

## Plugable Inductors (Pin Type Coils)

FASTRON plugable inductors offer a wide range of inductance values from 1 $\mu$ H to 150 000 $\mu$ H, 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 ammpack.

**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)                             | $\geq 40$ MHz measured with HP8753ES Network Analyzer<br>< 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<br>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)<br>For 07HCP, 07HVP, 09HCP, 09HVP : -55°C to +150°C (including component self-heating)<br>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 $\leq 30^\circ\text{C}$ / 85% relative humidity   |
| Solderability                         | Using lead free solder (Sn 99.9) at $260^\circ\text{C} \pm 5^\circ\text{C}$ for $5 \pm 0.5$ seconds, min 90% solder coverage of metallization<br>Standard: IEC 68-2-20 (Ta)   |
| Resistance to Soldering Heat          | Resistant to $260^\circ\text{C} \pm 5^\circ\text{C}$ for $10 \pm 1$ seconds<br>Standard: IEC 68-2-20 (Tb)   |
| Resistance to Solvent                 | Resistant to Isopropyl alcohol for $5 \pm 0.5$ minutes at $23^\circ\text{C} \pm 5^\circ\text{C}$<br>Standard: IEC 68-2-45   |
| Climatic Test                         | Defined by the following standards :<br>IEC 68-2-1 for Cold test: -55°C for 96 hours<br>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<br>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<br>: For 07HCP, 07HVP, 09HCP, 09HVP : -55°C to +150°C to -55°C<br>Max/Min temperature duration: 15 minutes<br>Temperature transition duration: 5 minutes<br>Cycles: 25<br>Standard: MIL-STD-202G |
| Tensile Strength of Leads (Pull Test) | Components withstand a pulling force of 10N for $10 \pm 1$ seconds<br>IEC 60068-2-21 (Ua1)  |
| Mechanical Shock                      | Mil-Std 202 Method 213<br>Condition C<br>3 axis, 6 times, total 18 shocks<br>100 G, 6 ms, half-sine   |
| Vibration                             | Mil-Std 202 Method 204<br>20 mins at 5G<br>10 Hz to 2000 Hz<br>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%)

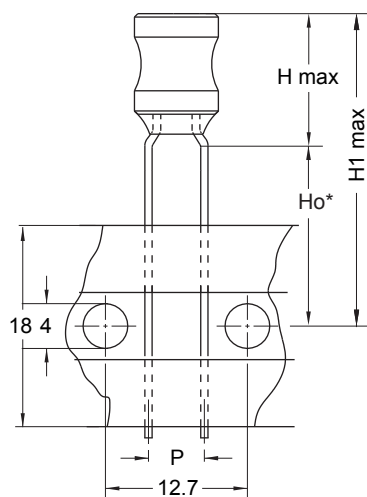
Packing Code - 50 (Loose in Box) / (Tray / Box), 51 (Taped / Reel)

## Plugable Inductors (Pin Type Coils)

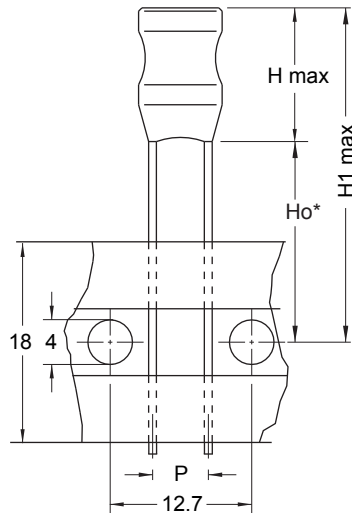
Packing  
Specification

Reel Taping  
Packing code : 51

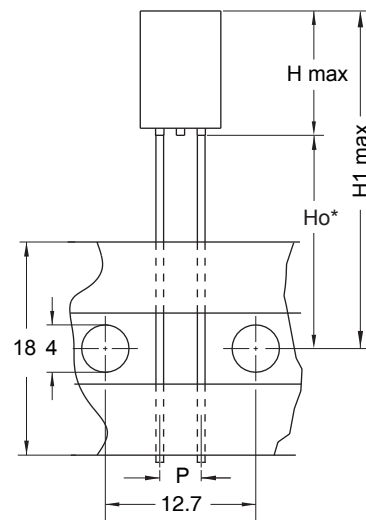
**Fig 1**



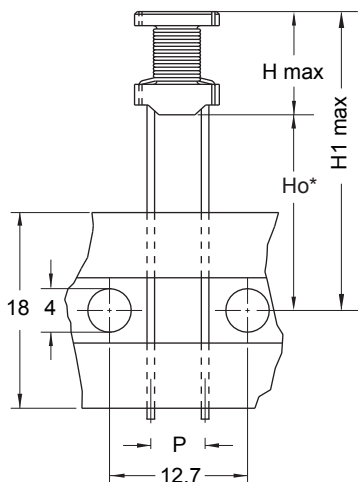
**Fig 2**



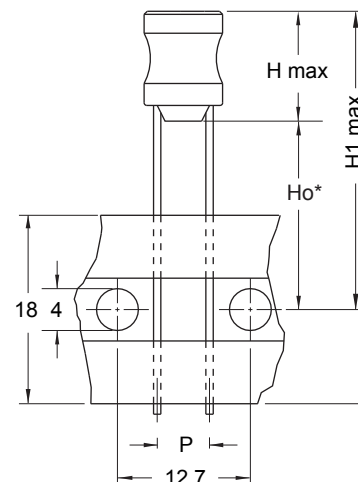
**Fig 3**



**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   | 2   |