

Leaded Inductors (Fixed Choke Coils)

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

Applications

These components are suitable for decoupling and interference suppression.

Communication: RF blocking and filtering, e.g. 12 ~ 16 kHz blocking filter

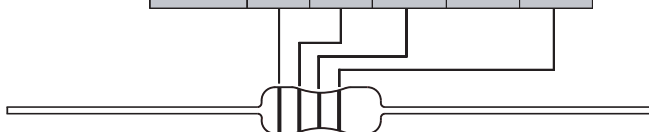
Others: Automotive electronics, electronic household appliances, entertainment electronics and lighting devices

Technical Data

L – Value (rated inductance)	Measured with Bode 100 Vector Network Analyzer at frequency f_L
Q – Factor (min)	Measured with Bode 100 Vector Network 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 I ₁ Current based on ambient temperature of 40°C and component temperature of max. 125°C I _{sat} 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 $\pm$ 5°C for 5 $\pm$ 0.5 seconds, min 90% solder coverage of metallization Standard: IEC 68-2-20 (Ta)
Resistance to Soldering Heat	Resistant to 260°C $\pm$ 5°C for 10 $\pm$ 1 seconds Standard: IEC 68-2-20 (Tb)
Resistance to Solvent	Resistant to Isopropyl alcohol for 5 $\pm$ 0.5 minutes at 23°C $\pm$ 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
Tensile Strength of Leads (Pull Test)	Components withstand a pulling force of 10N for 10 $\pm$ 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 Reference according to IEC 60062 :

L (μ H)	Nominal Inductance (μ H)				Tol. **
	Band 1	Band 2	Band 3	Band 4	
Gold	---	---	x 0.1	$\pm$ 5 %	J
Silver	---	---	x0.01	$\pm$ 10 %	K
Clear	---	---	---	$\pm$ 20 %	M
Black	---	0	x1	---	---
Brown	1	1	x10	$\pm$ 1 %	F
Red	2	2	x100	$\pm$ 2 %	G
Orange	3	3	x1000	$\pm$ 3 %	A
Yellow	4	4	x10000	---	---
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-01

Core Type - Ferrite, Phenolic

Tolerances - F (1%), G (2%), H (2.5%), A (3%), J (5%), K (10%), M (20%)

Packing Code

Packing Form	Taped / Reel	Taped / Ammpack
Axial	01	02
Radial	31, 51	32

Packing Specification

Fig. 1: On Reel (Plastic)

Packing code : 01, 31, 51

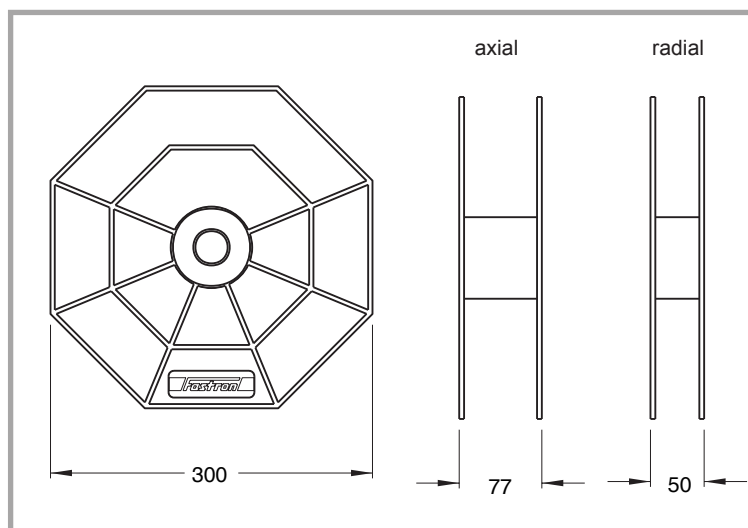


Fig. 2: Ammopack, axial

Packing code : 02

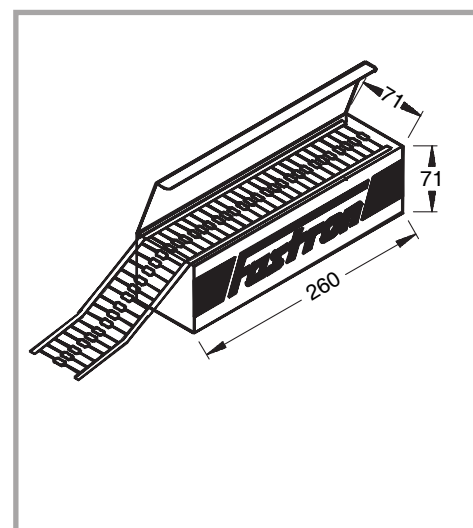


Fig. 3: Axial Standard Taping (65mm)

Packing code : 01, 02

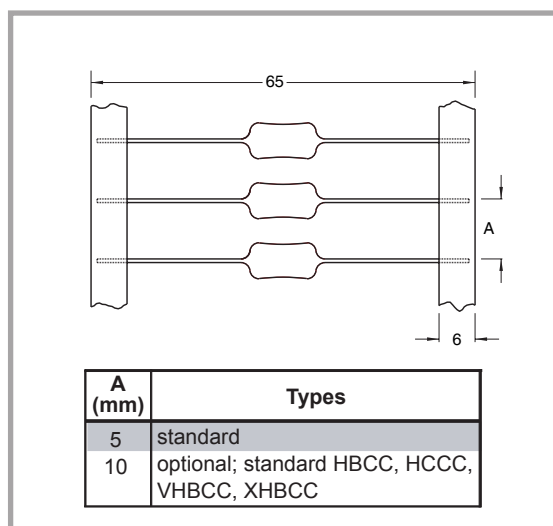


Fig. 4: Axial Narrow Taping (38mm)

Packing code : 11, 12

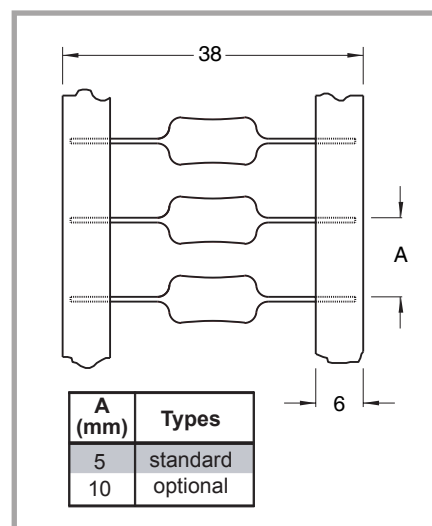


Fig. 5: Radial Taping

Packing code : 31, 32

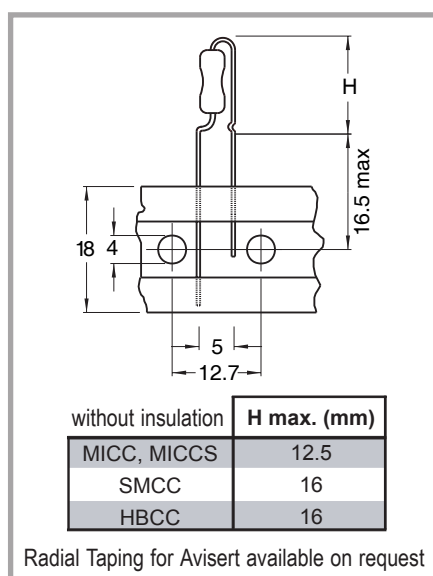
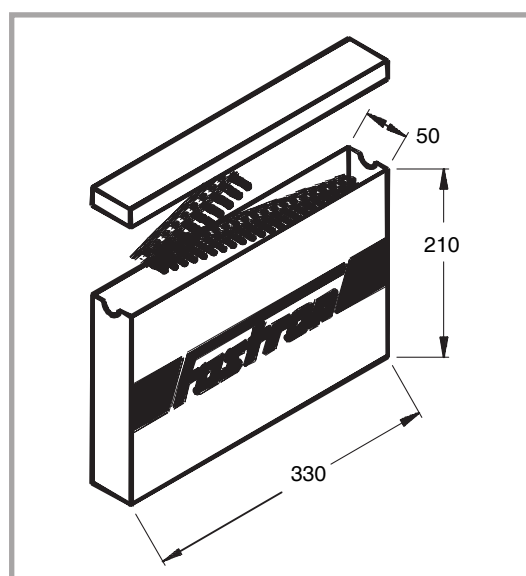


Fig. 6: Ammopack, radial

Packing code : 32



Packing
Specification

Fig. 7: Axial, loose form
Packing code : 00

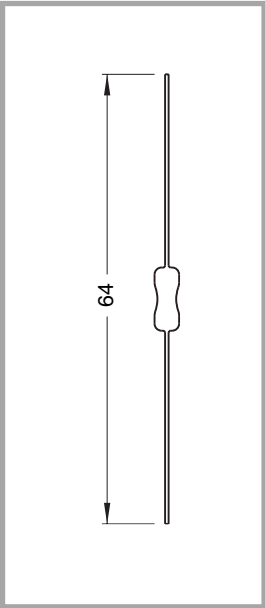


Fig. 8: Axial preformed
Packing code : 20

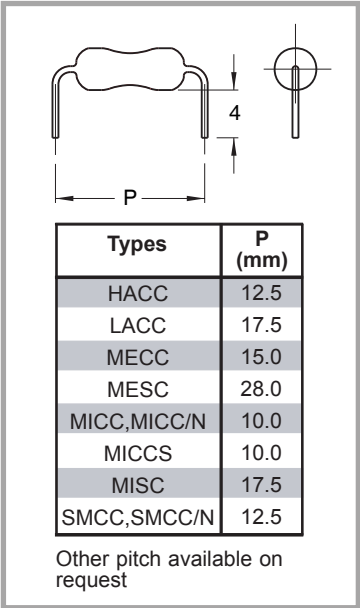


Fig. 9: Radial, (with kink) loose form
Packing code : 40

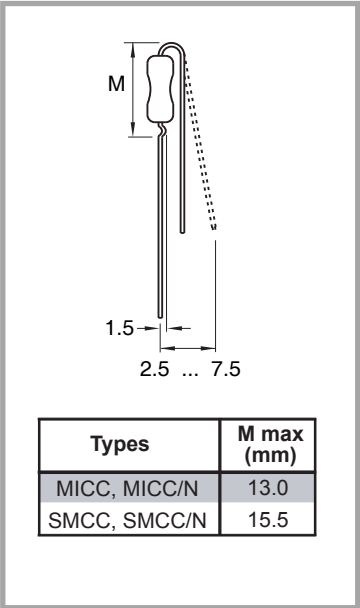
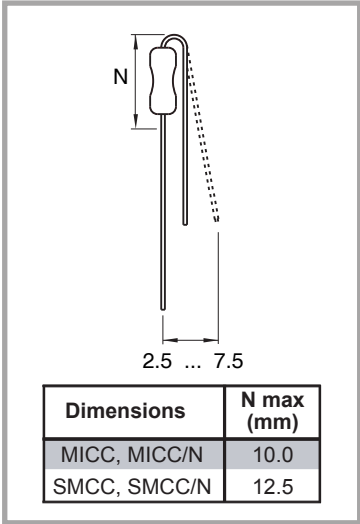


Fig. 10: Radial, (without kink) loose form
Packing code : 50



Packing Specification