

PROPERTIES OF TAK MATERIALS

MGB1	Q1D1	Q2A	Q1C1	D1B1	D8A	D1C1	D1B1	D3B1	DL5	L43	L6A
350	90	200	250	200	200	200	200	300	600	800	1200
0.1-2	0.3-15	0.1-5	0.1-4	0.3-5	0.2-5	0.3-5	0.3-5	0.1-2	0.1-1.5	0.01-0.5	0.01-0.5
3300	3100	3700	3000	2800	3300	3200	2800	3000	4000	2700	2700
1400	1400	2500	1500	1300	1700	1600	1300	1300	2400	1000	1000
0.7	4	0.6	1.25	0.9	0.6	0.9	0.9	0.7	0.3	0.2	0.2
180	300	150	150	180	250	200	180	150	180	100	100
25	25	60	140	30	40	50	30	25	30	4	4
15(0.1)	350(0.3)	20(0.1)	35(0.1)	400(0.3)	150(0.2)	600(0.3)	400(0.3)	15(0.1)	14(0.1)	10(0.01)	14(0.01)
80(2.0)	6009(15)	100(5.0)	400(4.0)	8009(5.0)	500(5.0)	1000(5.0)	800(5.0)	70(2.0)	90(1.5)	40(0.5)	45(0.5)
4.9	4.8	4.7	4.9	5.0	5.0	5.1	5.0	4.9	5.0	4.7	4.7
10 ⁷	10 ⁵	10 ⁷	10 ⁷	10 ⁷	10 ⁷	10 ⁵	10 ⁵	10 ⁷	10 ⁷	10 ⁷	10 ⁷

- μ_{iac} (AC initial permeability) : This is the permeability when a demagnetized core is measured in a weak AC magnetic field.
- $\tan \delta / \mu_{iac}$ (Relation loss factory) : This indicates the ratio of $\tan \delta$ to μ_{iac} .
- $\alpha \mu_r$ (Temperature factory of permeability) : This indicates the temperature dependence of permeability and is defined by following formula; $\alpha \mu_r =$

$$\frac{1}{T_1 - T_2} \frac{\mu_2 - \mu_1}{(\mu_1)^2}$$

- T_c (Curie temperature): This is the transition temperature when the magnetism of the ferrite core changed from ferromagnetism to paramagnets.
- B_m (Effective flux density) : This is the magnetic flux density when H_m is applied. (Refer to the figure below.).
- B_r (Effective retentively): This is the magnetic flux density that remains after the strength of the magnetic field has been reduced to zero following demagnetization from a state of saturation. (Refer to the figure below.).
- H_c (effective coercive force) : This is the strength of the magnetic field on the opposite direction that is necessary to reduce the magnetic flux density to zero following demagnetization from a state of saturation. (Refer to the figure below.).



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SPECIFICATION

規格號碼
DRAWING NO.

顧主
CUSTOMER

品名
ITEM

關連規格號碼
CUSTOMER DRAWING NO.

Q1C1 MATERIAL

材質
MATL

圖法
METHOD

單位
UNIT

尺度
SCALE

制定
DESIGN

承認
APPVD

確認
CHKD

立案
DWN

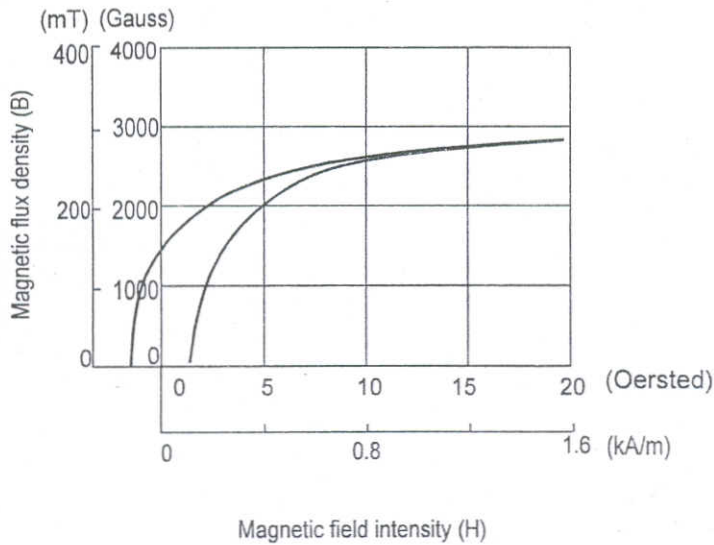
1997 年 07 月 04 日
YEAR MONTH DAY

楊惠民 劉哲男 劉時晔

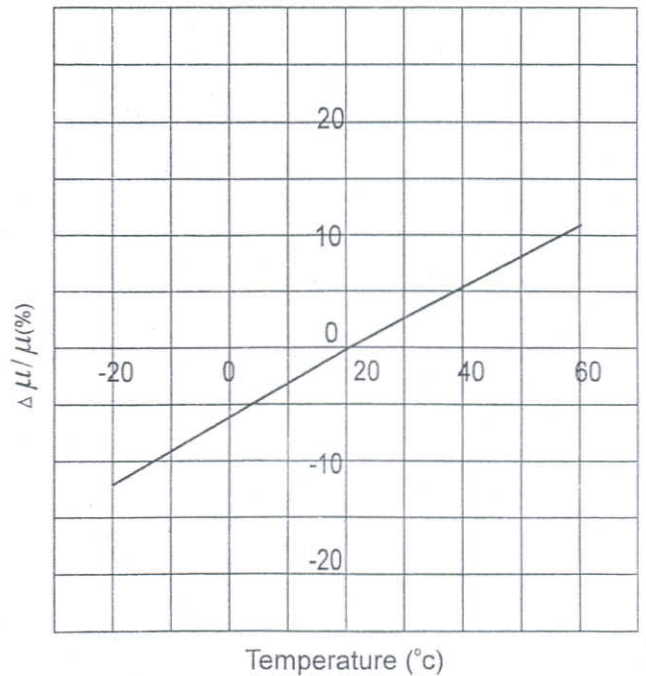
M/M

修訂
REVISION

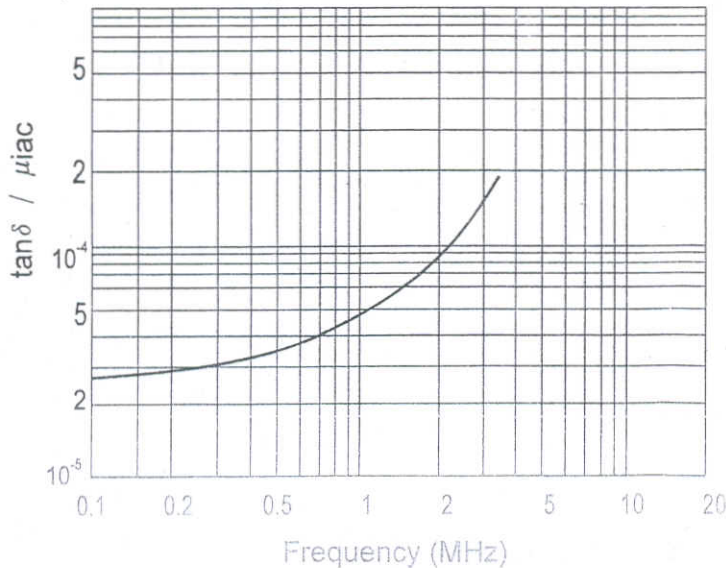
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|----|------|-------|-----|
| 1. | 年 | 月 | 日 |
| | YEAR | MONTH | DAY |
| 2. | 年 | 月 | 日 |
| | YEAR | MONTH | DAY |
| 3. | 年 | 月 | 日 |
| | YEAR | MONTH | DAY |



$\Delta \mu / \mu$ Vs. temperature curve (Q-series materials)



$\tan \delta / \mu_{iac}$ Vs. frequency response characteristics (Q-series materials)





Test Report

No. CANEC0800556119

Date: 06 Mar 2008

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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 :
Q1C1 MATERIAL FERRITE CORE

SGS Job No. : 10870088 - SZ
SGS Internal Reference No. : 18.4
Date of Sample Received : 29 Feb 2008
Testing Period : 29 Feb 2008 - 06 Mar 2008

Test Requested : Selected test(s) as requested by client.

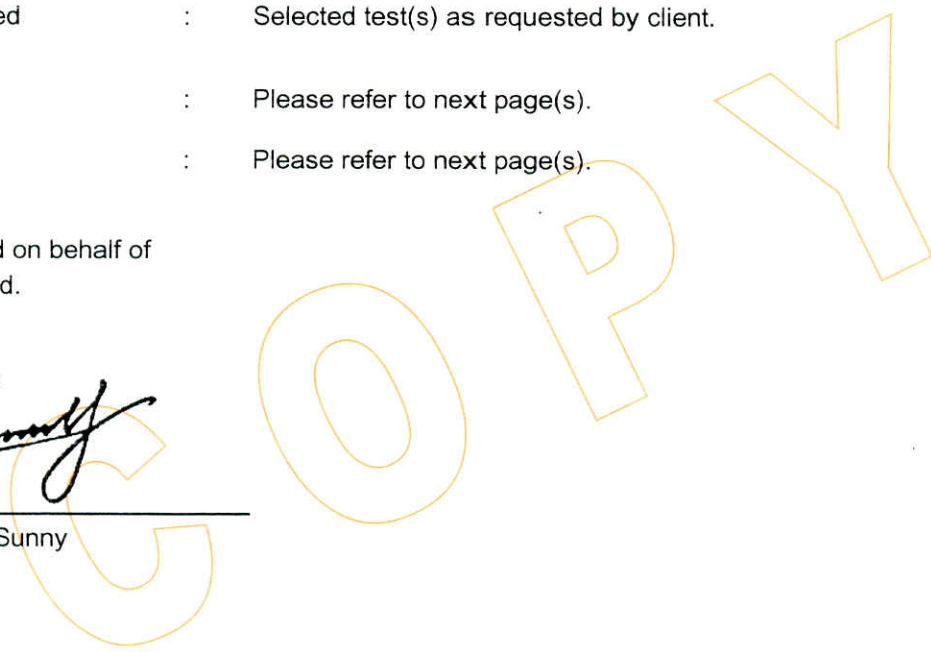
Test Method : Please refer to next page(s).

Test Results : Please refer to next page(s).

Signed for and on behalf of
SGS-CSTC Ltd.

Handwritten signature of Sunny

Huang Fang, Sunny
Sr. Engineer



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Test Report

No. CANEC0800556119

Date: 06 Mar 2008

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Test Results:

ID for specimen 1 : CAN08-005561.004

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	N.D.	2
Lead (Pb)	mg/kg	IEC 62321/2nd CDV (111/95/CDV), ICP-OES	6661	2
Mercury (Hg)	mg/kg	IEC 62321/2nd CDV (111/95/CDV), ICP-OES	N.D.	2
Hexavalent Chromium (CrVI) by alkaline extraction	mg/kg	IEC 62321/2nd CDV (111/95/CDV), UV-Vis	N.D.	2

Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit

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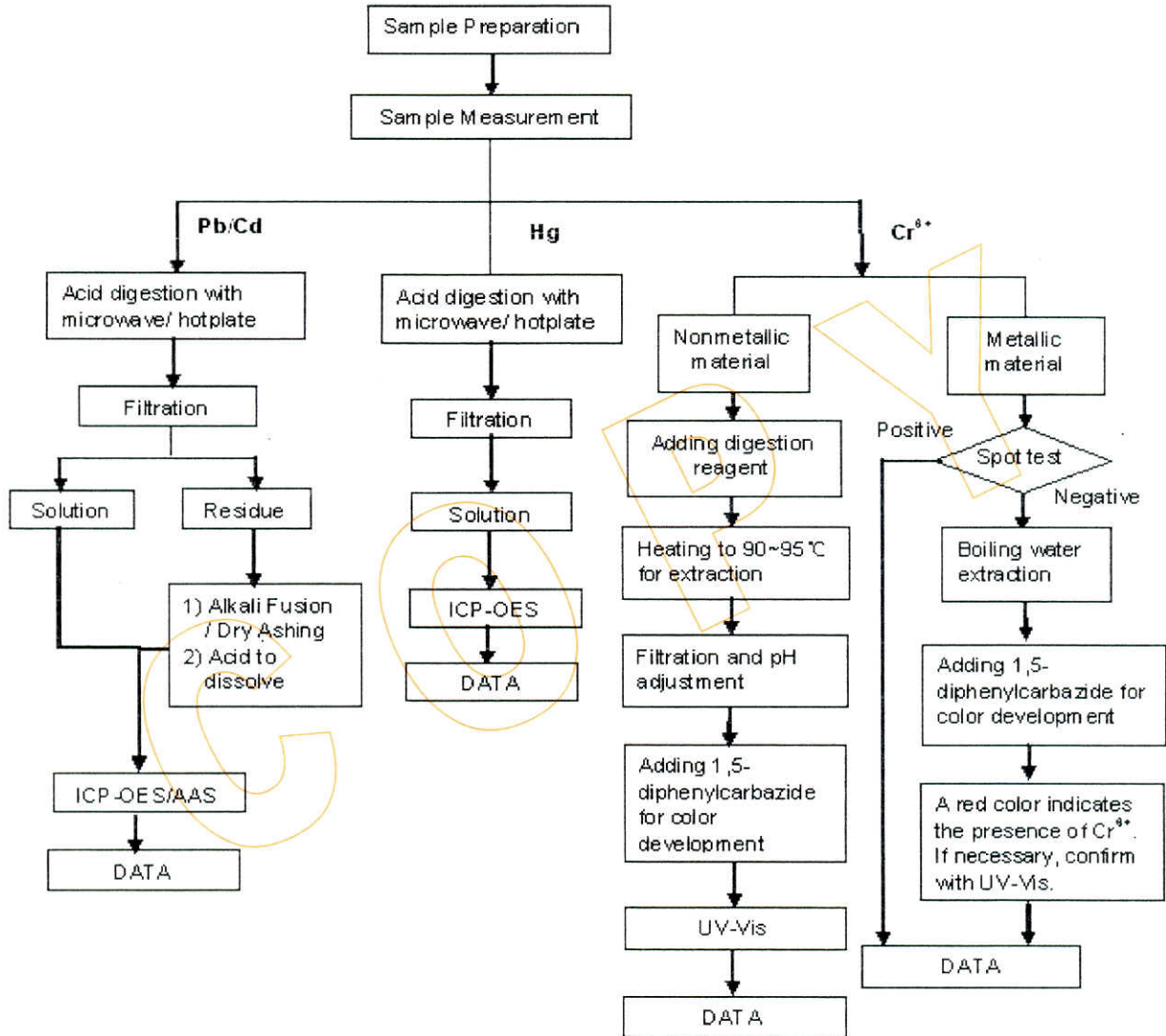
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GZCM1955913

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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Sample photo:



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