

NFC Antenna Module

近場通訊天線模組

INTRODUCTION 產品介紹

當機構中的金屬面靠近環形天線時，金屬面上產生的渦電流會降低天線的電感值及 Q 值，應用此一近場通訊天線模組可隔離機構中金屬對環形天線的影響。

The benefit of this NFC antenna module is to shield the loop antenna against the influence of metal environment. If metal is placed very close to the antenna, the alternating magnetic field generates eddy currents in the metal and following the inductance and quality factor is decreased.

FEATURE 特色

1. With various ferrimagnetic material, outstanding RF performance for maximum operating distance.
應用多種鐵氧體磁性材料，最佳化射頻特性與通訊距離。
2. Shielding antenna module against the influence of influence of metal plane.
隔離機構中金屬面對天線模組之影響。
3. Customized antenna module shape, dimensions and matching circuit design for easy integration of all 13.56MHz NFC applications.
設計 13.56MHz 近場通訊之客製化天線模組形狀、尺寸及匹配電路。

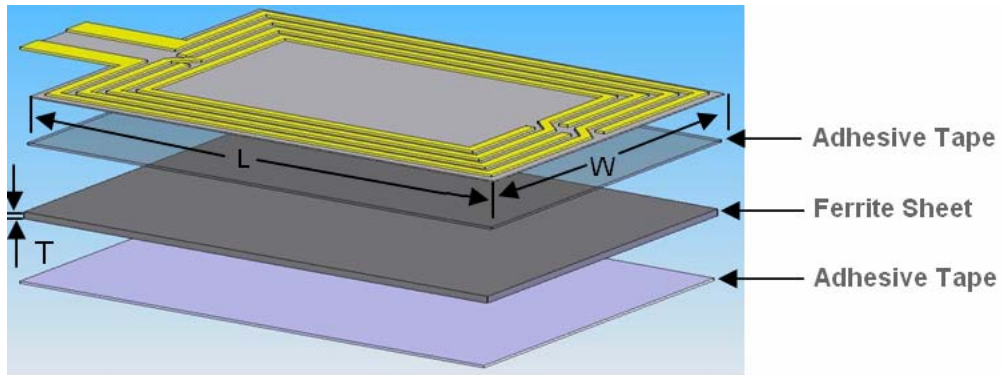
APPLICATION 適用產品

1. Smart phone, Tablet PC and Notebook with NFC function.
內建近場通訊功能之智慧型手機、平板電腦及筆記型電腦。
2. RFID Tags and RFID Reader/Writer units.
無線射頻識別標籤及讀寫設備。
3. Contactless smart card.
非接觸式智慧卡。
4. Wireless charging for mobile phone and battery powered handheld electronic electronics.
手持式電子設備及行動電話之無線充電。

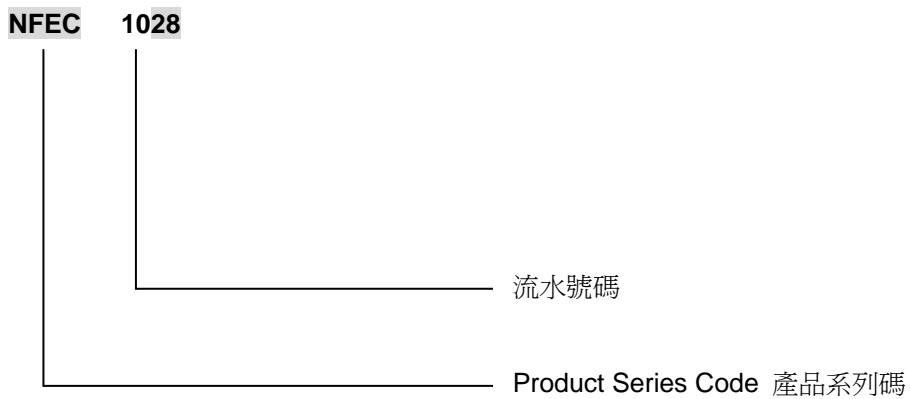
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STRUCTURE 結構



PART NUMBER SYSTEM 編碼系統



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NFEC Series 系列

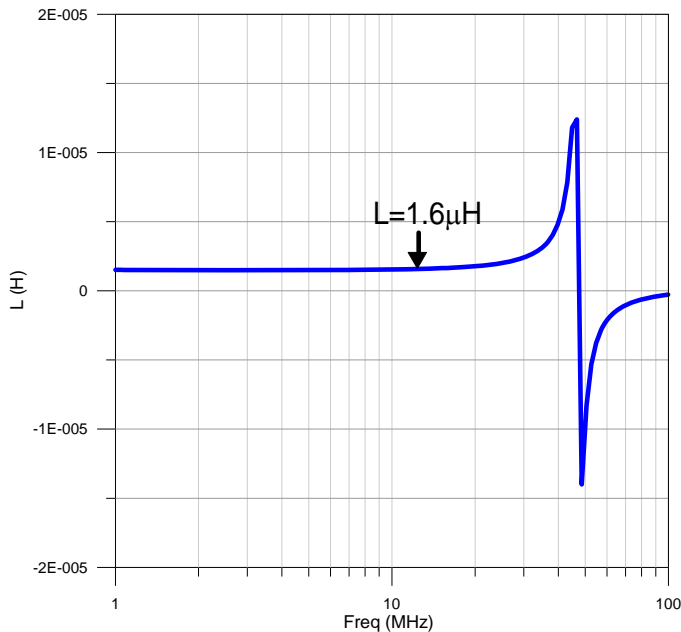
Characteristics 電器特性

Part Number 產品料號	Dimensions 邊長 L×W 長×寬 (mm)	Ferrite Sheet Thickness 鐵氧體貼片厚度 (mm)	Total Thickness 總厚度 (mm)	Inductance With Metal Impact 緊鄰金屬面電感值 @13.56MHz (μH)	Q With Metal Impact 緊鄰金屬面 Q 值 @13.56MHz	Operating Temperature Range (°C) 操作溫度範圍
NFEC1028	50×40	0.16	0.4	1.29 (Typ.)	37 (Typ.)	-40 to +85
NFEC1029	50×30	0.08	0.32	1.25 (Typ.)	35 (Typ.)	-40 to +85
NFEC1036	53.95×28.45	0.12	0.29	0.89 (Typ.)	32 (Typ.)	-40 to +85
NFEC1041	89×11	0.08	0.15	0.57 (Typ.)	29 (Typ.)	-40 to +85
NFEC1042	61×61	0.08	0.19	0.8 (Typ.)	31 (Typ.)	-40 to +85
NFEC1043	75×49	0.1	0.344	2.4 (Typ.)	41 (Typ.)	-40 to +85
Customizing		0.1, 0.2				

* TEST EQUIPMENT: E4991A MATERIAL ANALYZER

量測儀器：E4991A 材料分析儀

Inductance vs. Frequency



Q vs. Frequency

