

# 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 <sup>7</sup>	10 <sup>5</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>

- $\mu_{iac}$  (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  $\mu_{iac}$ .
- $\alpha_{\mu r}$  (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.

## MGB1 MATERIAL

材質  
MAT'L

圖法  
METHOD

單位  
UNIT

尺度  
SCALE

制定  
DESIGN

承認  
APPVD

確認  
CHKD

立案  
DWN

M/M

年  
YEAR

月  
MONTH

日  
DAY

修訂  
REVISION

1.

年  
YEAR

月  
MONTH

日  
DAY

2.

年  
YEAR

月  
MONTH

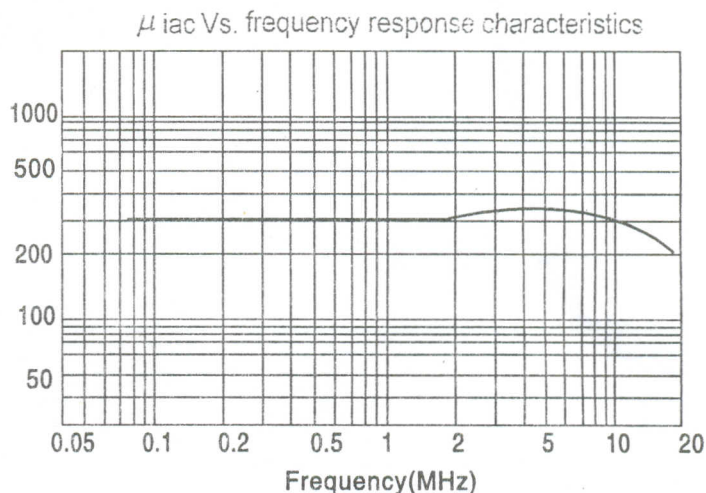
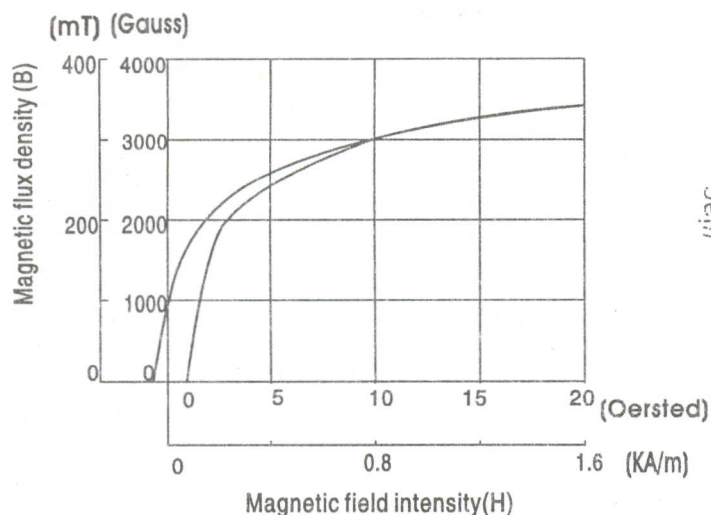
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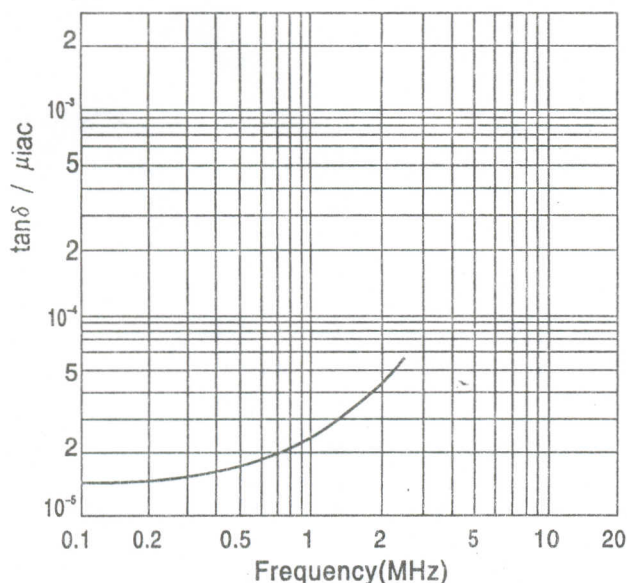
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YEAR

月  
MONTH

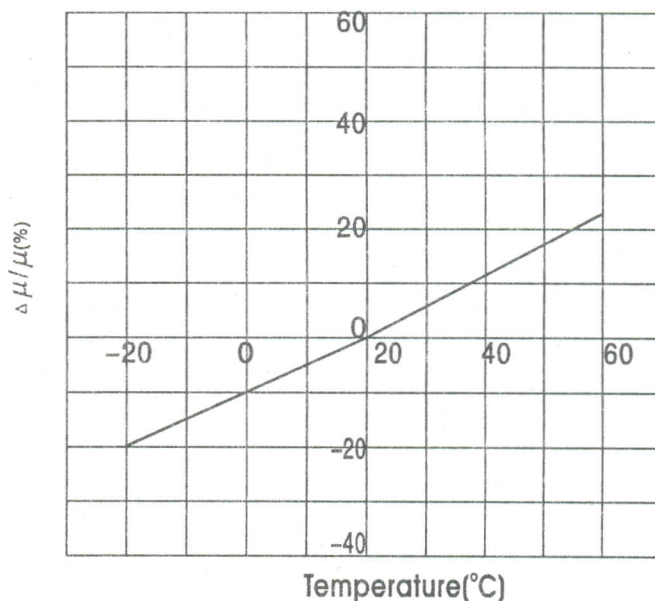
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$\tan \delta / \mu_{iac}$  Vs. frequency response characteristics (D-series materials)



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





# Test Report

No. CANEC0800052000

Date: 08 Jan 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 :

MGB1 MATERIAL FERRITE CORE

SGS Job No. : 10797439 - SZ  
Date of Sample Received : 14 Dec 2007  
Testing Period : 14 Dec 2007 - 19 Dec 2007

Test Requested : To determine the Cadmium, Lead, Mercury, Hexavalent Chromium content in the submitted sample.

Test Method : With reference to IEC 62321 Ed.1 111/54/CDV Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products.

- (1) Determination of Cadmium by ICP.  
Determination of Lead by ICP&AAS.  
Determination of Mercury by ICP.
- (2) Determination of Hexavalent Chromium by Colorimetric Method.

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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GZCM 1902634

## Test Report

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Test results by chemical method (Unit : mg/kg)

Test Item(s)	Method (Refer to)	No.1	MDL
Cadmium(Cd)	(1)	N.D.	2
Lead (Pb)	(1)	280	2
Mercury (Hg)	(1)	N.D.	2
Hexavalent Chromium (CrVI) by alkaline extraction	(2)	N.D.	2

Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit
4. Results & photo(s) of this report refer to test report CANEC0701017103.

### Test Part Description

No. 1 Dk-grey core

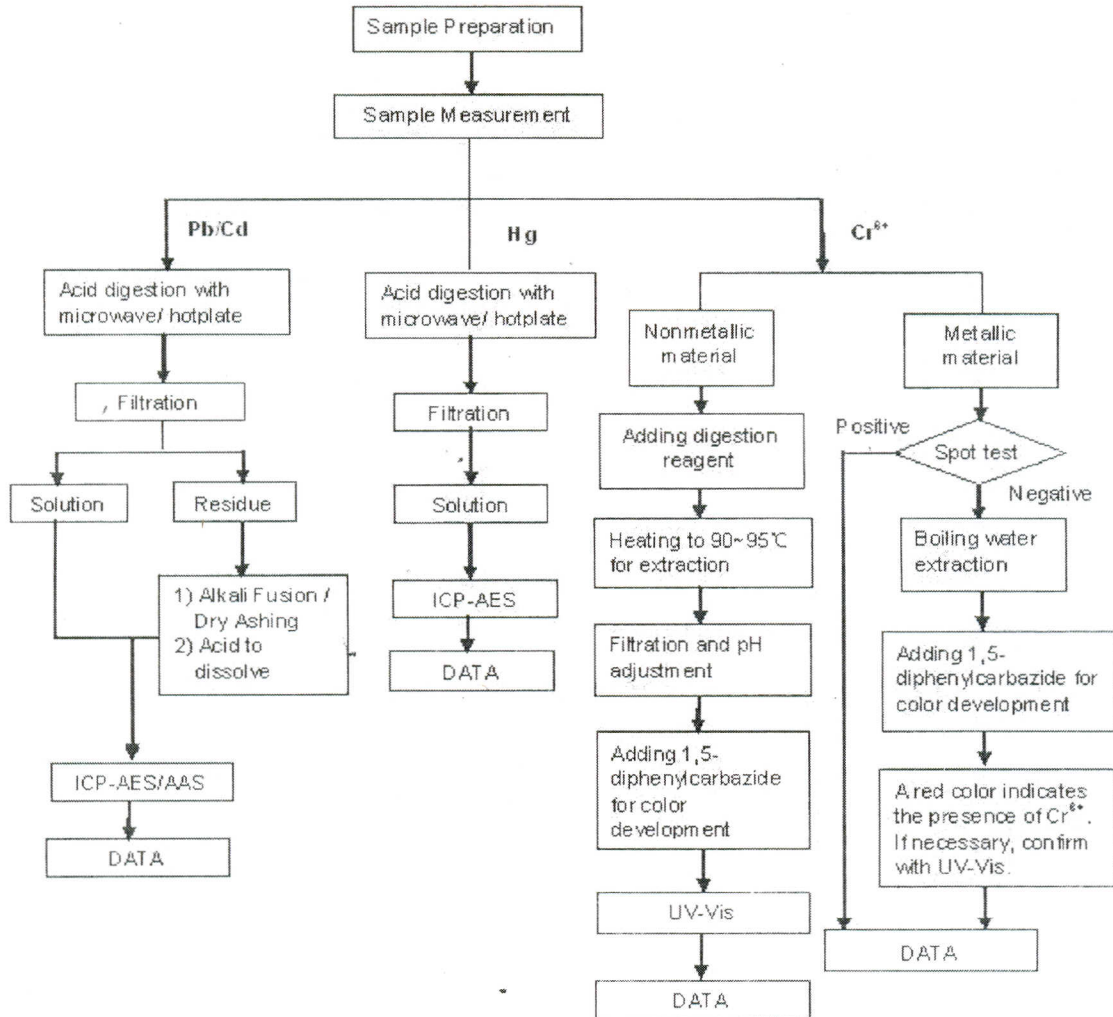
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### ATTACHMENTS

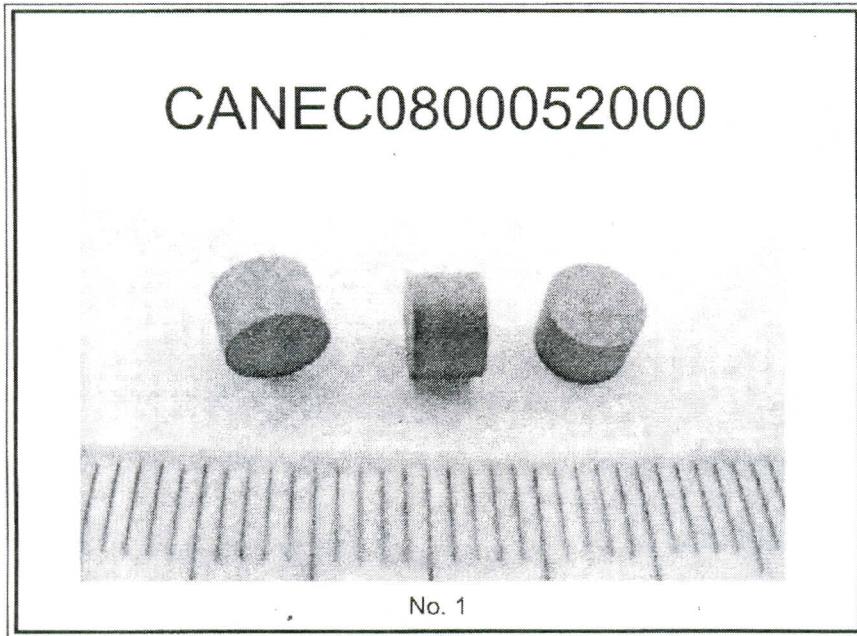
### Testing Flow Chart

- 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:



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

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