

Leaded Inductors (Fixed Choke Coils)

FASTRON leaded inductors come with a very wide inductance range from 0.1μH to 100000μH 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.

Others: Automotive electronics, electronic household appliances, entertainment electronics, lighting devices, medical applications.

Technical Data

L – Value (rated inductance)	Measured with Bode 100 Vector Network Analyzer or equivalent at frequency f_L
Q – Factor (min)	Measured with Bode 100 Vector Network Analyzer or equivalent at frequency f_Q
SRF (min)	Measured with HP 8753ES Network Analyzer or equivalent
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 (including 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
Tensile Strength of Leads (Pull Test)	Components withstand a pulling force of minimum 10N for 10 ± 1 second For MICC, MICCS (lead diameter 0.5mm): Components withstand a pulling force of minimum 5N for 10 ± 1 second Both values in accordance with IEC 60068-2-21 (Ua1)
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 (μH)	Nominal Inductance (μH)				Tol. **
Code	Band 1	Band 2	Band 3	Band 4	code
Gold	---	---	x 0.1	± 5 %	J
Silver	---	---	x0.01	± 10 %	K
Clear	---	---	---	± 20 %	M
Black	---	0	x1	---	---
Brown	1	1	x10	± 1 %	F
Red	2	2	x100	± 2 %	G
Orange	3	3	x1000	± 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)

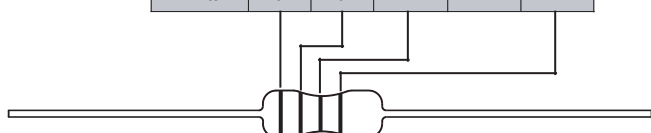
↓
SMCC-180K-01

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 / Ammo pack
Axial	01	02
Radial	31	32



Packing Specification

Fig. 1: On Reel (Plastic)

Packing code: 01, 31

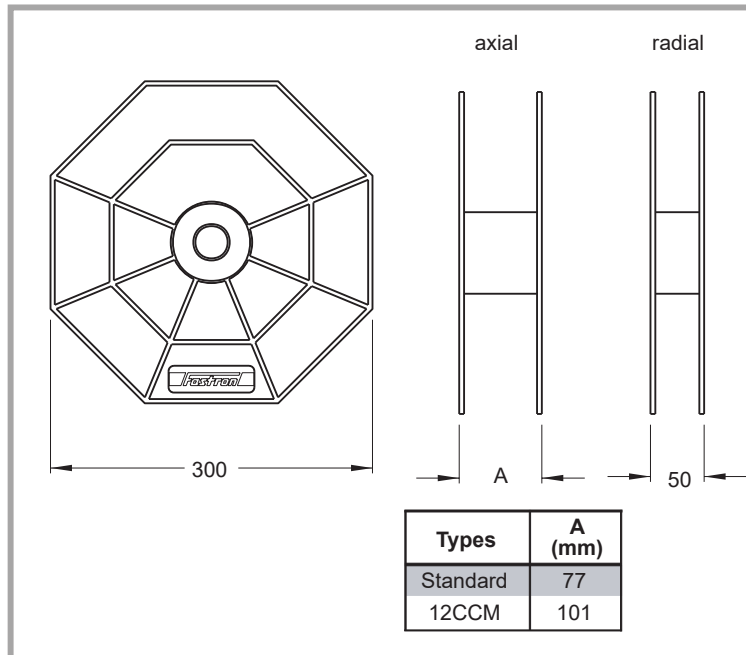


Fig. 2: Ammo pack, axial

Packing code: 02

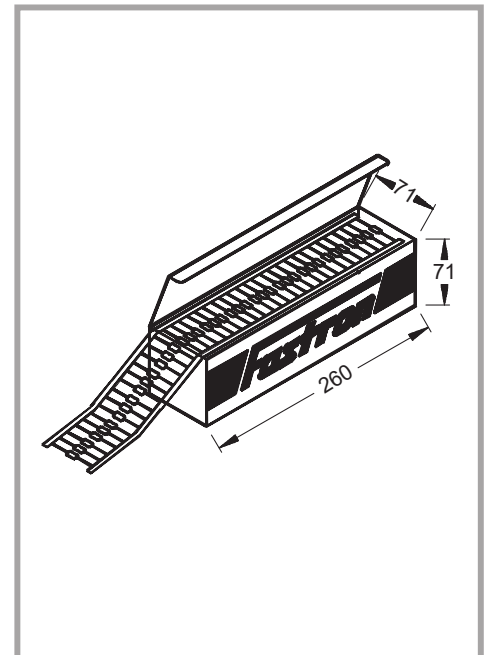


Fig. 3: Axial Standard Taping

Packing code: 01, 02

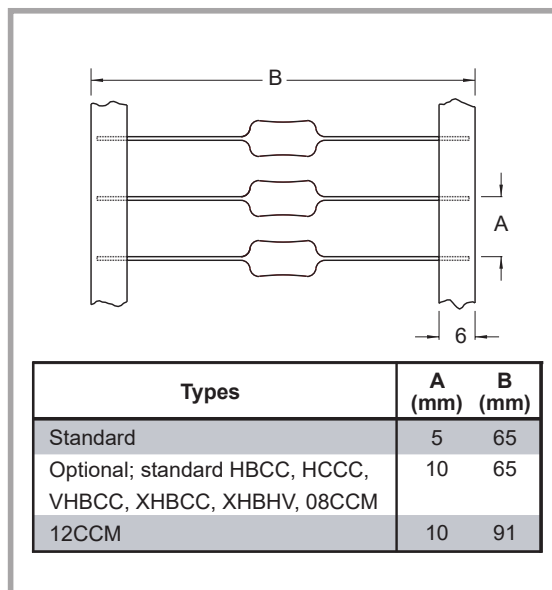
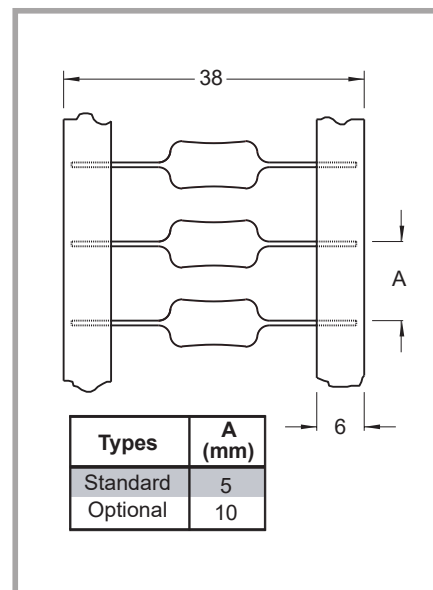


Fig. 4: Axial Narrow Taping (38mm)

Packing code: 11, 12



Packing Specification

Fig. 5: Radial Taping

Packing code: 31, 32

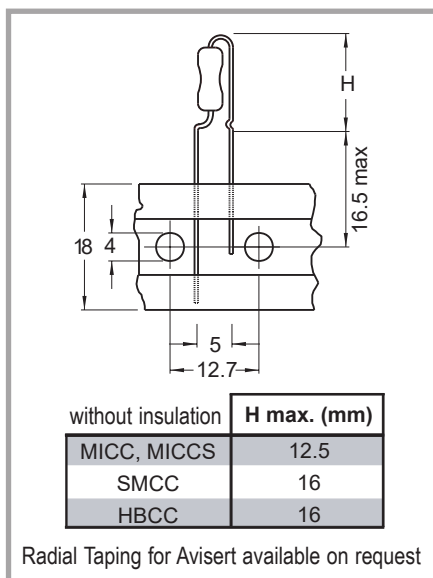


Fig. 6: Ammo pack, radial

Packing code: 32

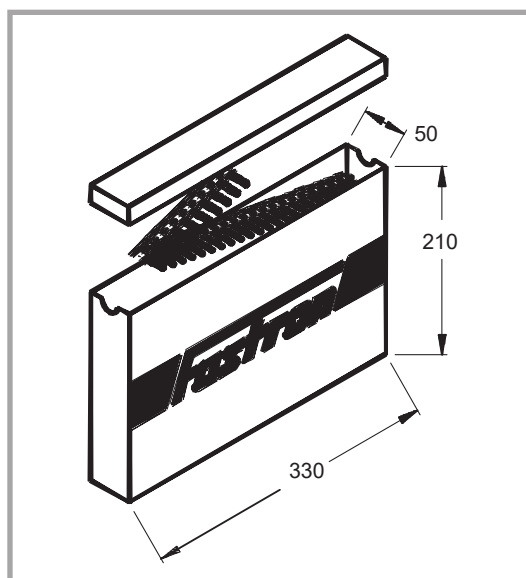
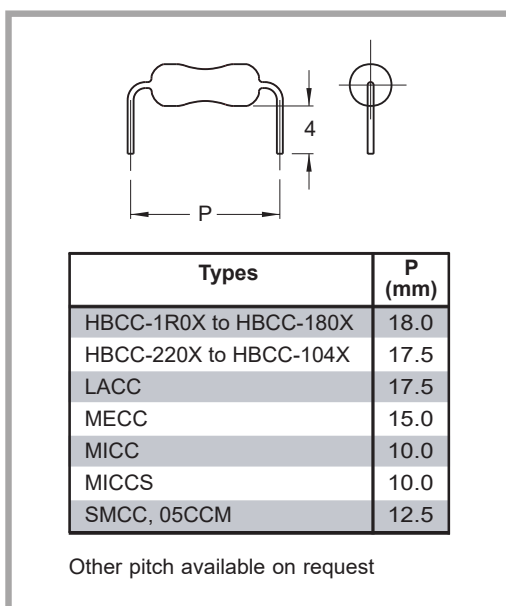


Fig. 7: Axial preformed

Packing code: 20



FASTRON's Component Key Characteristics



Approved according to AEC-Q200



Approved according to AEC-Q200 with High Temperature



Suitable for High Temperature



Part is RoHS conform and Halogen free



Mechanical Shock and Vibration Proof



Designed for High Q-values



Exceptionally High Q-values



Optimized for High Currents



Optimized for High Voltages