



ISO9001-2015  
Certificate No:672022020207194

No.T52210311961TC Date;OCT 12,2022 No.T52310270397TC Date;apr 15,2023

# 承認書

## SPECIFICATION FOR APPROVAL

客户名稱  
CUSTOMER

品名規格  
DESCRIPTION T25x16x10

客户料號  
CUS. P/N

提出日期  
DATE 2025.05.12

出圖 RDAWING		
發行 MADE	復核 CHECKED	確認 APPROVED
李光赫	方煜镗	梁琼
销售部：张 丽		

承 認 CUSTOMER APPROVE

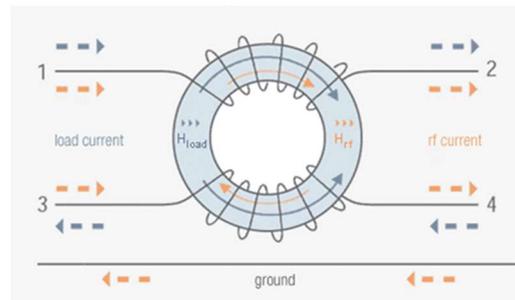


- 1, Part No.: EMC-C0025-01    Version: 01
- 2, Designed For: Common mode Core for EMC
- 3, Core Material Type: EMC1K107B    Fe about 72.5%, Si&B about 22% Cu,<1% Nb 3% and other alloying element
- 4, Encapsulation type: Protect by a plastic shell, and add silicon rubber to fix the core
- 5, Thickness of strip:16(+2/-2)um
- 6, Curie point temperature for magnetic material at about 550°C
- 7, Bare Core Physical characteristics (25\*16\*10)
  - Outer Diameter 25mm
  - Inner Diameter 16mm
  - Height 10mm
  - Across sectional effect Area  $A_{Fe}=0.344\text{cm}^2$
  - Core Effective Path Length  $L_{Fe}=6.43\text{cm}$
  - Weight  $M_{Fe}=16.3\text{g}\pm 1.5\text{g}$
- 8, Case: Made with PBT, operating temperature range (-40°C~105°C)
- 9, Relative permeability
  - $\mu_i@10\text{kHz}$  96000
  - $\mu_i@100\text{kHz}$  36000
- 10, Single turn inductor value(Quality control, full tested during producing)
  - $AI@10\text{kHz}$  67 uH -25%+45%
  - $AI@100\text{kHz}$  24 uH -25%+45%
  - Set test voltage 1V

11, High permeability nanocrystal core enable very high impedance. However, big common mode current or leakage current can easily caused the core go to saturation status. Next picture showed the principle.

So the DC bias take to consider the saturation behavior of common mode. Actually, the operating magnetic field density should be lower than 70%  $B_s$  (about 1.2Ts) continue. Shortly high  $di/dt$  can caused the  $B_{max}$  over 70%  $B_s$ , at this time, the frequency should be take to consider.

$I_{cm}$  of EMC-C0025-01 @10KHZ about 0.45 Ampere, @100KHZ about 1.2 Amperes



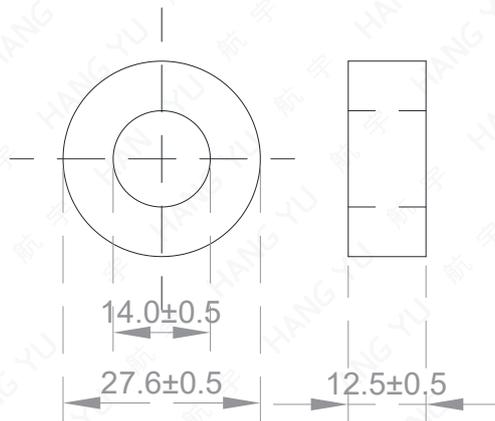
## 12, Outline Dimensions

Outer Diameter  $27.6\pm 0.5\text{mm}$

Inner Diameter  $14.0\pm 0.5\text{mm}$

Height  $12.5\pm 0.5\text{mm}$

## 13, Outline Drawing



## 14, Magnetical test (AQL 0,65 outgoing quality level)

Condition: Test of AL-value in series mode, Set test voltage 0.3V

AI@10kHz 48.5 uH min without DC bias

AI@100kHz 20 uH min without DC bias

## 15, Typical permeability vs frequency

NA

Part No.	Version	Author	Checked	Approved	Release data
EMC-C0025-01	01	Li guanghe	Fang yuliu	Ling qiong	2025.8.14