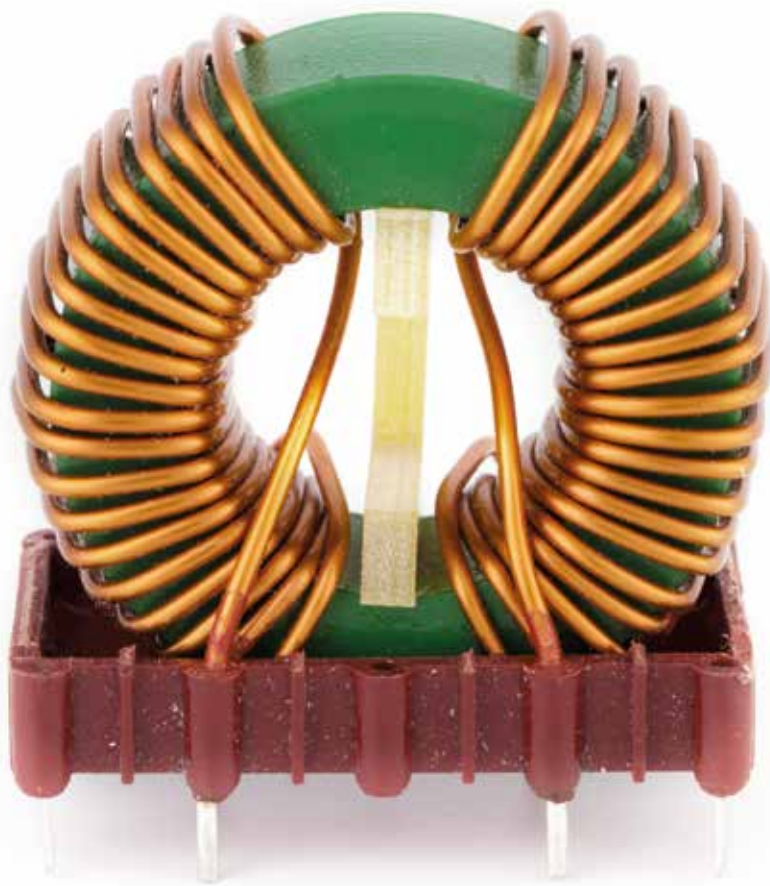




**TECH POWER**  
ELECTRONICS GROUP



*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-0 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 <sub>N</sub> (A)	L <sub>N</sub> at 10 KHz (mH)	L <sub>N</sub> 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

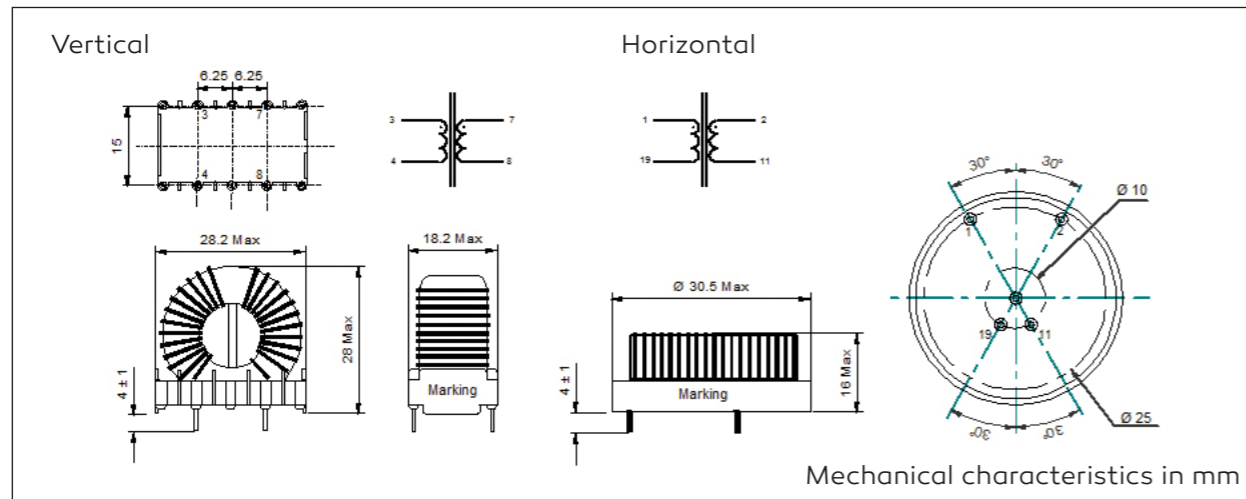
- I<sub>N</sub> nominal current in each winding
- L<sub>N</sub> nominal inductance, tolerance ±40 %
- Ambient temperature T<sub>a</sub> = -40 °C to +70 °C (short time +90 °C)
- Operating temperature T<sub>op</sub> = -40 °C to +130 °C (short time +150 °C)
- These nanocrystalline chokes are designed for a temperature rise of ΔT = 45-60 °C at T<sub>a</sub> = +70 °C and I = I<sub>N</sub> in each winding

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

**- Custom design on request**

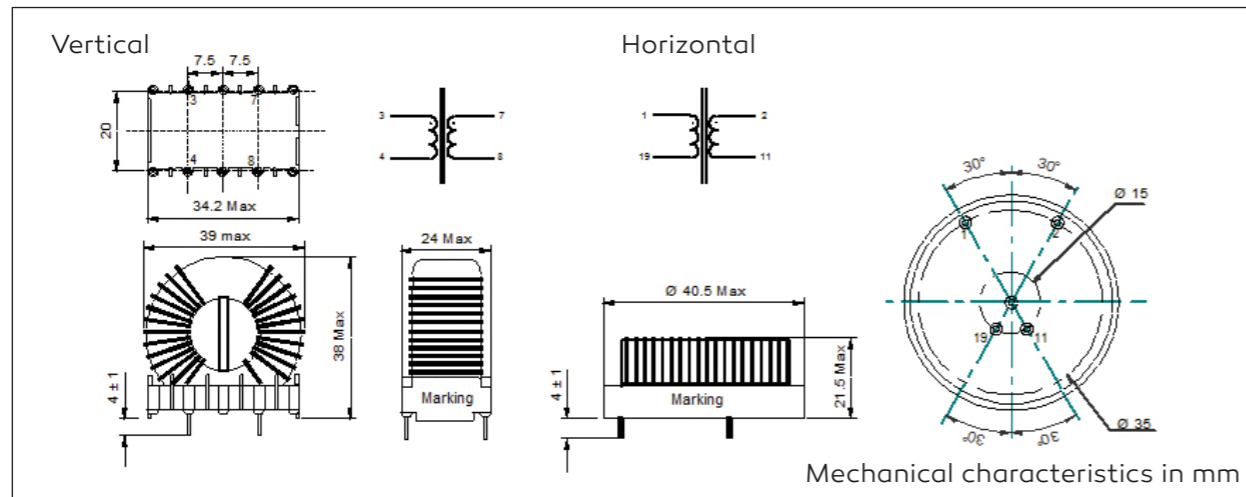
## COMMON MODE CHOKES - VOLUME I

### SCHEMATIC 1 (PIN SIDE VIEW)

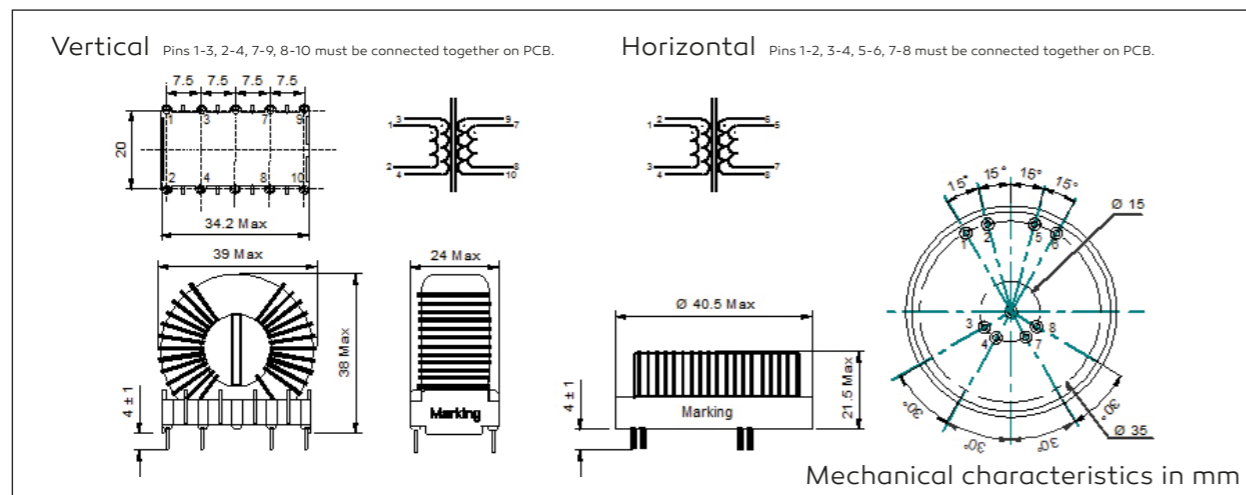


## COMMON MODE CHOKES - VOLUME II

### SCHEMATIC 1 (PIN SIDE VIEW)

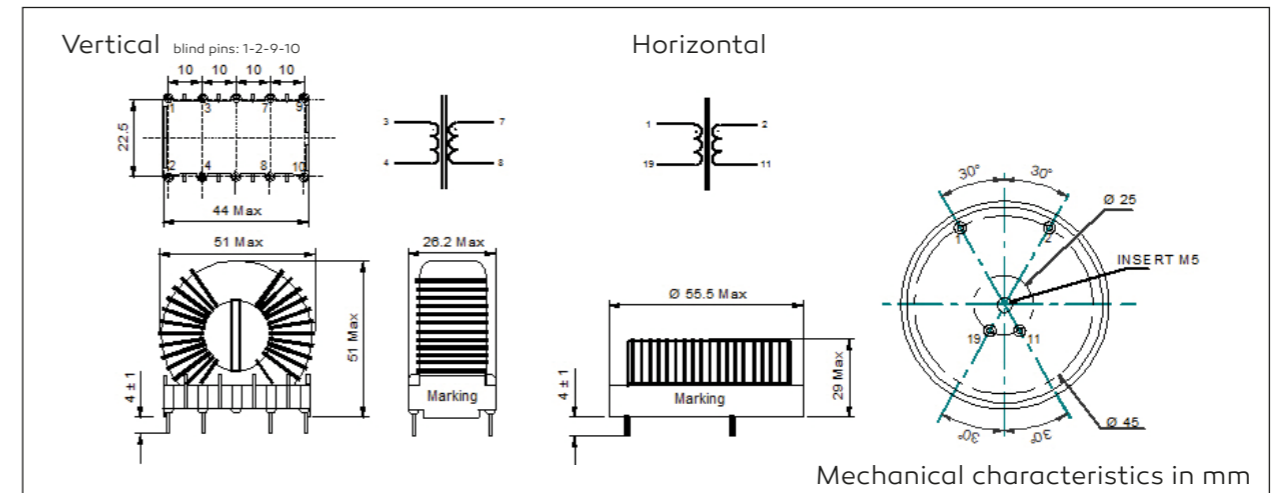


### SCHEMATIC 2 (PIN SIDE VIEW)

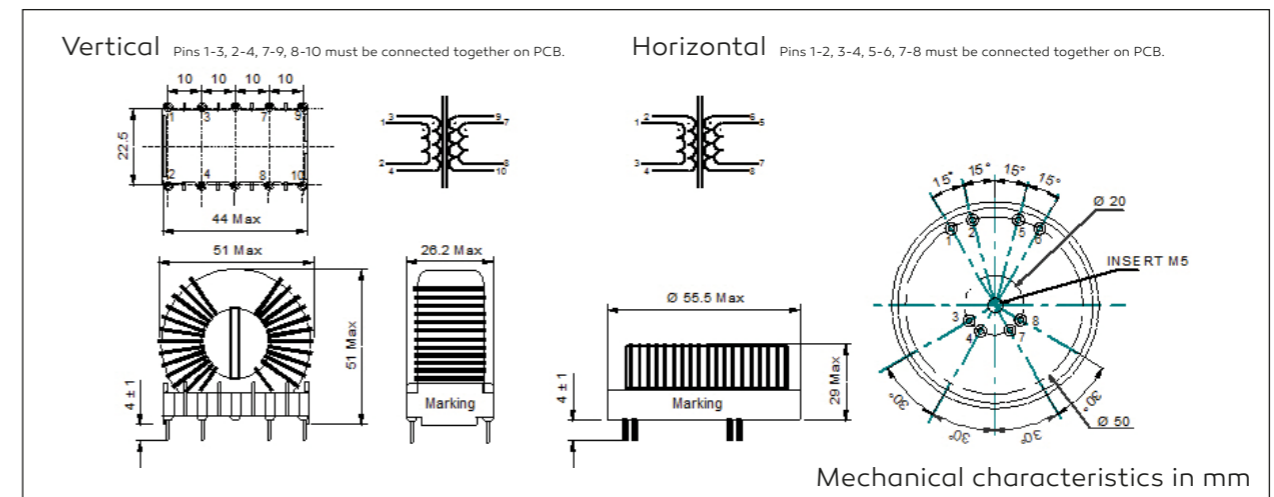


## COMMON MODE CHOKES - VOLUME III

### SCHEMATIC 1 (PIN SIDE VIEW)

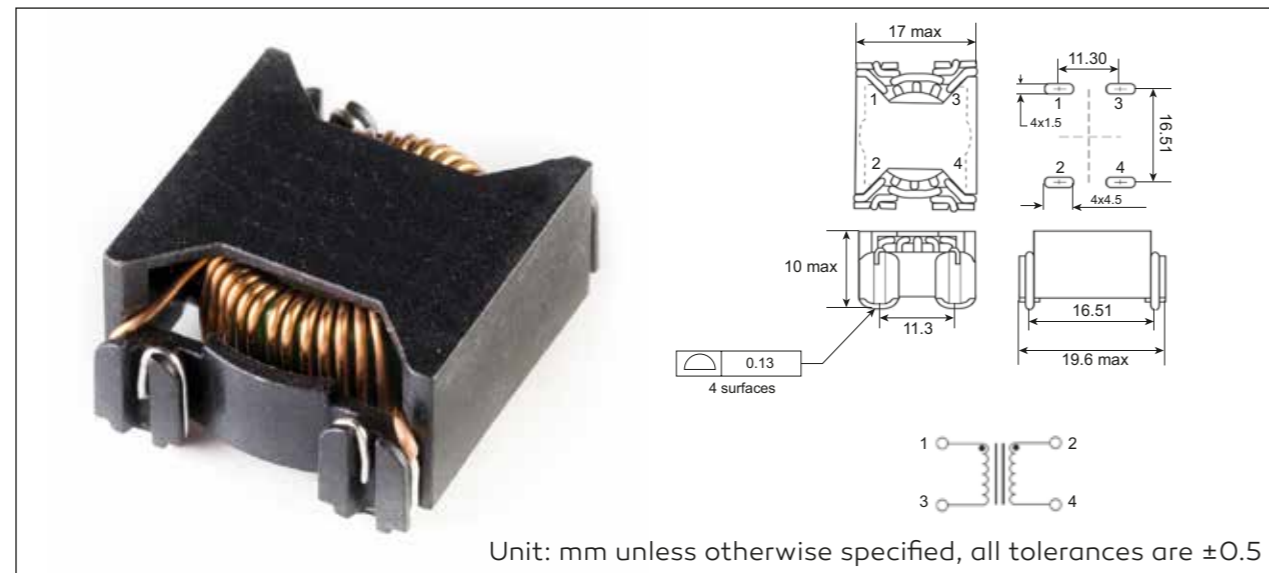


### SCHEMATIC 2 (PIN SIDE VIEW)

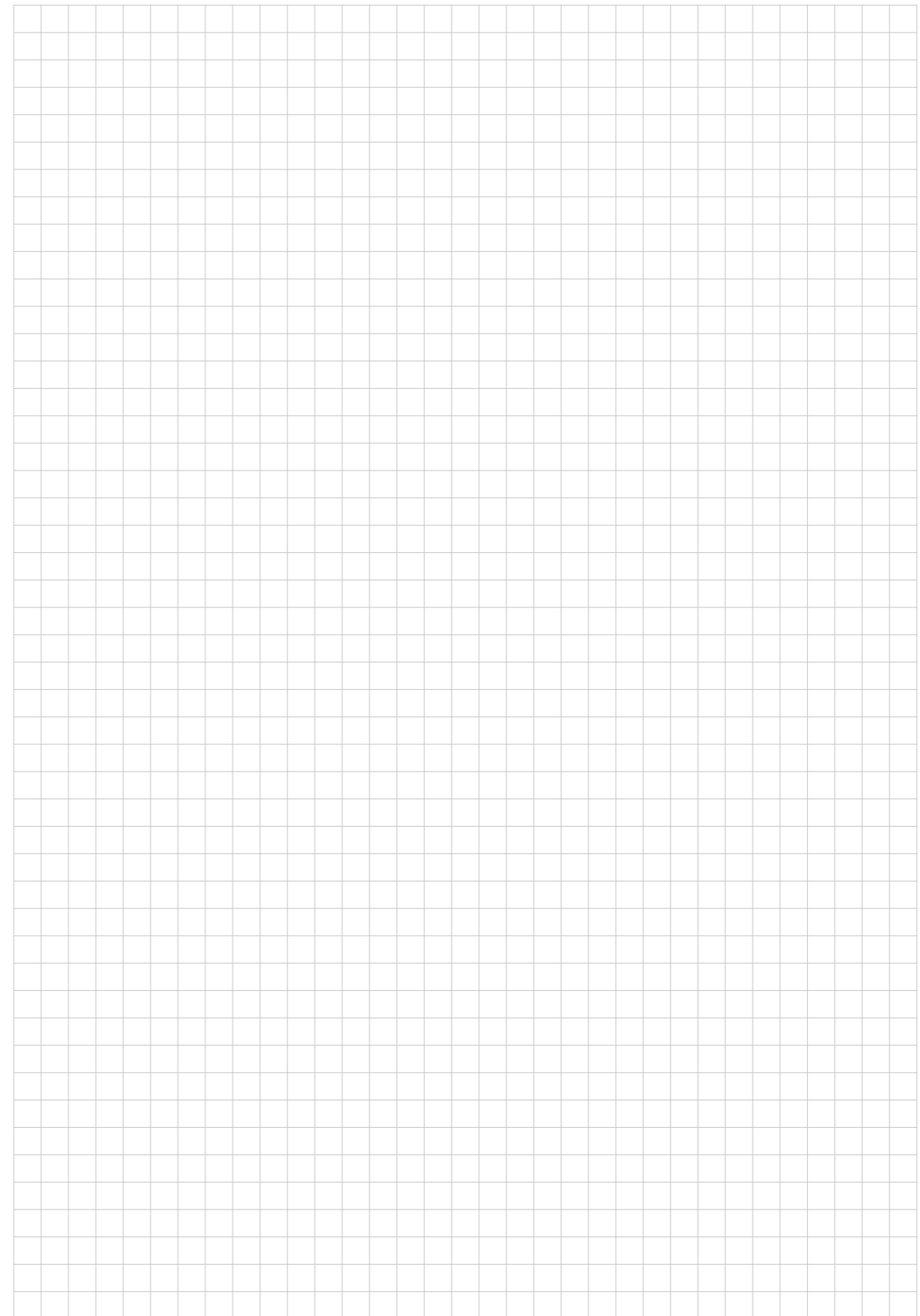
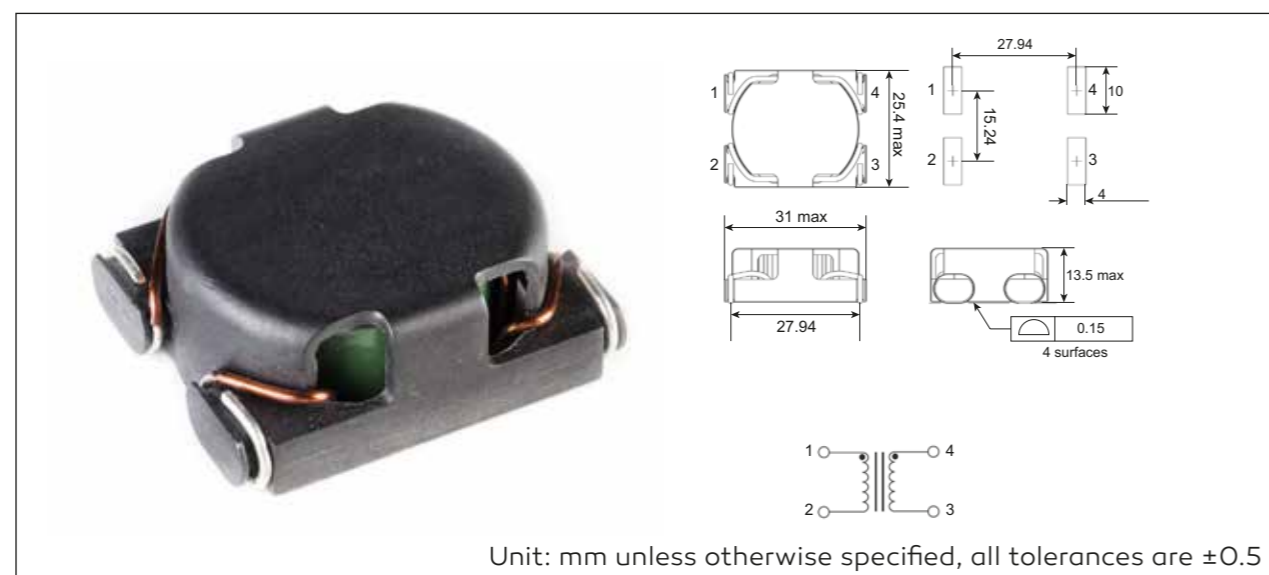


P/N Vertical	I <sub>N</sub> (A)	L <sub>N</sub> at 10 KHz (mH)	Resistance (mΩ)	Weight (g)	Volume	Dimensions (mm)
SCN100S015	1.5	10	120	4	1	19,6 x 17 x 10
SCN060S020	2	6	60	4	1	19,6 x 17 x 10
SCN030S035	3.5	3	22	4	1	19,6 x 17 x 10
SCN015S050	5	1.5	11	4	1	19,6 x 17 x 10
SCN080S070	7	8	15.5	17	2	31 x 25.4 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**



**VOLUME 2**





# 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

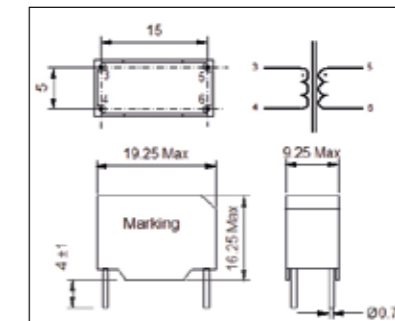
- RoHS
- Complies with EN138100, EN60938-2 (VDE565.2)
- Plastic materials meet UL94 V-O requirements

### 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

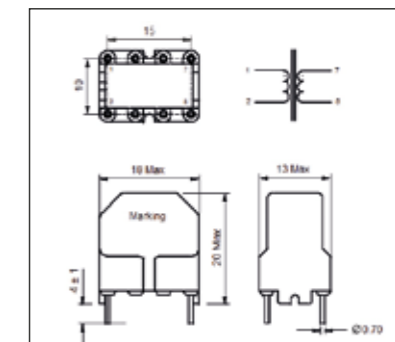
## VERTICAL CASE

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



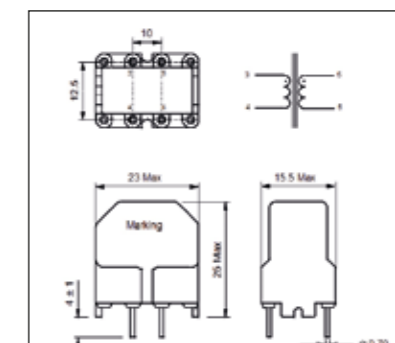
Mechanical characteristics in mm

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



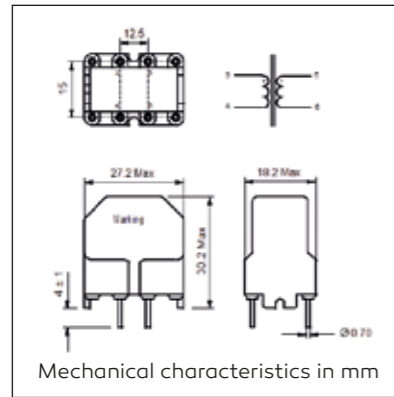
Mechanical characteristics in mm

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

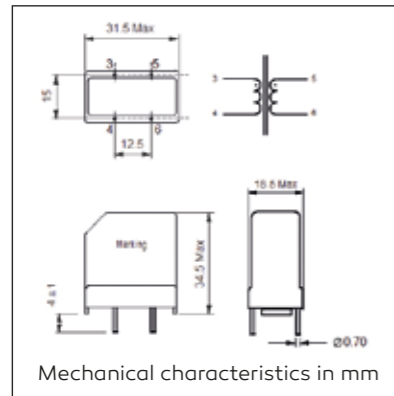


Mechanical characteristics in mm

## VERTICAL CASE

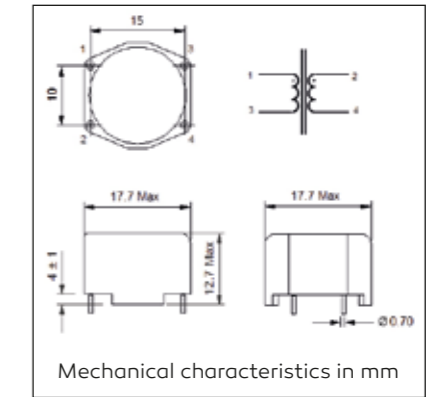


P/N	Nominal Current (A)	Nominal Inductance (mH)	DC Resistance (mΩ)
SCF470V006	0.6	47.0	1,150
SCF390V008	0.8	39.0	1,000
SCF180V010	1.0	18.0	610
SCF100V015	1.5	10.0	220
SCF068V020	2.0	6.8	147
SCF056V025	2.5	5.6	105
SCF045V030	3.0	4.5	80
SCF033V040	4.0	3.3	45

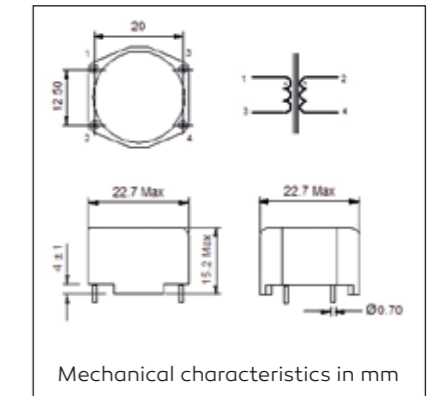


P/N	Nominal Current (A)	Nominal Inductance (mH)	DC Resistance (mΩ)
SCF820V005	0.5	82.0	2,700
SCF330V010	1.0	33.0	750
SCF270V014	1.4	27.0	510
SCF068V021	2.1	6.8	190
SCF033V041	4.1	3.3	66
SCF018V060	6.0	1.8	23

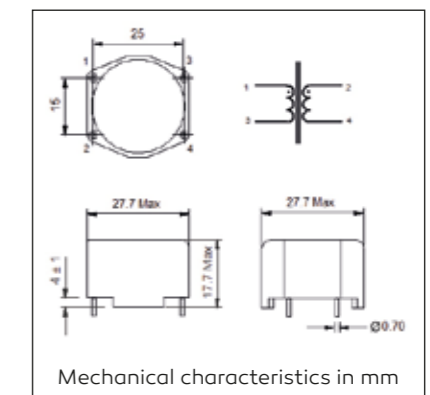
## HORIZONTAL CASE



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

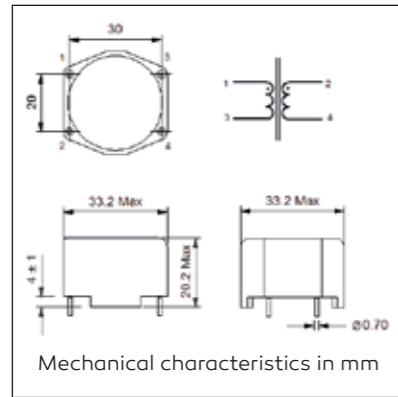


P/N	Nominal Current (A)	Nominal Inductance (mH)	DC Resistance (mΩ)
SCF470H006	0.6	47.0	1,150
SCF390H008	0.8	39.0	1,000
SCF180H010	1.0	18.0	610
SCF100H015	1.5	10.0	220
SCF068H020	2.0	6.8	147
SCF056H025	2.5	5.6	105
SCF045H030	3.0	4.5	80
SCF033H040	4.0	3.3	45

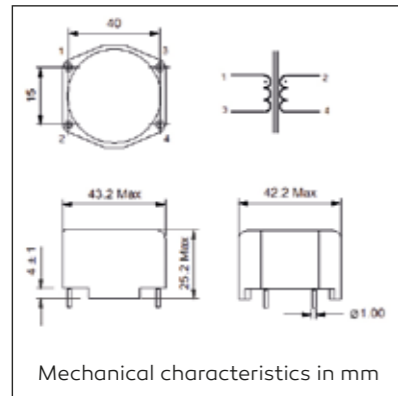


# HORIZONTAL CASE

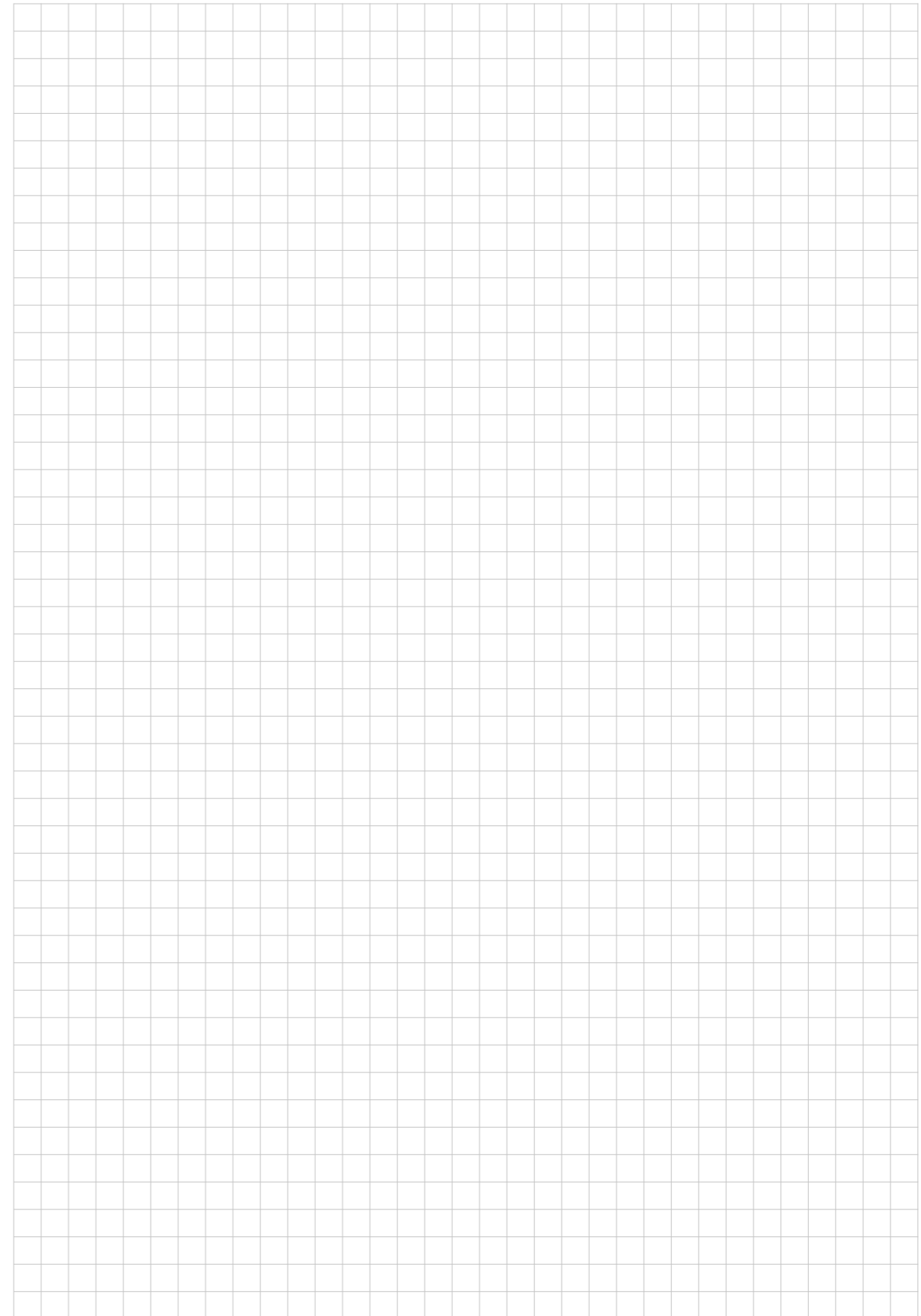
# NOTES



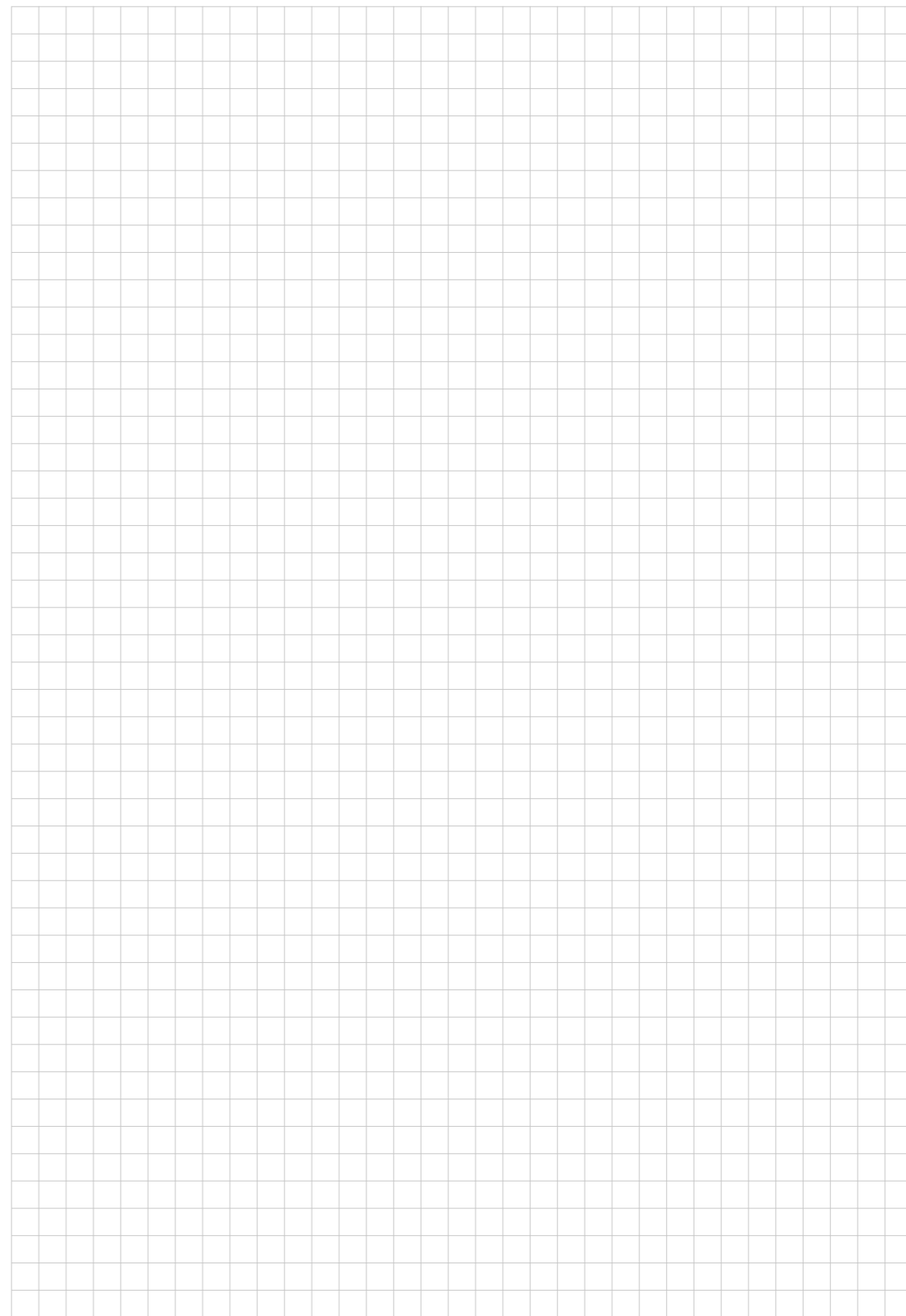
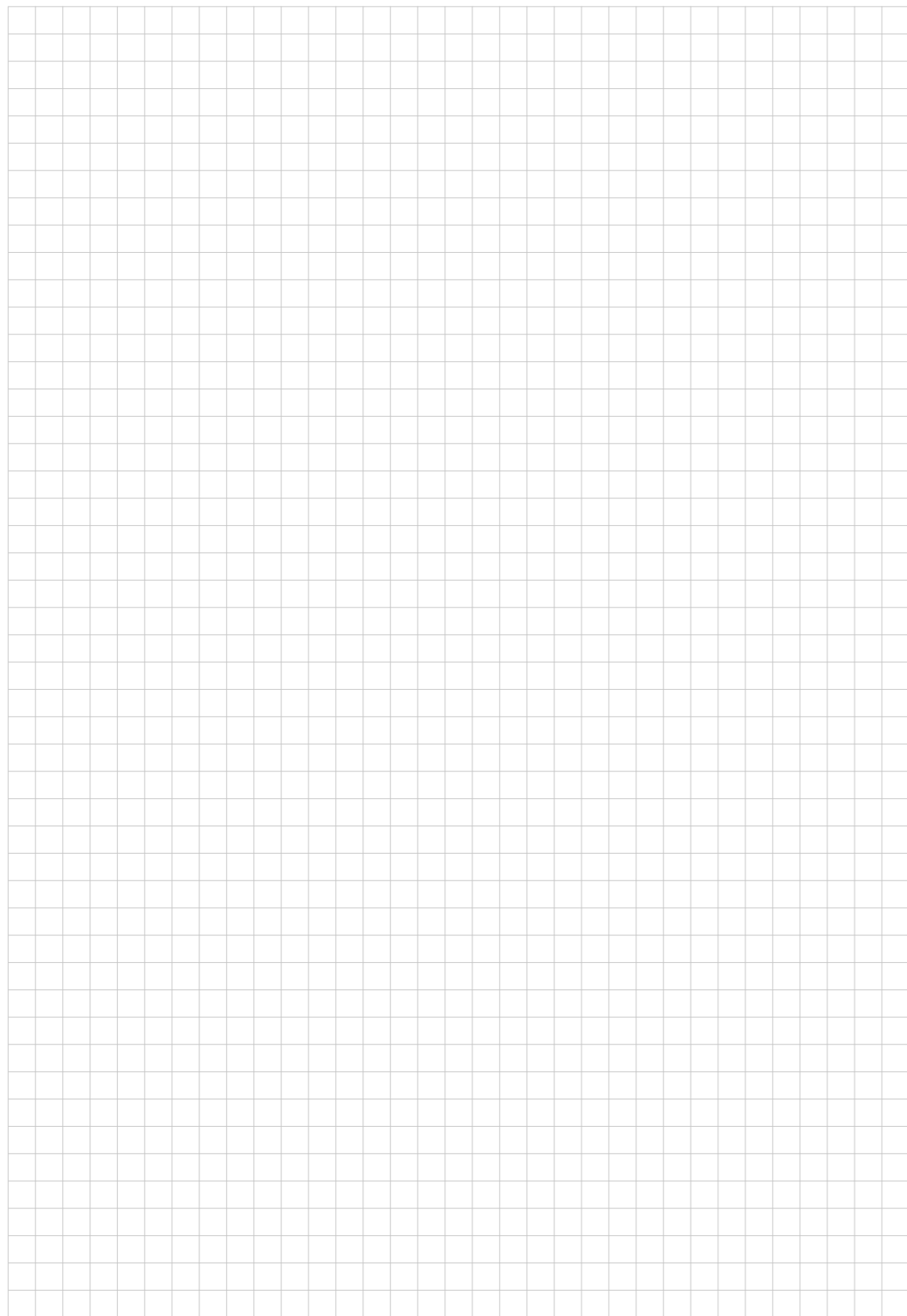
P/N	Nominal Current (A)	Nominal Inductance (mH)	DC Resistance (mΩ)
SCF820H005	0.5	82.0	2,700
SCF330H010	1.0	33.0	880
SCF470H010	1.0	47.0	750
SCF270H014	1.4	27.0	510
SCF100H020	2.0	10.0	230
SCF068H021	2.1	6.8	190
SCF033H040	4.0	3.3	58
SCF039H041	4.1	3.9	66
SCF018H060	6.0	1.8	23



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









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● Development & manufacture  
○ Production



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ELECTRONICS GROUP

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