

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 |

Technical Data

Colour Coding Reference according to IEC 60062 :

| L (µH) | Nominal Inductance (µH) | | | | Tol. ** |
|--------|-------------------------|--------|--------|--------|---------|
| | Band 1 | Band 2 | Band 3 | Band 4 | |
| 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

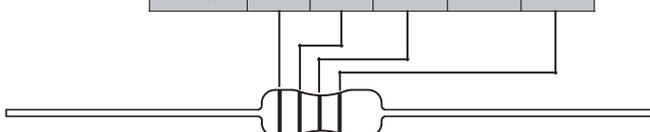
Example: SMCC-180X-YY

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

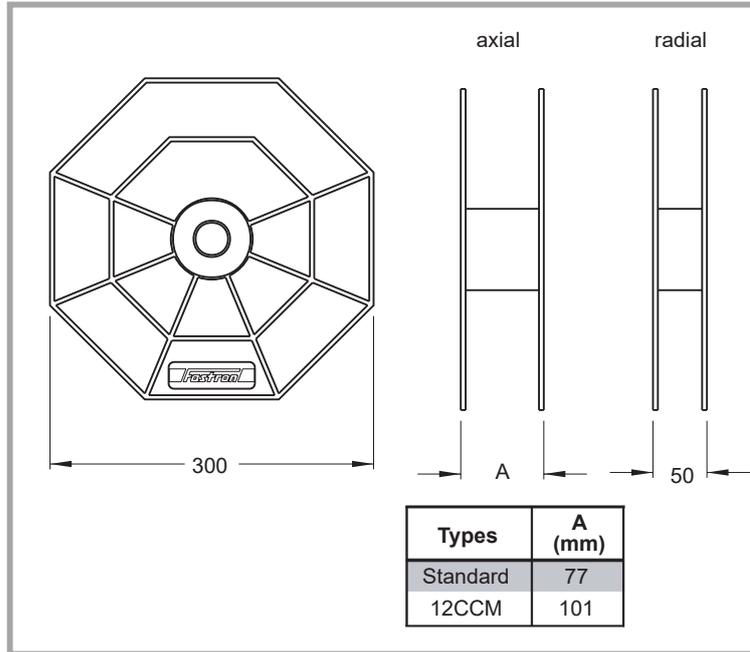


Fig. 2: Ammo pack, axial

Packing code: 02

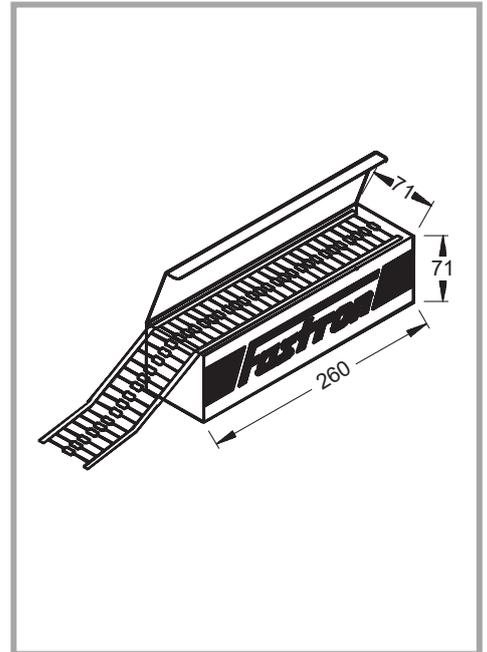


Fig. 3: Axial Standard Taping

Packing code: 01, 02

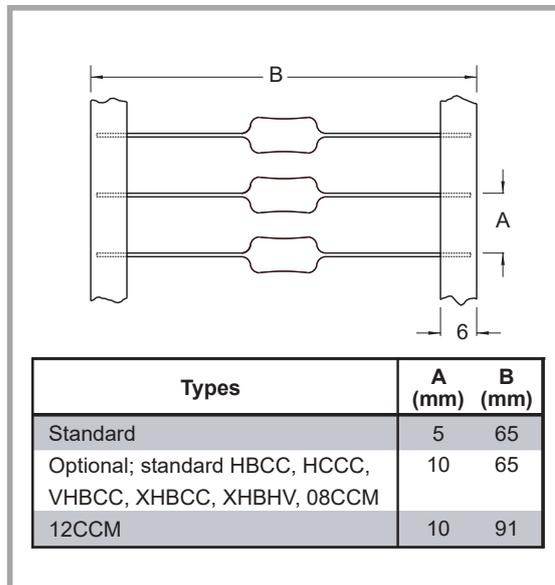
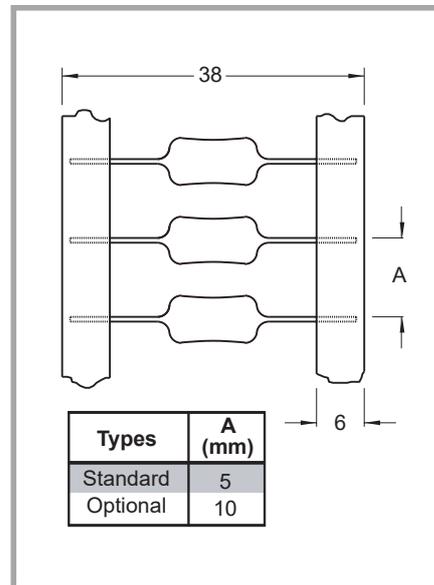


Fig. 4: Axial Narrow Taping (38mm)

Packing code: 11, 12



Packing Specification

Fig. 5: Radial Taping

Packing code: 31, 32

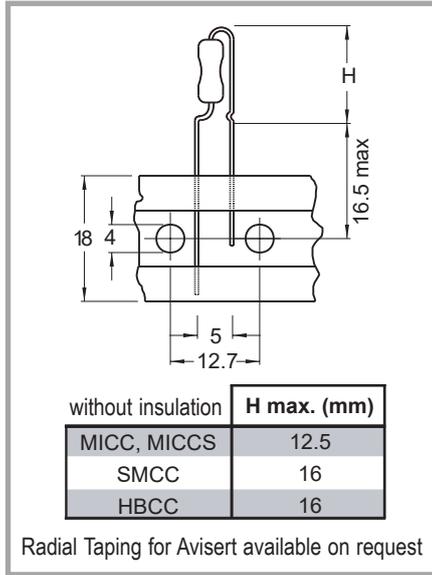


Fig. 6: Ammo pack, radial

Packing code: 32

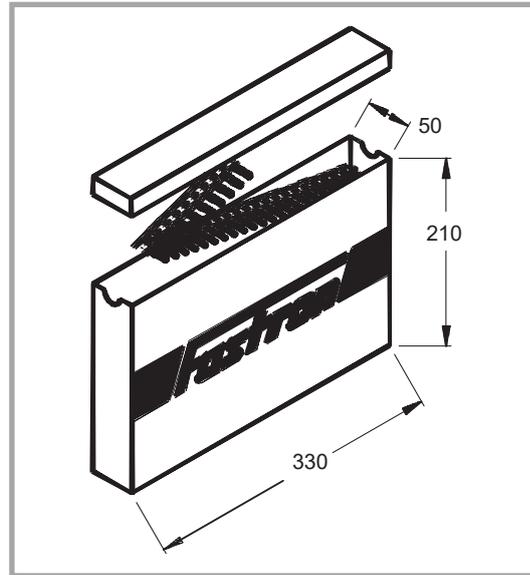
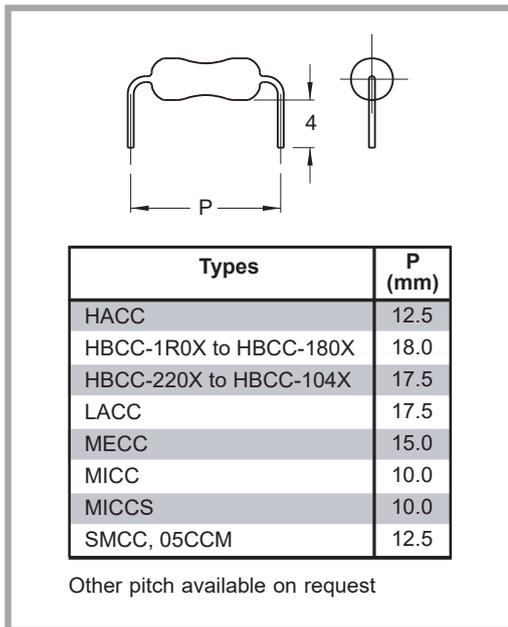


Fig. 7: Axial preformed

Packing code: 20



Packing Specification

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