Plugable Inductors (Pin Type Coils)

FASTRON plugable inductors offer a wide range of inductance values from 1µH to 150 000µH, a high Q and also suitable for high currents and high voltages. They come in shielded, tube and cap versions able to protect the winding. They are available in reel packing and ammopack.

Applications

Applied in DC-DC converters and all types of electronic instruments, such as digital amplifier LPF and signal filtering applications.

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)	≥ 40 MHz measured with HP8753ES Network Analyzer < 40 MHz measured with Bode 100 Vector 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 Isat Current based on inductivity drop of 10% related to the unloaded inductivity
Operating Temperature	For plugable inductors : -55°C to +125°C (including component self-heating) For 07HCP, 07HVP, 09HCP, 09HVP : -55°C to +150°C (including component self-heating) For 07HCP/T, 07HVP/T, 09HCP/T, 09HVP/T : -55°C to +125°C (including component self-heating)
Recommended soldering method	Wave
Moisture Sensitivity Levels (MSL)	MSL Level 1, indicating unlimited floor life at ≤ 30°C / 85% relative humidity
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: +85°C (plugable, 07HCP/T, 07HVP/T, 09HCP/T, 09HVP/T) and +150°C (07HCP, 07HVP, 09HCP, 09HVP) for 96 hours IEC 60068-2-78 for Humidity test: 40°C at RH 95% for 4 days
Thermal Shock Test	Temperature cycle : For plugable, 07HCP/T, 07HVP/T,09HCP/T, 09HVP/T : -55°C to +85°C to -55°C : For 07HCP, 07HVP, 09HCP, 09HVP : -55°C to +150°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 second For 05HCP, 05HCP/T : Components withstand a pulling force of 5N for 10 ± 1 second 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

Remarks : Above technical data is for non-shielded type only.

Ordering Code

Example: 09P-101X-YY

09P - **101** **X** - **YY** → **09P-101K-51**

(Model) (Inductance Value) (Tolerance) (Packing Code)

Core Type - Ferrite
Tolerances - J (5%), K (10%), M (20%)
Packing Code - 50 (Loose in Box) / (Tray / Box), 51 (Taped / Reel)

Plugable Inductors (Pin Type Coils)

Packing Specification **Reel Taping**
Packing code : 51

Fig 1

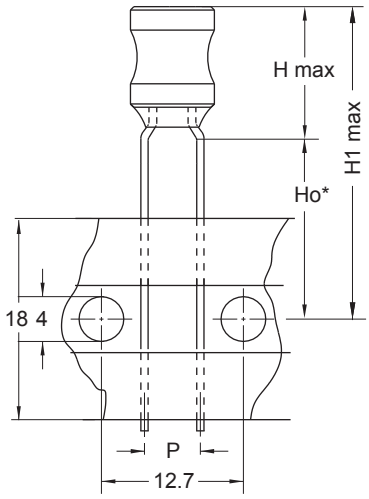


Fig 2

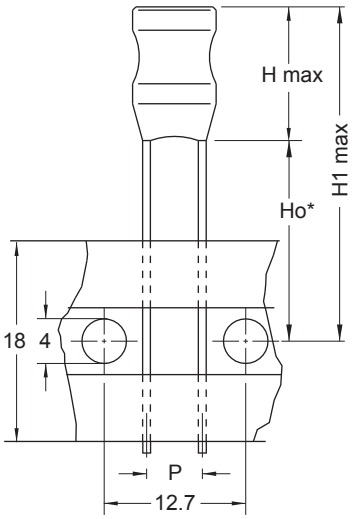


Fig 3

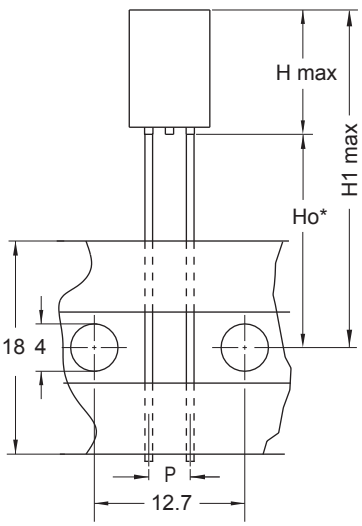


Fig 4

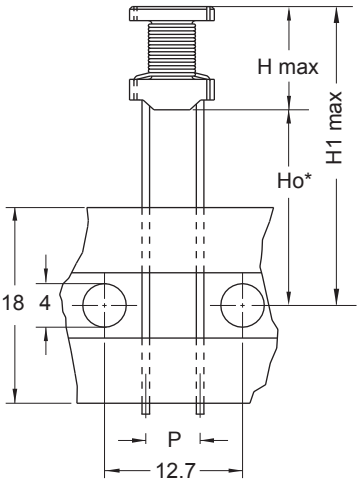
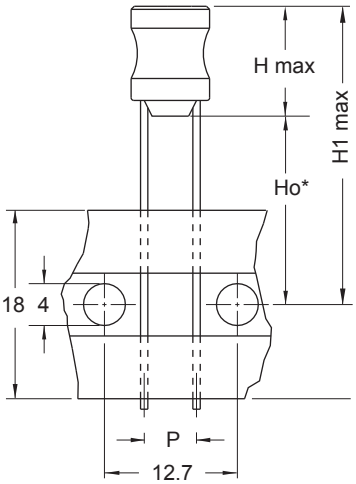


Fig 5



*according to IEC 286

Series	H max	Ho	H1 max	P	Fig
07P	12.5	16	28	5	1
07P/F	10.5	18	32.2	3.5	3
09P	12.5	18	32.2	5	2
09P/F	13.4	18	32.2	5	3
07HCP & 07HVP	10	18	32.2	5	4
07HCP/T & 07HVP/T	10.5	18	32.2	5	5
11P / 11PHC	15	18	34	5	5
05HCP	7.5	18	28.5	2.5	4
05HCP/T	7.5	18	28.5	2.5	5