Leaded Inductors (Fixed Choke Coils)

FASTRON leaded inductors come with a very wide inductance range from 0.1µH to 100 000µH and with high Q values. They are available in tape and ammopack packing.

Applications

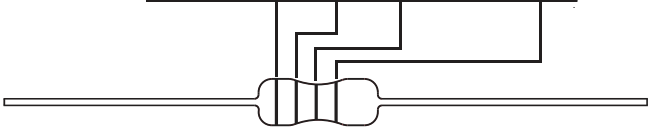
These components are suitable for decoupling and interference suppression.
Communication: RF blocking and filtering, e.g. 12 ~ 16 kHz blocking filter
Others: Automotive electronics, electronic household appliances, entertainment electronics and lighting devices

Technical Data

L – Value (rated inductance)	Measured with HP 4194A Impedance / Gain-phase Analyzer at frequency f_L
Q – Factor (min)	Measured with HP 4194A Impedance / Gain-phase Analyzer at frequency f_Q
SRF (min)	Measured with HP 8753ES Network Analyzer
DCR (max)	Measured at 25°C
Rated DC Current	I based on temperature rise, determined at the point where the temperature rise does not exceed 40°C above the ambient temperature of 25°C I1 Current based on ambient temperature of 40°C and component temperature of max. 125°C Isat Current based on inductivity drop of 10% related to the unloaded inductivity
Operating Temperature	-55°C to +125°C (includes component self-heating)
Recommended soldering method	Wave
Solderability	Using lead free solder (Sn 99.9) at 260°C ± 5°C for 5 ± 0.5 seconds, min 90% solder coverage of metallization Standard: IEC 68-2-20 (Ta)
Resistance to Soldering Heat	Resistant to 260°C ± 5°C for 10 ± 1 seconds Standard: IEC 68-2-20 (Tb)
Resistance to Solvent	Resistant to Isopropyl alcohol for 5 ± 0.5 minutes at 23°C ± 5°C Standard: IEC 68-2-45
Climatic Test	Defined by the following standards IEC 68-2-1 for Cold test: -55°C for 96 hours IEC 68-2-2 for Dry heat test: +125°C for 96 hours IEC 60068-2-78 for Humidity test: 40°C at RH 95% for 4 days
Thermal Shock Test	Temperature cycle : -55°C to +125°C to -55°C Max/Min temperature duration: 15 minutes Temperature transition duration: 5 minutes Cycles: 25 Standard: MIL-STD-202G
Tensile Strength of Leads (Pull Test)	Components withstand a pulling force of 10N for 10 ± 1 seconds IEC 60068-2-21 (Ua_1)
Mechanical Shock	Mil-Std 202 Method 213 Condition C 3 axis, 6 times, total 18 shocks 100 G, 6 ms, half-sine
Vibration	Mil-Std 202 Method 204 20 mins at 5G 10 Hz to 2000 Hz 12 cycles each of 3 orientations

Colour Coding

L (µH) / Code	Nominal Inductance (µH) Band 1	Band 2	Band 3	Band 4	Tol. ** code
Gold	–	---	x 0.1	± 5 %	J
Silver	–	---	x0.01	± 10 %	K
Clear	–	---	---	± 20 %	M
Black	0	0	x1	---	---
Brown	1	1	x10	± 1 %	F
Red	2	2	x100	± 2 %	G
Orange	3	3	x1000	± 3 %	A
Yellow	4	4	---	---	---
Green	5	5	---	---	---
Blue	6	6	---	---	---
Violet	7	7	---	---	---
Grey	8	8	---	---	---
White	9	9	---	---	---



Ordering Code

Example:
SMCC-180X-YY

SMCC - **180** **X** - **YY**
(Model) (Inductance Value) (Tolerance) (Packing Code)

↓

SMCC-180K-00

Core Type - Ferrite
Tolerances - F (1%), G (2%), H (2.5%), A (3%), J (5%), K (10%), M (20%)
- **Bold is standard tolerence**
Packing Code - 00 (Loose in Box), 01, 02, 31, 51 (Reel), 02 (Ammopack – axial), 32 (Ammopack – radial)

Technical Data & Packing Spec

Packing Specification

Fig. 1: On Reel (Plastic)
Packing code : 01, 31, 51

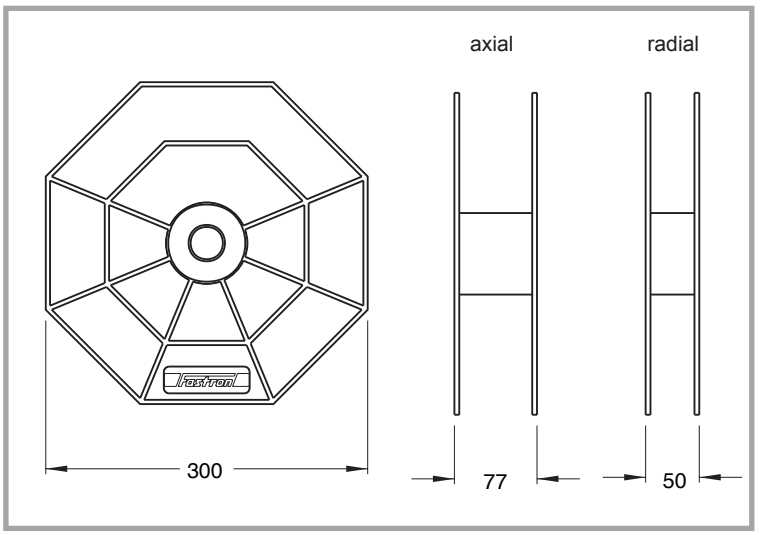


Fig. 2: Ammopack, axial
Packing code : 02

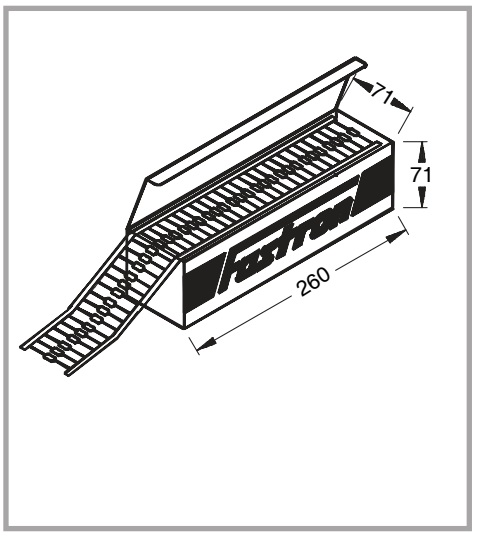
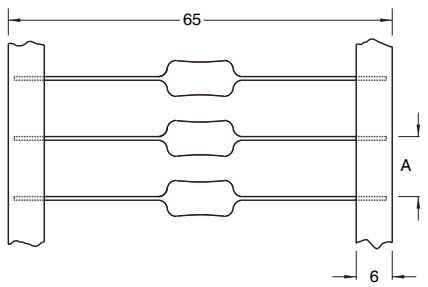
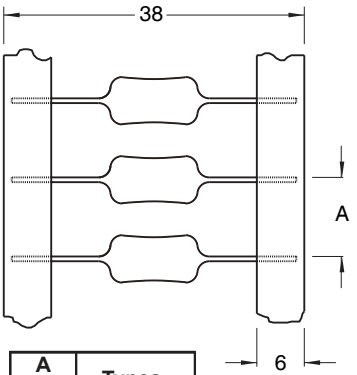


Fig. 3: Axial Standard Taping (65mm)
Packing code : 01, 02



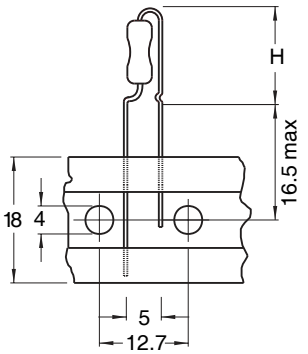
A (mm)	Types
5	standard
10	optional; standard HBCC, HCCC, VHBCC, XHBCC

Fig. 4: Axial Narrow Taping (38mm)
Packing code : 11, 12



A (mm)	Types
5	standard
10	optional

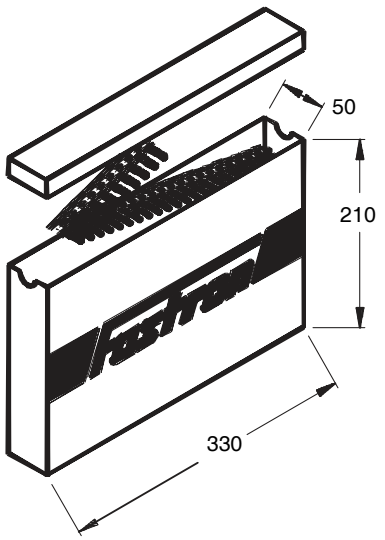
Fig. 5: Radial Taping
Packing code : 31, 32



without insulation	H max. (mm)
MICC, MICCS	12.5
SMCC	16
HBCC	16

Radial Taping for Avisert available on request

Fig. 6: Ammopack, radial
Packing code : 32



Packing Specification

Fig. 7: Axial, loose form

Packing code : 00

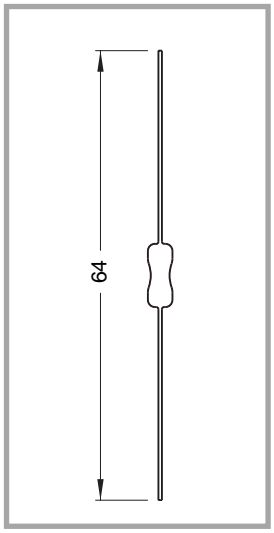
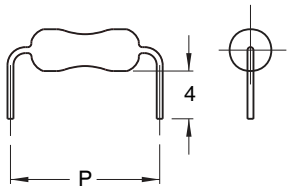


Fig. 8: Axial preformed

Packing code : 20

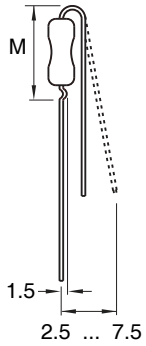


Dimensions	P (mm)
MICC,MICC/N	10.0
MICCS	10.0
SMCC,SMCC/N	12.5
MECC	15.0
LACC	17.5

Other pitch available on request

Fig. 9: Radial, (with kink) loose form

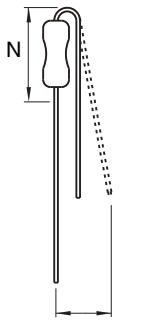
Packing code : 40



Dimensions	M max (mm)
MICC, MICC/N	13.0
SMCC, SMCC/N	15.5

Fig. 10: Radial, (without kink) loose form

Packing code : 50



Dimensions	N max (mm)
MICC, MICC/N	10.0
SMCC, SMCC/N	12.5