High Frequency Transformer, HFT

DCC no. HFC-EP, HFCPQ series released: 2021.09.26

These four magnetic transformers (EP13, EP17, EP20, and PQ20) are commonly used components in smart meters. Their function is to measure current and voltage and convert them into corresponding electrical signals. These electrical signals can be used to calculate parameters such as power usage, voltage quality, and power factor, as well as to implement functions such as power regulation, load management, and fault detection.



XCX company is a professional manufacturer of magnetic components, providing transformers of various specifications and models, mainly used in various smart meters and power systems. XCX transformers adopt high-quality magnetic materials and advanced production technology, featuring high precision, high stability and high efficiency, and can maintain good performance in complex electromagnetic environments. XCX transformers also have larger inductance and saturation current, which can adapt to higher loads and complex power systems.



♦ Product introduction

XCX-HFT (High Frequency Transformer, hereinafter referred to as HFT), including EP13, EP17, EP20 and PQ20 series, commonly used smart meter transformer models, excellent electrical characteristics, such as low leakage high withstand voltage, inductance, dielectric strength and stable temperature performance. In smart meter applications, these products can be used for energy metering and voltage and current measurement. In addition, they can also be used in various types of power supplies and inverters, such as switching power supplies, frequency converters, converters.

Product Characteristics

- Can be customized.
- Can be used in SMPS (Switched-Mode Power Supply).
- Excellent transmission characteristics.
- Low loss, high frequency 0~1 MHz.
- High-quality automatic production.
- Magnetic shielding and EMI minimization.
- Working temperature range: -40° C ~+125 $^{\circ}$ C.
- Comply with RoHS, REACH requirements.

♦ Product application

HFT is mainly used in power system monitoring and protection, it can measure and monitor the current in the circuit for analysis and control. The following are several application introductions of HFT:

SMPS: HFT is often used in the transformer and filter of switching power supply to ensure the stability of the power supply.





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- Smart meters: HFT is used in current sensors and voltage converters in smart meters to achieve energy measurement, monitoring and management efficiency.
- LED driver: HFT is used in the transformer and inductance components of the LED lamp driver to achieve efficient energy conversion and guarantee circuit stability.
- Communication equipment: HFT is used in isolation transformers and couplers in communication equipment to realize signal isolation and transmission, and improve signal stability and reliability.
- Automotive electronics: HFT is used in ignition coils and DC-DC converters in automotive electronics to achieve efficient power conversion and guarantee circuit stability.





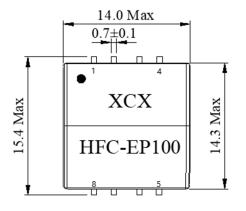


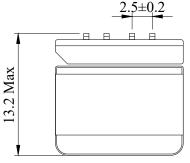


Product specifications

| P/N | Package | L*W*H(mm) | Inductance(mH) | Turns ratio | Range(kHz) | Hi-pot(Vac) |
|--------------|---------|----------------|----------------|-------------|------------|-------------|
| HFC-EP100-00 | SMT | 15.4*15.0*15.0 | 1.00 | 1:1±3% | 1K-100kHz | customized |
| HFC-EP100-01 | SMT | 15.4*14.0*13.2 | 1.00 | 1:1±3% | 1K-100kHz | customized |
| HFC-EP250-00 | DIP | 19.5*25.0*19.0 | 2.50 | customized | 1K-100kHz | customized |
| HFC-EP300-00 | DIP | 31.6*30.3*26.0 | 3.00 | customized | 1K-100kHz | customized |
| HFC-PQ400-00 | DIP | 24.2*23.7*26.7 | 4.00 | customized | 1K-100kHz | customized |

◆ Dimensions (HFC-EP100/ unit: mm)







Schematic

