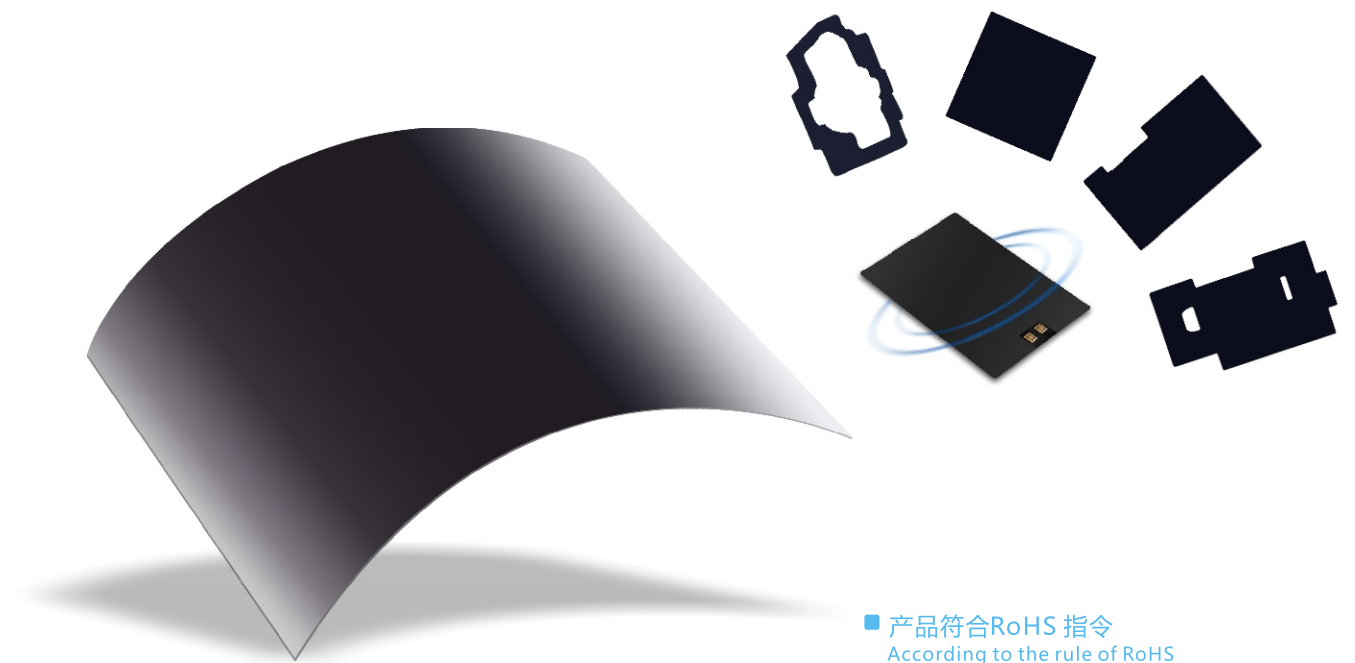




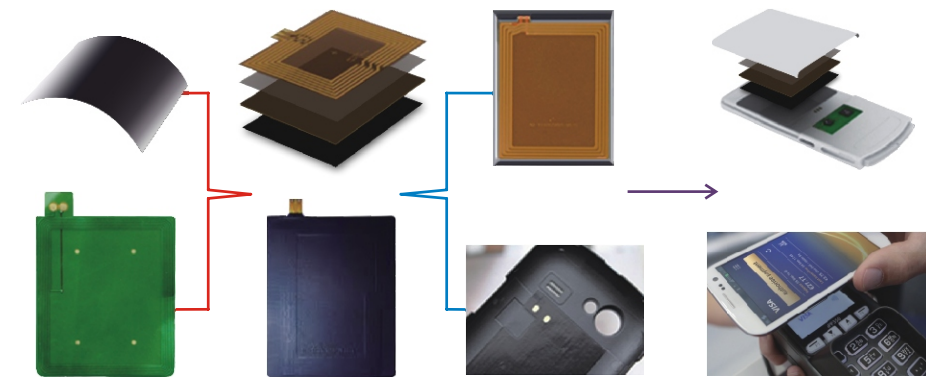
## Ferrite Sheet for NFC Antenna

NFC天线用铁氧体磁片



■ 产品符合RoHS 指令  
According to the rule of RoHS

### 产品应用 Applications



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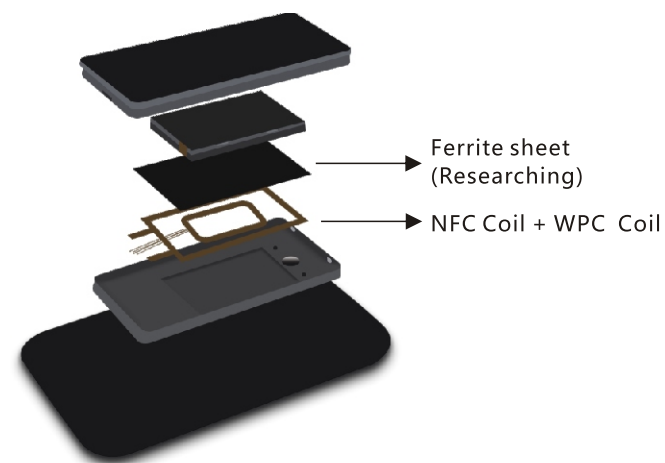
### 可靠性 试验

### Reliability Test

测试条件 TEST CONDITION		测试标准 REQUIREMENTS
高温测试 High Temperature Resistance	<ul style="list-style-type: none"> <li>● 温度: +85 ± 5°C</li> <li>● 时间: 96 hrs</li> <li>● Temperature: +85 ± 5°C</li> <li>● Time: 96 hrs</li> </ul>	<ul style="list-style-type: none"> <li>● 不能有可见的破裂</li> <li>● 磁导率变化±15%内</li> <li>● No visual damage</li> <li>● Permeability change with in ±15%</li> </ul>
低温测试 Low Temperature Resistance	<ul style="list-style-type: none"> <li>● 温度: -40 ± 5°C</li> <li>● 时间: 96 hrs</li> <li>● Temperature: -40 ± 5°C</li> <li>● Time: 96 hrs</li> </ul>	
热冲击(高低温) Thermal Shock (Temperature Cycle)	<ul style="list-style-type: none"> <li>● 循环: -40°C/60min ↔ +85°C/60min</li> <li>● 循环次数: 30</li> <li>● Cycle: -40°C/60min ↔ +85°C/60min</li> <li>● Number of cycle: 30</li> </ul>	
高温湿度测试 Humidity (Steady Condition)	<ul style="list-style-type: none"> <li>● 湿度: 80 % RH</li> <li>● 温度: +80 ± 3°C</li> <li>● 时间: 120 hrs</li> <li>● Humidity: 80 % RH</li> <li>● Temperature: +80 ± 3°C</li> <li>● Time: 120 hrs</li> </ul>	
备注 Remarks	<ul style="list-style-type: none"> <li>● 测试后室温放60分钟</li> <li>● Measure after left for 60 min. at room temperature</li> </ul>	

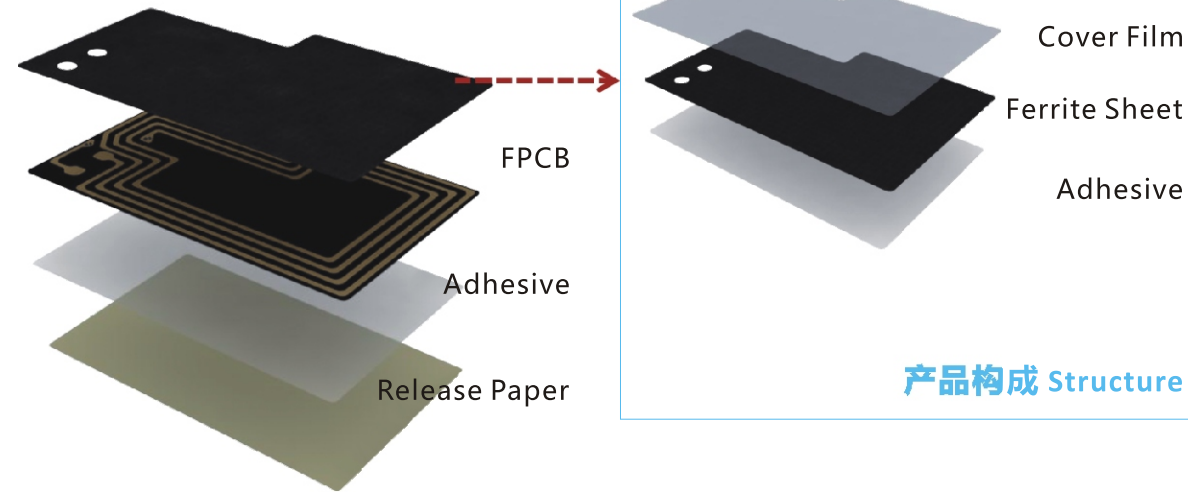
### Product Trends

### 产品趋势



注: 铁氧体磁片同时可以满足NFC和WPC的需求, 且互不干扰  
The ferrite sheet can meet the WPC & NFC at the same time, without interference.

## NFC天线 NFC Antenna



产品构成 Structure

### Features

### 磁片作用

- 通过增加天线的磁场强度  
有效增加感应距离  
Increased magnetic field
- 产品可以折弯  
Flexible
- 带有双面胶与组合体紧密贴合  
Suited for thin and compact devices

### Part Number

### 料号说明

$$\text{TRF 160} - \frac{I}{(1)} - \frac{L \times W \times T}{(2) \quad (3)}$$

- (1) : TDG铁氧体磁片代码/ TDG flexible ferrite sheet
- (2) : 形状规格代码/ Type
- (3) : 尺寸代码 (mm)/ Size (mm)

### Structure and Dimension (mm)

### 规格尺寸

Ferrite Thickness	Cover Film +Adhesive Thickness	Total Thickness	Sample Size L(mm)×W(mm)
0.06	0.01mm + 0.01mm	0.08	60×60 120×60
0.08	0.01mm + 0.01mm	0.10	
0.10	0.02mm + 0.02mm	0.14	
0.15	0.02mm + 0.02mm	0.19	
0.20	0.03mm + 0.03mm	0.26	

可根据客户设计尺寸提供模切产品  
Provide die-cutting products according to customer requirements

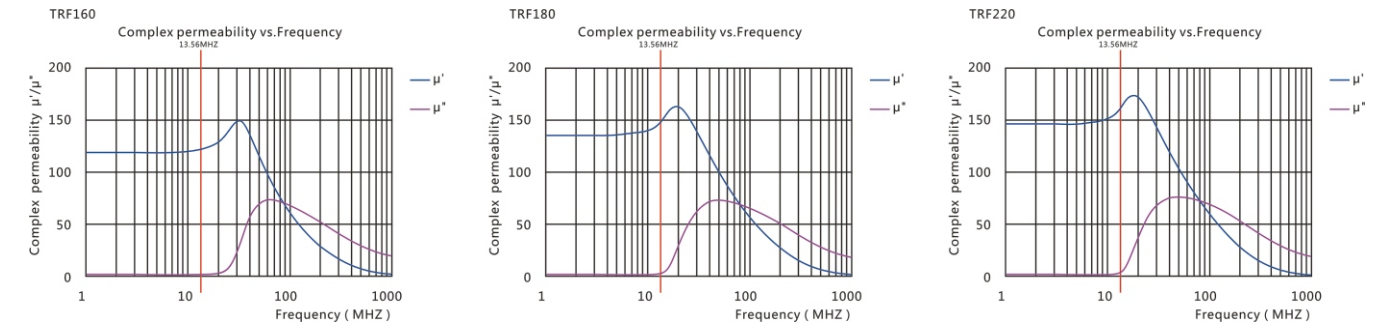
## 电磁特性

## Characteristic

### 基本特性 Typical Value

材料 Material	TRF160	TRF180	TRF220	TRF600
磁导率实部 $\mu'$ @13.56MHz Real part permeability $\mu'$ @13.56MHz	130±20%	150±20%	170±20%	220±15%
磁导率虚部 $\mu''$ @13.56MHz Imaginary part permeability $\mu''$ @13.56MHz	1.5	2.5	3.5	230
工作频率 Operating frequency	13.56MHz			
工作温度 Operating temperature	-40°C ~ 85°C			

### 磁导率特性曲线 Permeability Characteristic



### 测试条件 Measurement Condition

- 测试设备 : Agilent 4395A  
**Instrument:** Agilent 4395A
- 测试尺寸 : 在薄片样品上冲制外径为18mm, 内径为8mm的磁环  
**Measuring size:** outer diameter 18mm / inner diameter 8mm

