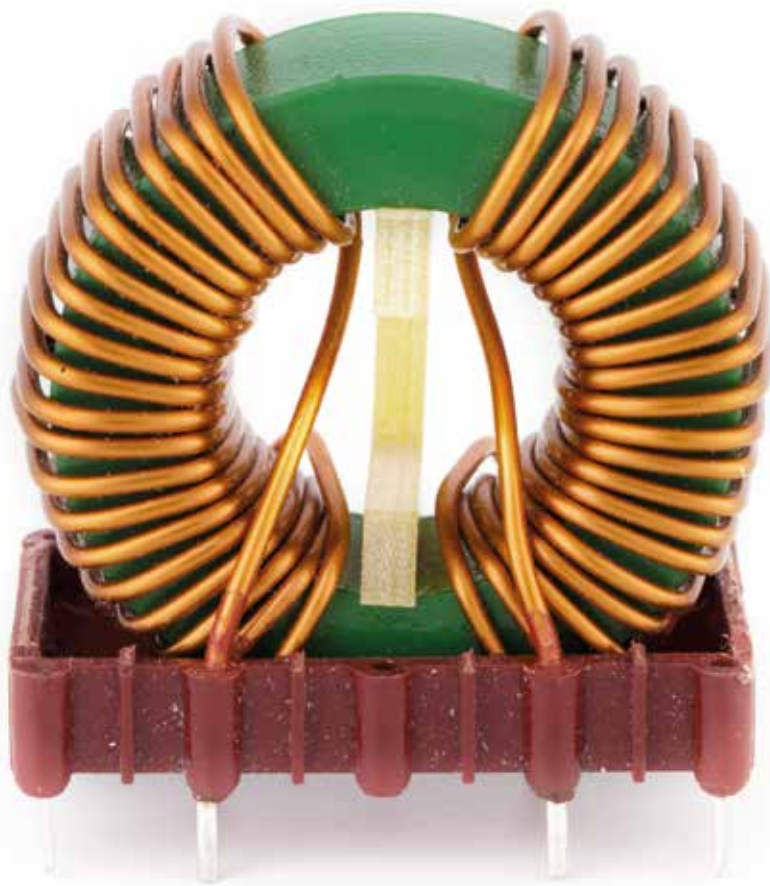




TECH POWER
ELECTRONICS GROUP



Tech Power
Components



COMMON MODE CHOKE



INDUCTIVE POWER.

AGILE // PRAGMATIC // SINCERE

Driven by innovation, reliable and always focused on solutions – this is how the group-wide expertise within the TECH POWER ELECTRONICS GROUP can be summed up. The six companies SCHWA-MEDICO Transformatoren GmbH, SCHNEEFUSS + ROHDE GmbH, MANFRED SCHMELZER GmbH, MS BALTI Trafo OÜ, MCT Transformatoren GmbH and TECH POWER ELECTRONICS together form a strong alliance capable of shaping the worldwide market with their transformers and industrial products. We are a company with clear values, a commitment to quality, synchronous workflows, lean structures, and a strategy of long-term growth for the entire group.



COMMON MODE CHOKE NANOCRYSTALLINE

TECH POWER ELECTRONICS GROUP develops new standard series of common mode chokes based on nanocrystalline toroidal cores. They are particularly suitable for harsh environments.

Advantages

Compared to ferrite cores, nanocrystalline cores have several advantages:

- Lighter (weight is reduced by 2 or 3)
- Smaller (volume is reduced by 2 or 3)
- High rated current and high inductance values with a compact design
- Better frequency response due to a low number of turns
- Extended operating temperature range up to 150 °C
- Inductance does not vary depending on temperature variation
- Cost attractive solution regarding size and performances

Standards

- RoHS
- Complies with IEC60938-2 (VDE565-2-1)
- Plastic materials meet UL94 V-O requirements

- 3 volumes available
- For volume III (> 100 gr), fixation with screws on horizontal version and blind pins on vertical version
- Rated voltage: 250 Vac
- Withstanding voltage: 1,500 Vac

| P/N Vertical | P/N Horizontal | I _N (A) | L _N at 10 KHz (mH) | L _N at 100 KHz (mH) | Resistance (mΩ) | Weight (g) | Pins Cu tinned ø (mm) | Volume | Schematic |
|--------------|----------------|--------------------|-------------------------------|--------------------------------|-----------------|------------|-----------------------|--------|-----------|
| SCN120V075 | SCN120H075 | 7.5 | 12.0 | 2.2 | 16.0 | 18.0 | 0.8 | 1 | 1 |
| SCN075V095 | SCN075H095 | 9.5 | 7.5 | 1.5 | 10.0 | 18.0 | 0.9 | 1 | 1 |
| SCN150V130 | SCN150H130 | 13 | 15.0 | 2.8 | 10.0 | 45.0 | 1.2 | 2 | 1 |
| SCN042V140 | SCN042H140 | 14 | 4.2 | 0.85 | 5.0 | 18.0 | 1.1 | 1 | 1 |
| SCN480V150 | SCN480H150 | 15 | 48.0 | 10.0 | 14.5 | 105/115 | 1.3 | 3 | 1 |
| SCN100V180 | SCN100H180 | 18 | 10.0 | 1.7 | 5.0 | 45.0 | 1.5 | 2 | 1 |
| SCN013V200 | SCN013H200 | 20 | 1.3 | 0.25 | 2.4 | 18.0 | 1.25 | 1 | 1 |
| SCN060V220 | SCN060H220 | 22 | 6.0 | 1.0 | 3.6 | 45.0 | 1.6 | 2 | 1 |
| SCN185V240 | SCN185H240 | 24 | 18.5 | 3.7 | 5.5 | 105/115 | 1.7 | 3 | 1 |
| SCN110V280 | SCN110H280 | 28 | 11.0 | 2.2 | 3.8 | 105/115 | 1.8 | 3 | 1 |
| SCN030V320 | SCN030H320 | 32 | 3.0 | 0.5 | 1.6 | 45.0 | 1.4 | 2 | 2 |
| SCN040V500 | SCN040H500 | 50 | 4.0 | 0.8 | 1.3 | 105/115 | 1.7 | 3 | 2 |

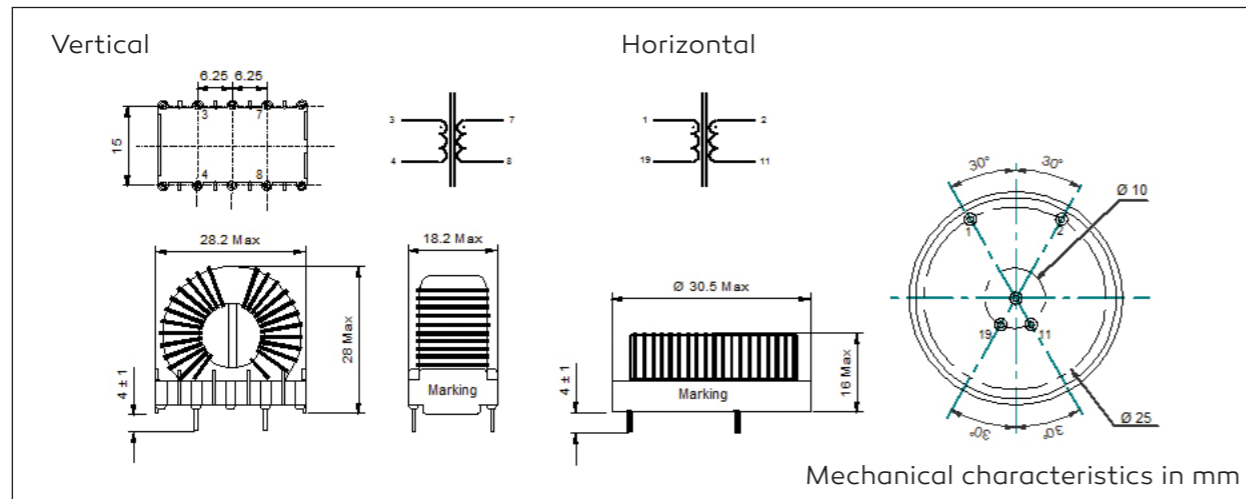
- I_N nominal current in each winding
- L_N nominal inductance, tolerance ±40 %
- Ambient temperature T_a = -40 °C to +70 °C (short time +90 °C)
- Operating temperature T_{op} = -40 °C to +130 °C (short time +150 °C)
- These nanocrystalline chokes are designed for a temperature rise of ΔT = 45-60 °C at T_a = +70 °C and I = I_N in each winding

NB: Data derating in case of deviant ambient temperatures or deviant nominal currents.

- Custom design on request

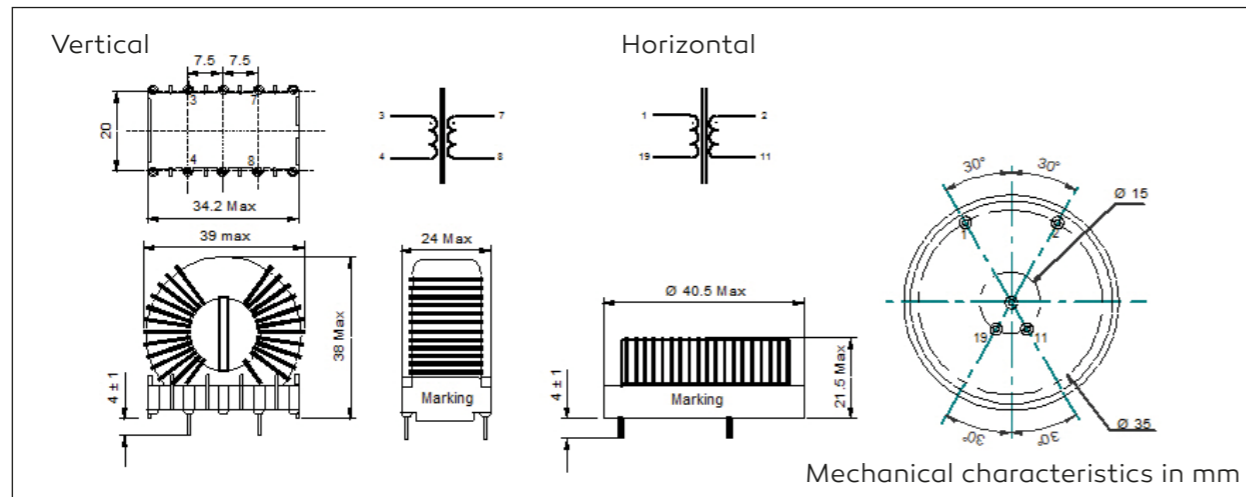
COMMON MODE CHOKES - VOLUME I

SCHEMATIC 1 (PIN SIDE VIEW)

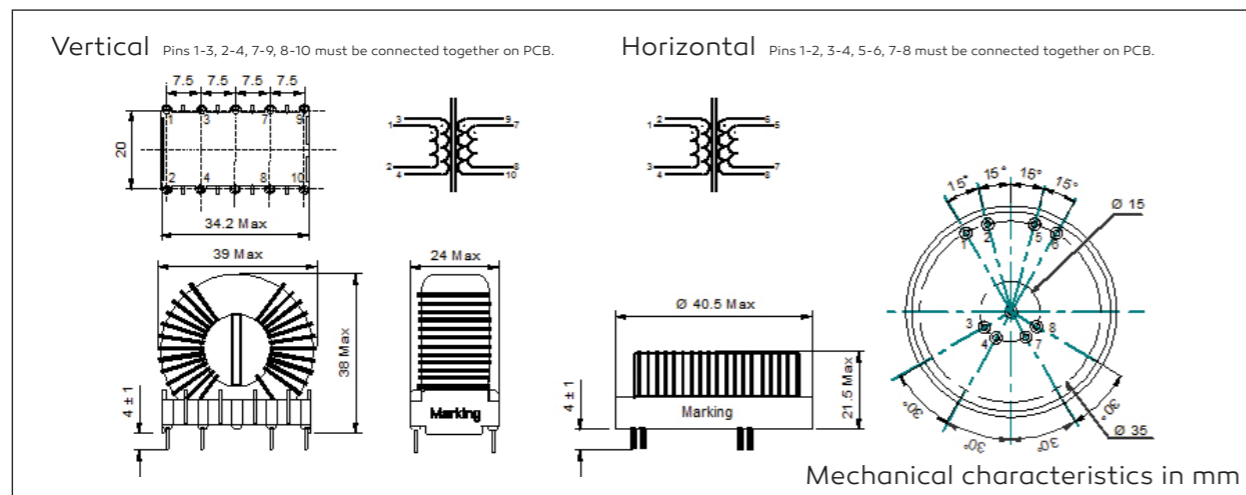


COMMON MODE CHOKES - VOLUME II

SCHEMATIC 1 (PIN SIDE VIEW)

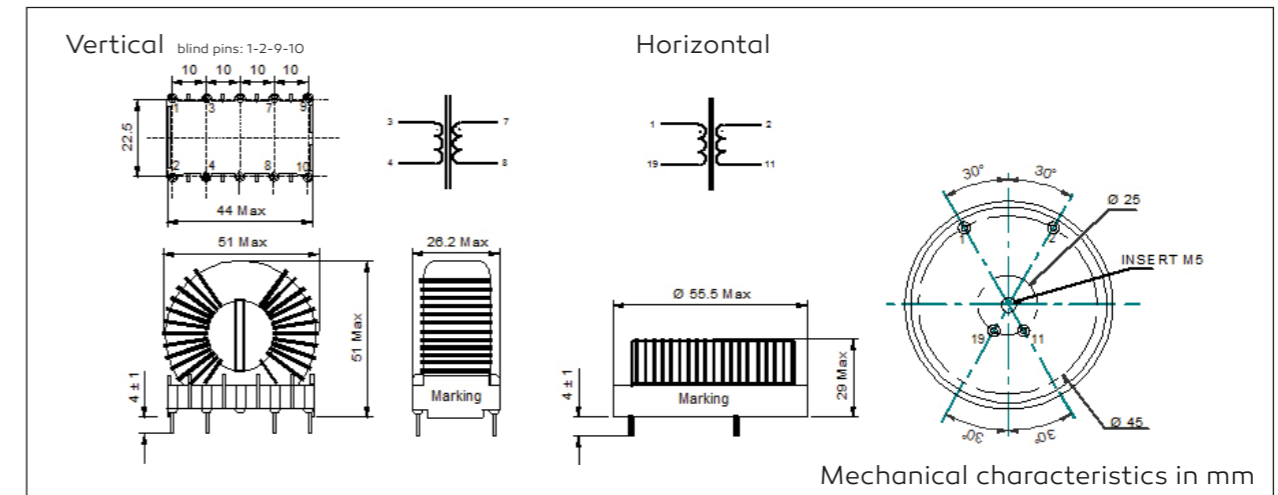


SCHEMATIC 2 (PIN SIDE VIEW)

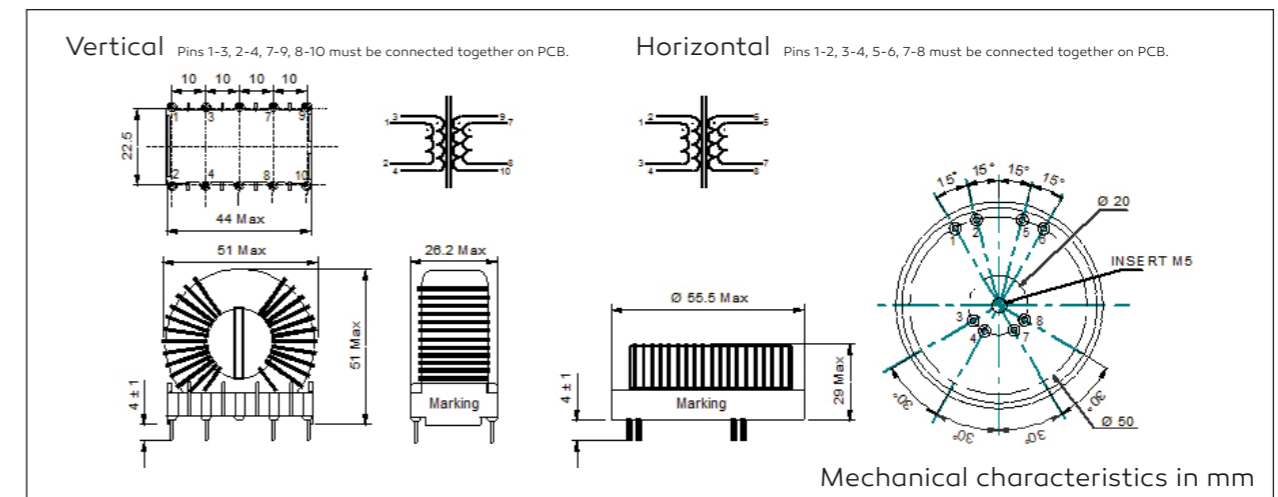


COMMON MODE CHOKES - VOLUME III

SCHEMATIC 1 (PIN SIDE VIEW)




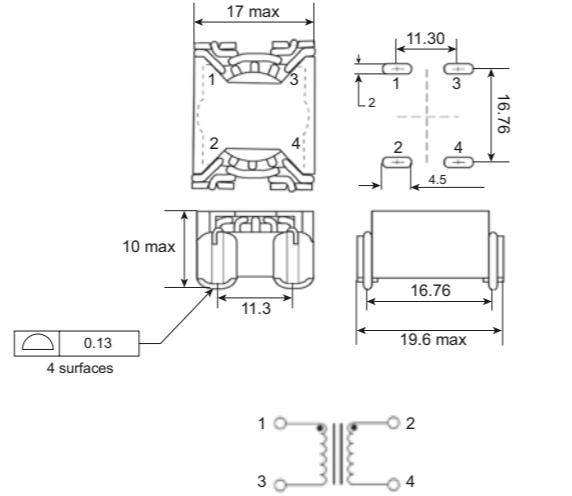
SCHEMATIC 2 (PIN SIDE VIEW)



COMMON MODE CHOKES - SMD


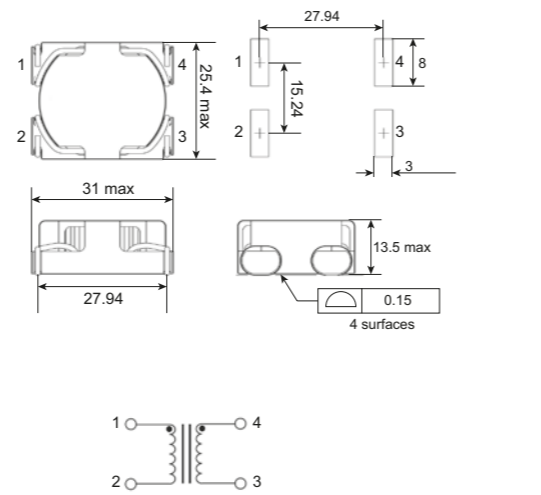
| P/N Vertical | I _N (A) | L _N at 10 KHz (mH) | Resistance (mΩ) | Weight (g) | Volume | Dimensions (mm) |
|-----------------|-----------------------|----------------------------------|--------------------|---------------|--------|--------------------|
| SCN100S015 | 1.5 | 10 | 120 | 4 | 1 | 19,6 x 17 x 10 |
| SCN060S020 | 2 | 6 | 60 | 4 | 1 | 19,6 x 17 x 10 |
| SCN030S035 | 3.5 | 3 | 22 | 4 | 1 | 19,6 x 17 x 10 |
| SCN015S050 | 5 | 1.5 | 11 | 4 | 1 | 19,6 x 17 x 10 |
| SCN080S070 | 7 | 8 | 15.5 | 17 | 2 | 31 x 25.4 x 13.5 |
| SCN050S090 | 9 | 5 | 10 | 17 | 2 | 31 x 25.4 x 13.5 |
| SCN030S130 | 13 | 3 | 5 | 17 | 2 | 31 x 25.4 x 13.5 |
| SCN013S160 | 16 | 1.3 | 3 | 17 | 2 | 31 x 25.4 x 13.5 |

VOLUME 1

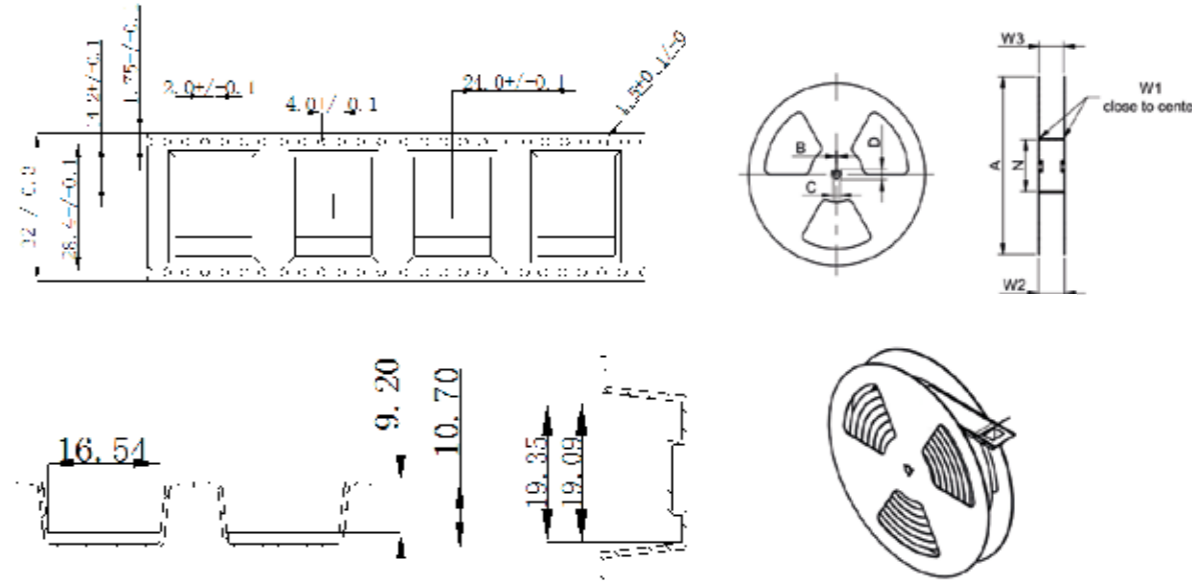
Unit: mm unless otherwise specified, all tolerances are ±0.5

VOLUME 2

Unit: mm unless otherwise specified, all tolerances are ±0.5

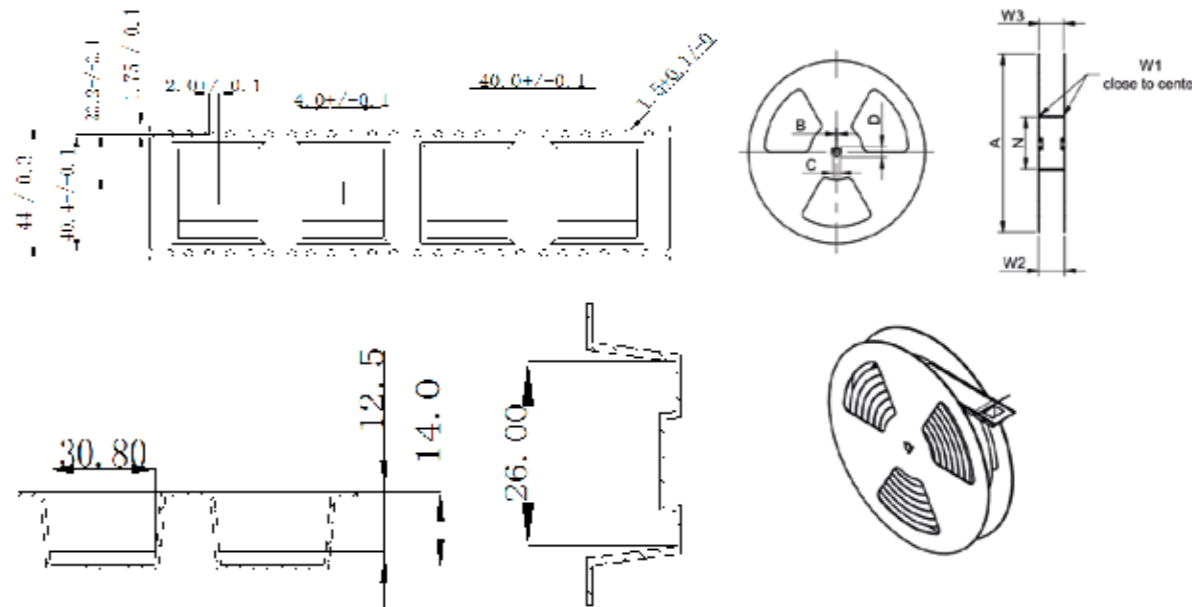
VOLUME 1



| | A | B | C | D | N | W1 | W2 | W3 | W4 |
|------------|-------|-----|------|------|------|------|------|------|------|
| Tolerance | ±2.0 | min | min | min | min | ±2.0 | max | min | max |
| Tape width | 330,0 | 1,5 | 12,8 | 20,2 | 80,0 | 32,5 | 38,5 | 32,5 | 35,8 |

Packing: 200 PCS/reel, 2 reels/box, 4 boxes/carton, 1600 PCS/carton, carton size 365 x 365 x 365 mm

VOLUME 2



| | A | B | C | D | N | W1 | W2 | W3 | W4 |
|------------|-------|-----|------|------|------|------|------|------|------|
| Tolerance | ±2.0 | min | min | min | min | ±2.0 | max | min | max |
| Tape width | 330,0 | 1,5 | 12,8 | 20,2 | 80,0 | 44,4 | 50,4 | 44,4 | 47,4 |

Packing: 100 PCS/reel, 1 reel/box, 5 boxes/carton, 500PCS/carton, carton size 365 x 365 x 365 mm



COMMON MODE CHOKE STANDARD

TECH POWER ELECTRONICS GROUP develops highly-efficient toroidal common mode chokes. Compact design combined with high saturation level result in high noise attenuation performance.

Standards

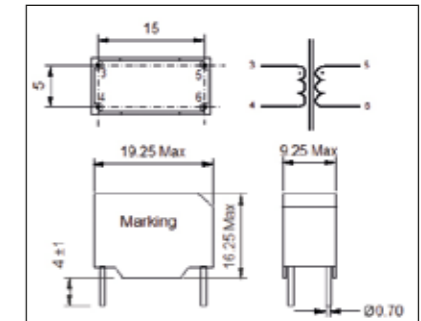
- RoHS
- Complies with EN138100, EN60938-2 (VDE565.2)
- Plastic materials meet UL94 V-O requirements

Characteristics

- Rated voltage: 250 Vac
- Withstanding voltage: 1,500 Vac
- Nominal current RMS value at 60 °C
- Inductance measured at 10 kHz, 10 mV, tolerance: +50/-30 %
- DC resistance nominal value at 25 °C, tolerance ±15 %
- Electric specifications at 25 °C
- Operating temperature: from -40 °C to 125 °C

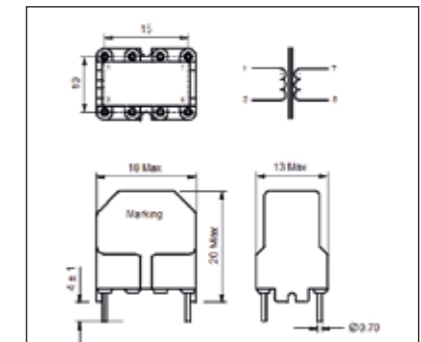
VERTICAL CASE

| P/N | Nominal Current (A) | Nominal Inductance (mH) | DC Resistance (mΩ) |
|------------|---------------------|-------------------------|--------------------|
| SCF120V003 | 0.3 | 12.0 | 920 |
| SCF068V004 | 0.4 | 6.8 | 530 |
| SCF044V006 | 0.6 | 4.4 | 385 |
| SCF030V010 | 1.0 | 3.0 | 205 |
| SCF015V016 | 1.5 | 1.6 | 100 |
| SCF011V020 | 2.0 | 1.1 | 70 |



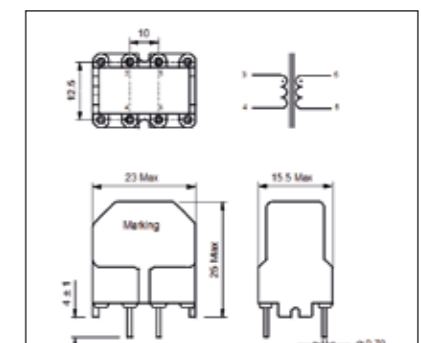
Mechanical characteristics in mm

| P/N | Nominal Current (A) | Nominal Inductance (mH) | DC Resistance (mΩ) |
|------------|---------------------|-------------------------|--------------------|
| SCF390V004 | 0.4 | 39.0 | 1,550 |
| SCF270V005 | 0.5 | 27.0 | 1,250 |
| SCF150V006 | 0.6 | 15.0 | 500 |
| SCF100V008 | 0.8 | 10.0 | 370 |
| SCF068V012 | 1.2 | 6.8 | 245 |
| SCF033V015 | 1.5 | 3.3 | 135 |
| SCF018V020 | 2.0 | 1.8 | 75 |
| SCF007V040 | 4.0 | 0.7 | 35 |



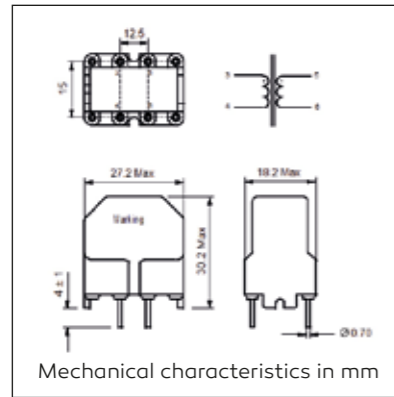
Mechanical characteristics in mm

| P/N | Nominal Current (A) | Nominal Inductance (mH) | DC Resistance (mΩ) |
|------------|---------------------|-------------------------|--------------------|
| SCF470V003 | 0.3 | 47.0 | 1,650 |
| SCF390V005 | 0.5 | 39.0 | 810 |
| SCF270V008 | 0.8 | 27.0 | 500 |
| SCF150V010 | 1.0 | 15.0 | 375 |
| SCF100V012 | 1.2 | 10.0 | 220 |
| SCF068V015 | 1.5 | 6.8 | 130 |
| SCF042V020 | 2.0 | 4.2 | 102 |
| SCF033V025 | 2.5 | 3.3 | 75 |
| SCF020V030 | 3.0 | 2.0 | 55 |

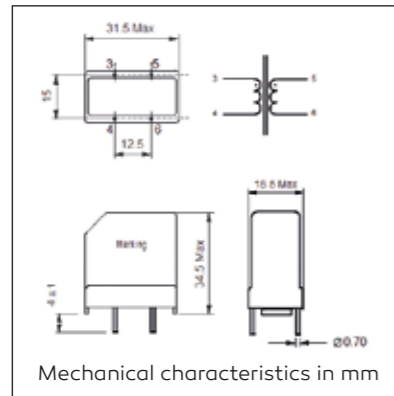


Mechanical characteristics in mm

VERTICAL CASE

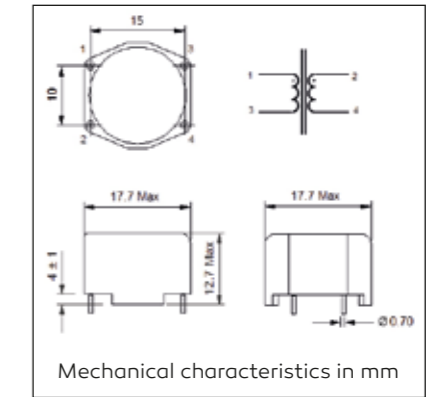


| P/N | Nominal Current (A) | Nominal Inductance (mH) | DC Resistance (mΩ) |
|------------|---------------------|-------------------------|--------------------|
| SCF470V006 | 0.6 | 47.0 | 1,150 |
| SCF390V008 | 0.8 | 39.0 | 1,000 |
| SCF180V010 | 1.0 | 18.0 | 610 |
| SCF100V015 | 1.5 | 10.0 | 220 |
| SCF068V020 | 2.0 | 6.8 | 147 |
| SCF056V025 | 2.5 | 5.6 | 105 |
| SCF045V030 | 3.0 | 4.5 | 80 |
| SCF033V040 | 4.0 | 3.3 | 45 |

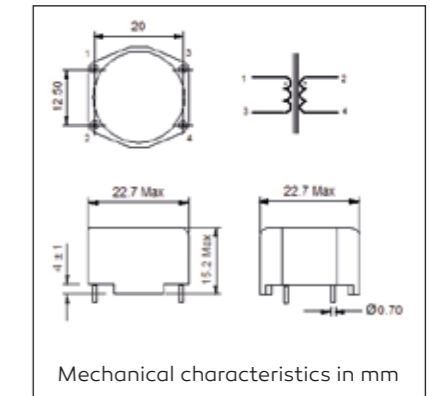


| P/N | Nominal Current (A) | Nominal Inductance (mH) | DC Resistance (mΩ) |
|------------|---------------------|-------------------------|--------------------|
| SCF820V005 | 0.5 | 82.0 | 2,700 |
| SCF330V010 | 1.0 | 33.0 | 750 |
| SCF270V014 | 1.4 | 27.0 | 510 |
| SCF068V021 | 2.1 | 6.8 | 190 |
| SCF033V041 | 4.1 | 3.3 | 66 |
| SCF018V060 | 6.0 | 1.8 | 23 |

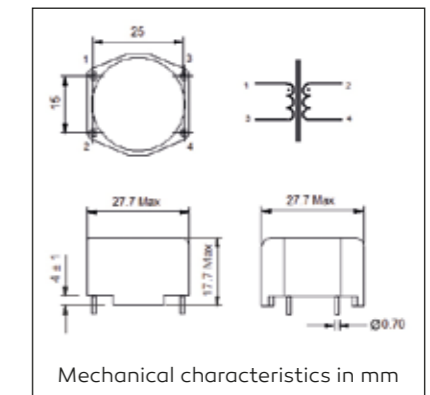
HORIZONTAL CASE



| P/N | Nominal Current (A) | Nominal Inductance (mH) | DC Resistance (mΩ) |
|------------|---------------------|-------------------------|--------------------|
| SCF390H004 | 0.4 | 39.0 | 1,550 |
| SCF270H005 | 0.5 | 27.0 | 1,250 |
| SCF150H006 | 0.6 | 15.0 | 500 |
| SCF100H008 | 0.8 | 10.0 | 370 |
| SCF068H012 | 1.2 | 6.8 | 245 |
| SCF033H015 | 1.5 | 3.3 | 135 |
| SCF018H020 | 2.0 | 1.8 | 75 |
| SCF007H040 | 4.0 | 0.7 | 35 |



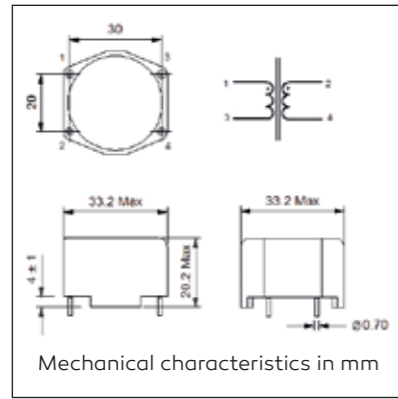
| P/N | Nominal Current (A) | Nominal Inductance (mH) | DC Resistance (mΩ) |
|------------|---------------------|-------------------------|--------------------|
| SCF470H003 | 0.3 | 47.0 | 1,650 |
| SCF390H005 | 0.5 | 39.0 | 810 |
| SCF270H008 | 0.8 | 27.0 | 500 |
| SCF150H010 | 1.0 | 15.0 | 375 |
| SCF100H012 | 1.2 | 10.0 | 220 |
| SCF068H015 | 1.5 | 6.8 | 130 |
| SCF042H020 | 2.0 | 4.2 | 102 |
| SCF033H025 | 2.5 | 3.3 | 75 |
| SCF020H030 | 3.0 | 2.0 | 55 |
| SCF015H040 | 4.0 | 1.5 | 35 |



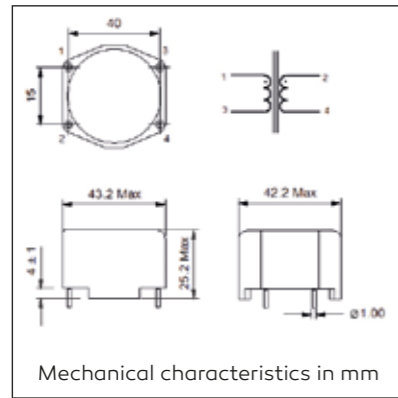
| P/N | Nominal Current (A) | Nominal Inductance (mH) | DC Resistance (mΩ) |
|------------|---------------------|-------------------------|--------------------|
| SCF470H006 | 0.6 | 47.0 | 1,150 |
| SCF390H008 | 0.8 | 39.0 | 1,000 |
| SCF180H010 | 1.0 | 18.0 | 610 |
| SCF100H015 | 1.5 | 10.0 | 220 |
| SCF068H020 | 2.0 | 6.8 | 147 |
| SCF056H025 | 2.5 | 5.6 | 105 |
| SCF045H030 | 3.0 | 4.5 | 80 |
| SCF033H040 | 4.0 | 3.3 | 45 |

HORIZONTAL CASE

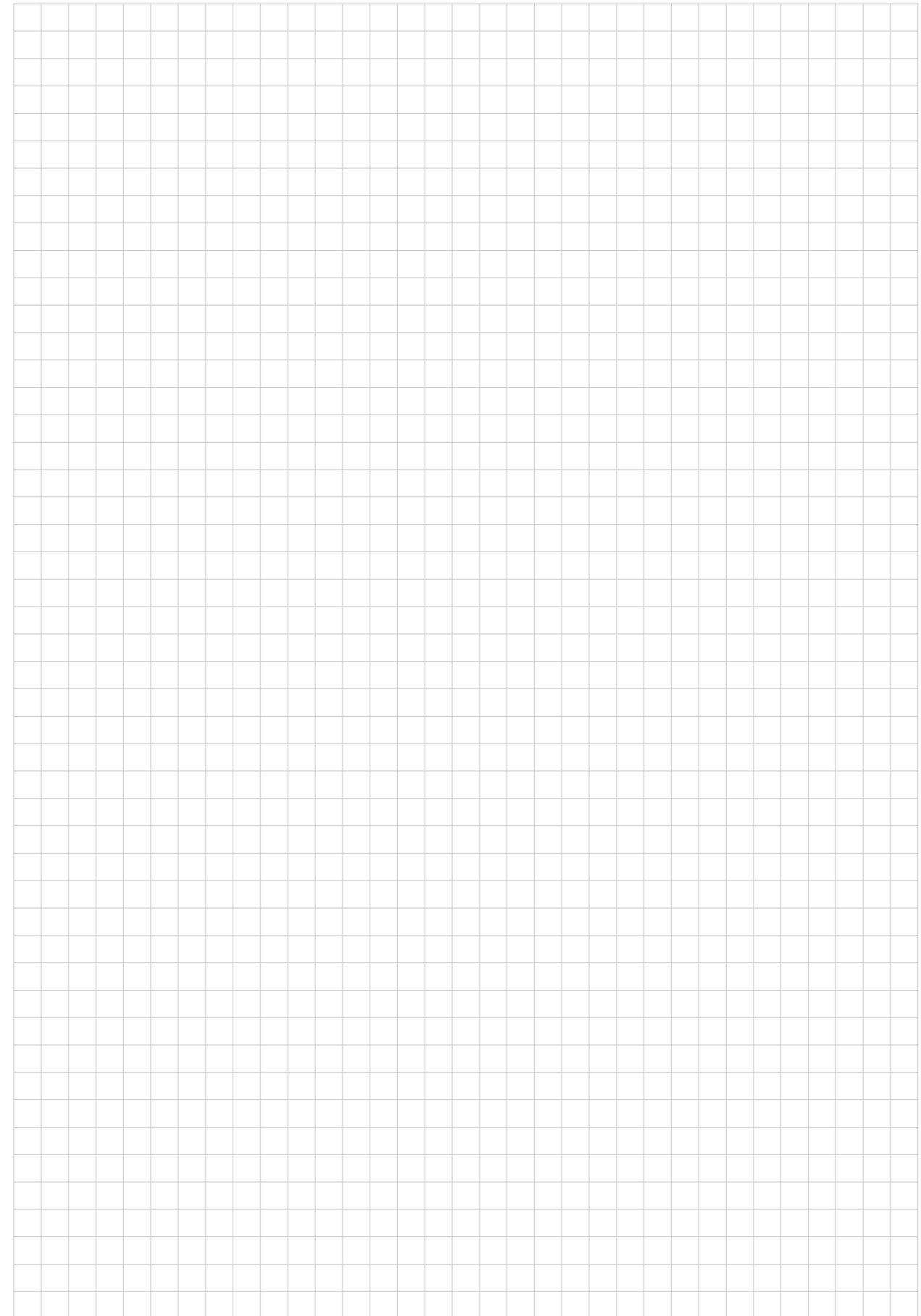
NOTES

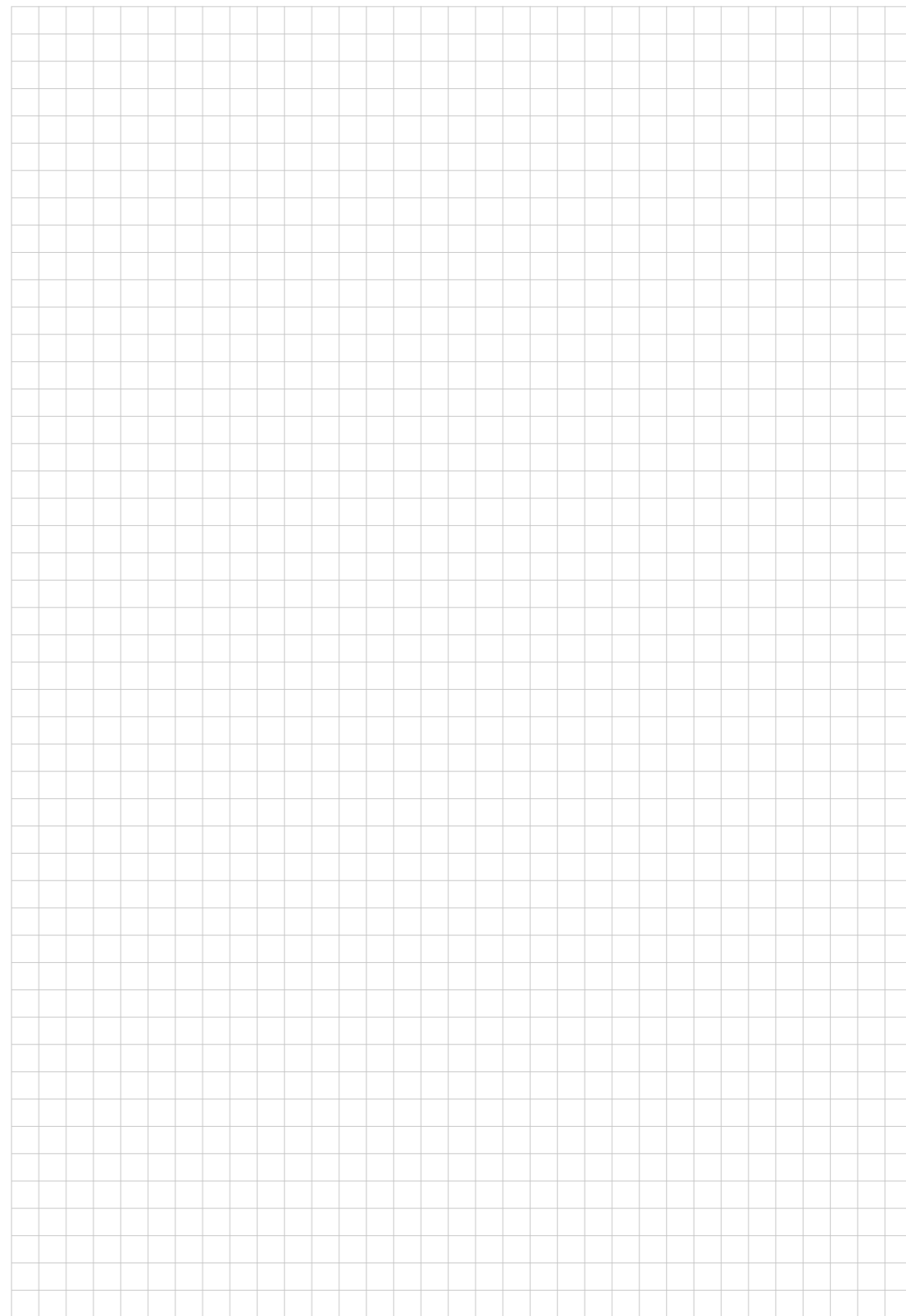
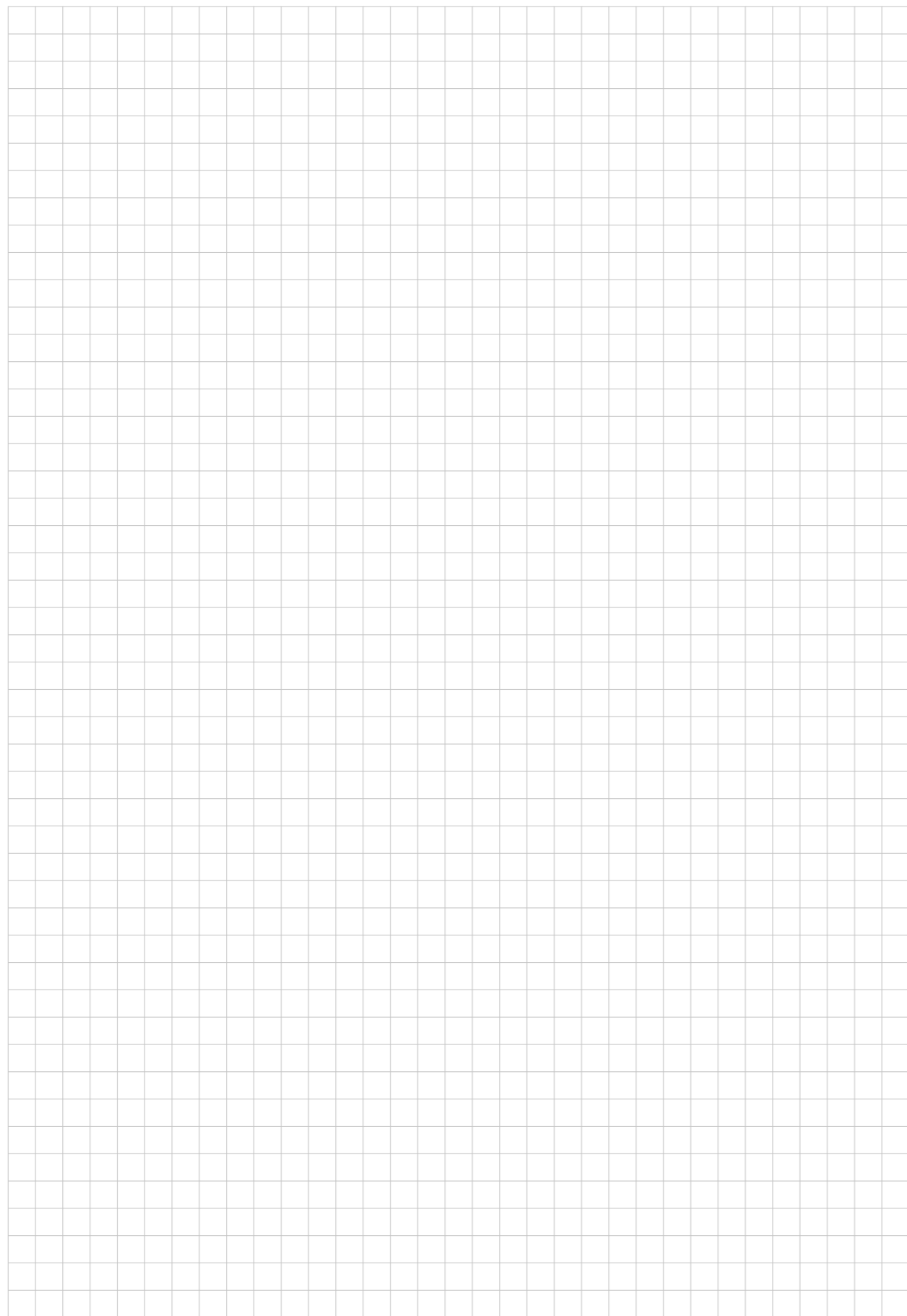


| P/N | Nominal Current (A) | Nominal Inductance (mH) | DC Resistance (mΩ) |
|------------|---------------------|-------------------------|--------------------|
| SCF820H005 | 0.5 | 82.0 | 2,700 |
| SCF330H010 | 1.0 | 33.0 | 880 |
| SCF470H010 | 1.0 | 47.0 | 750 |
| SCF270H014 | 1.4 | 27.0 | 510 |
| SCF100H020 | 2.0 | 10.0 | 230 |
| SCF068H021 | 2.1 | 6.8 | 190 |
| SCF033H040 | 4.0 | 3.3 | 58 |
| SCF039H041 | 4.1 | 3.9 | 66 |
| SCF018H060 | 6.0 | 1.8 | 23 |



| P/N | Nominal Current (A) | Nominal Inductance (mH) | DC Resistance (mΩ) |
|------------|---------------------|-------------------------|--------------------|
| SCF680H010 | 1.0 | 68.0 | 1,300 |
| SCF180H020 | 2.0 | 18.0 | 350 |
| SCF068H040 | 4.0 | 6.8 | 87 |
| SCF039H060 | 6.0 | 3.9 | 41 |
| SCF027H080 | 8.0 | 2.7 | 22 |
| SCF018H100 | 10.0 | 1.8 | 14 |







LOCATIONS

● Development & manufacture
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