# PROPERTIES OF TAK MATERIALS (TAK 材質表)

(For High $\mu$	MATERIA	ALS) 鎳-	一鋅氧化磁	鐵粉系列(	高頻使用
IINIT/BI (A)	DLO	DLO	DLA	DIE	DLC
UNIT (単位)	DL2	DL3	DL4	DL5	DL6
	300	350	600	400	300
MHz(百萬赫兹)	0.1–2	0.1–2	0.1-2	0.1–2	0.1–2
Gauss(高斯)	2600	3500	3500	4000	4300
Gauss(高斯)	1500	1600	2000	2400	2400
Oersted(奥斯特)	0.9	0.7	0.5	0.3	0.3
°C(攝氏)	180	200	180	200	220
X10 <sup>-6</sup> /°C(攝氏)	10	25	30	25	25
X10 <sup>-6</sup>	20(0.1)	15(0.1)	12(0.1)	15(0.1)	20(0.1)
	100(2.0)	80(2.0)	80(2.0)	80(2.0)	90(2.0)
g/cm³(公克/立方公分)	4.8	4.8	4.9	4.9	4.8
Ω cm(歐姆)	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
	UNIT(單位)  MHz(百萬赫兹)  Gauss(高斯)  Gauss(高斯)  Oersted(奧斯特)  °C(攝氏)  X10-6/°C(攝氏)  X10-6  g/cm³(公克/立方公分)	UNIT(單位) DL2 300  MHz(百萬赫兹) 0.1-2  Gauss(高斯) 2600  Gauss(高斯) 1500  Oersted(奥斯特) 0.9  °C(攝氏) 180  X10-6/°C(攝氏) 10  X10-6 20(0.1) 100(2.0)  g/cm³(公克/立方公分) 4.8	UNIT(單位) DL2 DL3 300 350  MHz(百萬赫兹) 0.1-2 0.1-2  Gauss(高斯) 2600 3500  Gauss(高斯) 1500 1600  Oersted(奥斯特) 0.9 0.7  °C(攝氏) 180 200  X10-6/°C(攝氏) 10 25  X10-6 20(0.1) 15(0.1) 100(2.0) 80(2.0)  g/cm³(公克/立方公分) 4.8 4.8	UNIT(單位) DL2 DL3 DL4 300 350 600  MHz(百萬赫兹) 0.1-2 0.1-2 0.1-2  Gauss(高斯) 2600 3500 3500  Gauss(高斯) 1500 1600 2000  Oersted(奥斯特) 0.9 0.7 0.5  °C(攝氏) 180 200 180  X10-6/°C(攝氏) 10 25 30  X10-6 20(0.1) 15(0.1) 12(0.1) 100(2.0) 80(2.0) 80(2.0)  g/cm³(公克/立方公分) 4.8 4.8 4.9	UNIT(單位) DL2 DL3 DL4 DL5 300 350 600 400  MHz(百萬赫兹) 0.1-2 0.1-2 0.1-2 0.1-2  Gauss(高斯) 2600 3500 3500 4000  Gauss(高斯) 1500 1600 2000 2400  Oersted(奥斯特) 0.9 0.7 0.5 0.3  OC(攝氏) 180 200 180 200  X10-6/OC(攝氏) 10 25 30 25  X10-6 20(0.1) 15(0.1) 12(0.1) 15(0.1) 100(2.0) 80(2.0) 80(2.0) g/cm³(公克/立方公分) 4.8 4.8 4.9 4.9

# SPECIFICATION

品名 關連規格號碼 CUSTOMER DRAWING NO. 顧 主 CUSTOMER DL4 MATERIAL 材質 圖法 單位 尺度 制定 承認 確認 立案 UNIT SCALE MAT'L METHOD DESIGN DWN 1997 年 07 月 04 日 杨惠民 刘哲男刘时晔 M/M 修訂 月 MONTH 日DAY REVISION 1. YEAR 年 YEAR 月 MONTH H 2. DAY 年 YEAR 日DAY 3.  $\mu$  iac Vs. frequency response characteristics (mT) (Gauss) 400- 4000 1000 Magnetic flux density 3000 500 200- 2000 200 100 1000 50 <sup>20</sup>(Oersted) 10 0.05 0.5 0.8 1.6 (kA/m) Frequency (MHz) Magnetic field intensity (H)  $tan\delta$  /  $\mu$  iac Vs. frequency response characteristics  $\Delta \mu / \mu Vs.$  temperature curve (D-series materials) (D-series materials) 60 . 10 / µiac 5 tans, 2 0 10 60 -20 40 5 -20 0.5 0.1 Frequency (MHz)



No. CANEC0800556113

Date: 05 Mar 2008

Page 1 of 4

TAK TECHNOLOGY CO..LTD NO.3RD INDUSTRIAL AREA JUZHOU SHIJIE TOWN DONGGUAN CITY GUANGDONG PROVINCE CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as: DL4 MATERIAL FERRITE CORE

SGS Job No.

10870088 - SZ

SGS Internal Reference No. :

18.13

Date of Sample Received

29 Feb 2008

**Testing Period** 

29 Feb 2008 - 04 Mar 2008

Test Requested

Selected test(s) as requested by client.

Test Method

Please refer to next page(s).

Test Results

Please refer to next page(s)

Signed for and on behalf of SGS-CSTC Ltd.

Huang Fang, Sunny

Sr. Engineer

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No. CANEC0800556113

Date: 05 Mar 2008

Page 2 of 4

Test Results:

ID for specimen 1

: CAN08-005561.013

Description for specimen 1

: Dk-gray core

#### Heavy metal(s)

Test Item(s)	Unit	Test Method (Reference)	Result	MDL
Cadmium (Cd)	mg/kg	IEC 62321/2nd CDV (111/95/CDV), ICP-OES	4	2
Lead (Pb)	mg/kg	IEC 62321/2nd CDV (111/95/CDV), ICP-OES	36	2
Mercury (Hg)	mg/kg	IEC 62321/2nd CDV (111/95/CDV), ICP-OES	N.D.	2
Hexavalent Chromium (CrVI) by	mg/kg	IEC 62321/2nd CDV (111/95/CDV), UV-Vis	N.D.	2

#### Note:

1. mg/kg = ppm

alkaline extraction

2. N.D. = Not Detected (< MDL)

3. MDL = Method Detection Limit



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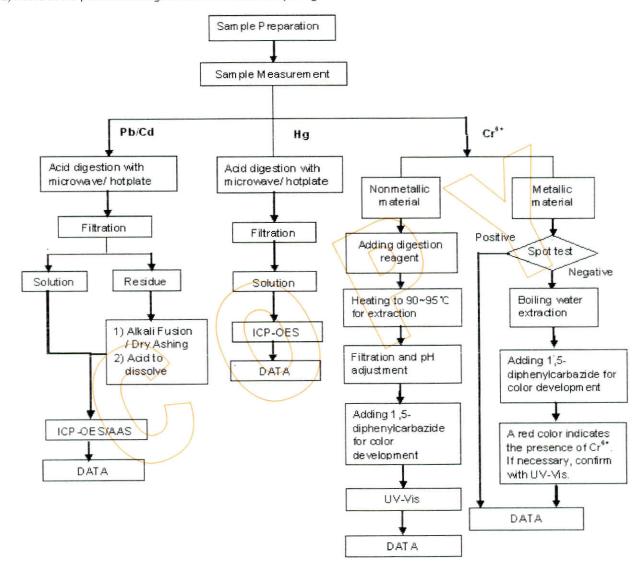
Date: 05 Mar 2008

Page 3 of 4

#### ATTACHMENTS

### **Testing Flow Chart**

- 1) Name of the person who made measurement: David Shen
- 2) Name of the person in charge of measurement: Emily Feng



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Page 4 of 4

Sample photo:



SGS authenticate the photo on original report only \*\*\* End of Report \*\*\*

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