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) 80(2.0)	350(0.3) 6009(15)	20(0.1) 100(5.0)	35(0.1) 400(4.0)	400(0.3) 8009(5.0)	150(0.2) 500(5.0)	600(0.3) 1000(5.0)	400(0.3) 800(5.0)	15(0.1) 70(2.0)	14(0.1) 90(1.5)	10(0.01) 40(0.5)	14(0.01) 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 intial permeability) : This is the permeability when a demagnetized core is measured in a weak AC magnetic field.
- tan δ / μ iac (Relation loss factory) :This indicates the ratio of tan δ to μ iac.
- α μ r(Temperature factory of permeability) :This indicates the temperature dependence of permeability and is defined by following formula; $\alpha\mu r = \frac{1}{T1 - T2} \frac{\mu 2 - \mu 1}{(\mu 1)^2}$
- Tc(Curie temperature):This is the transition temperature when the magnetism of the ferrite core changed from ferromagnetism to paramagnets.
- Bm(Effective flux density): This is the magnetic flux density when Hms is applied.(Refer to the figure below.).
- Br (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.).
- Hc(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.).

TAK Ferrite

SHi Long,IndustrialArea Yuan Shan Town
Lian Ping He Yuan Guang Dong P.R.CHINA
TEL:(86–762)–4329901 FAX:(86–762)4329002

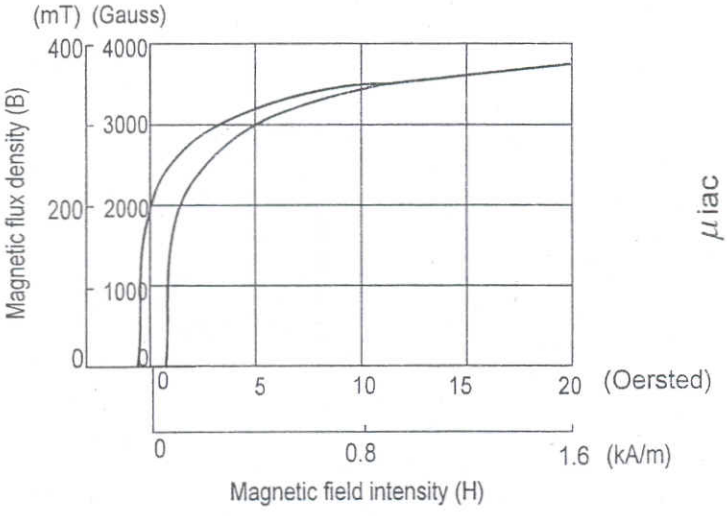
SPECIFICATION

規格號碼 DRAWING NO.

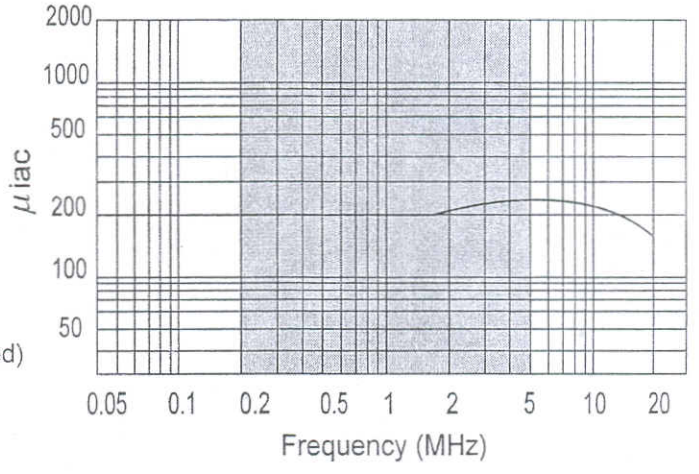
顧 主 CUSTOMER	品名 ITEM	關連規格號碼 CUSTOMER DRAWING NO.
	D8A MATERIAL	

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		1997 年 YEAR 07 月 MONTH 04 日 DAY	杨惠民	刘哲男	刘时晔

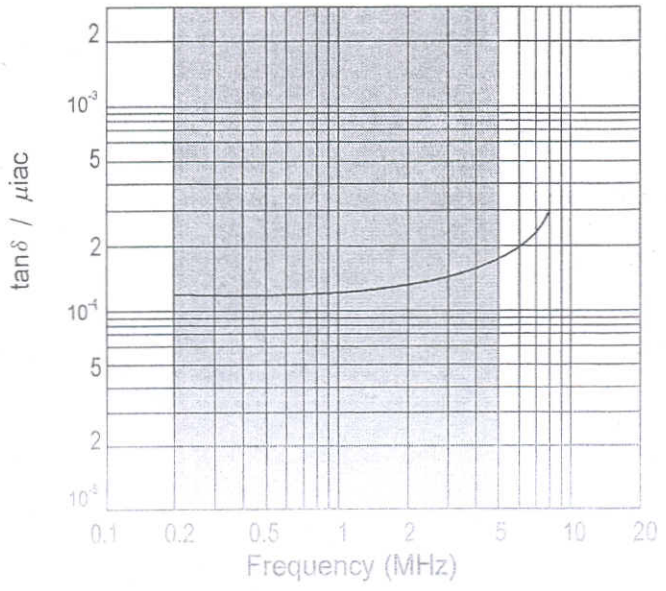
修訂 REVISION		年 YEAR	月 MONTH	日 DAY
	1.			
	2.			
	3.			



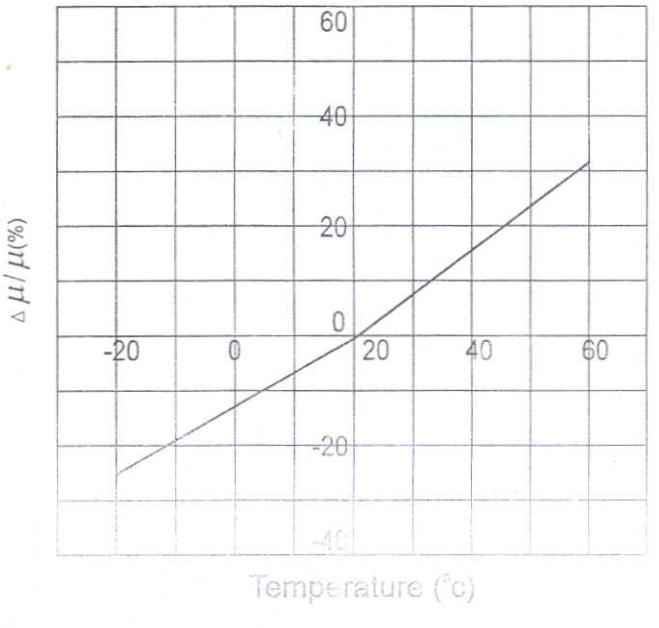
μ iac Vs. frequency response characteristics



tan δ / μ iac Vs. frequency response characteristics (D-series materials)



Δ μ / μ Vs. temperature curve (D-series materials)



Test Report

No. CANEC0802809708 Date: 07 Jun 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 :
D8A MATERIAL FERRITE CORE

SGS Job No.	:	11064108 - SZ
SGS Internal Reference No.	:	8.8
Date of Sample Received	:	02 Jun 2008
Testing Period	:	02 Jun 2008 - 06 Jun 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

Test Results:

ID for specimen 1 : CAN08-028097.008

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	296	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

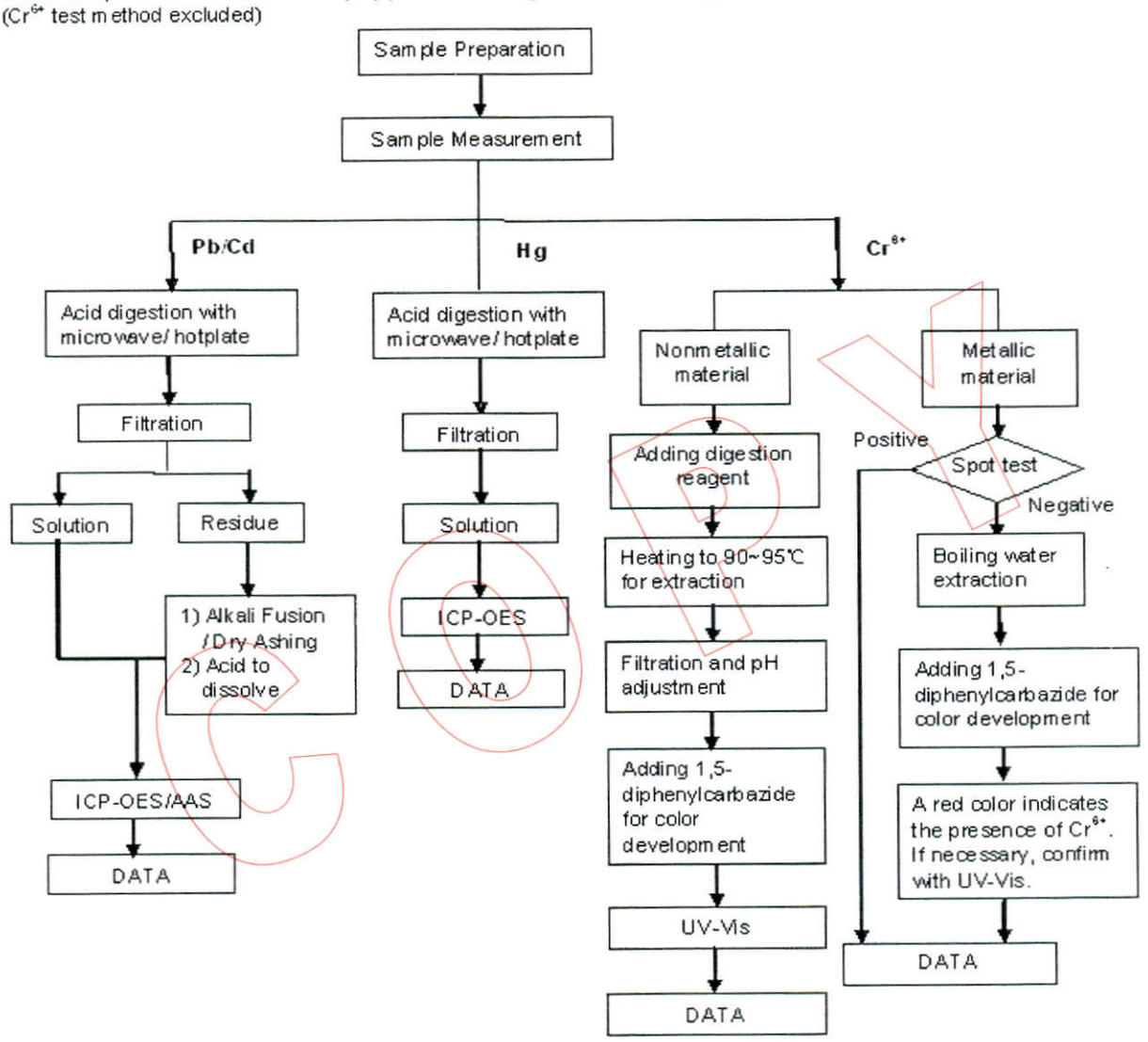
Note:

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

ATTACHMENTS

Testing Flow Chart

1) Name of the person who made measurement: Bowen Chen
2) Name of the person in charge of measurement: Adams Yu
3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} test method excluded)



Sample photo:

CAN08-028097.008

SGS authenticate the photo on original report only

*** End of Report ***

Test Report

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Huang Fang, Sunny
Sr. Engineer

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Guangzhou Branch Testing Service Chemical Laboratory.
198 Kezhu Road, Scientech Park Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20)82155555 f (86-20)82075113 www.cn.sgs.com
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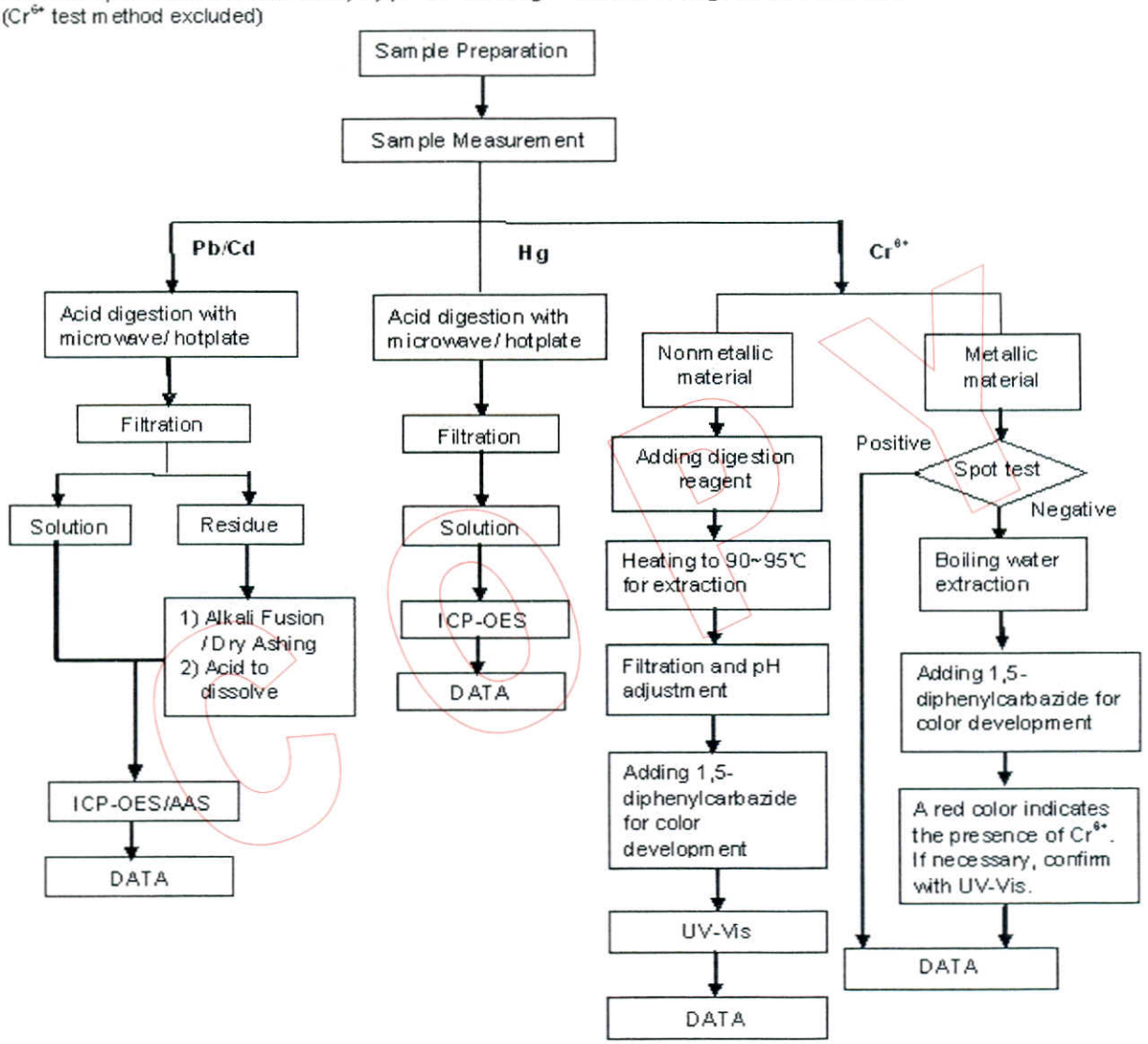
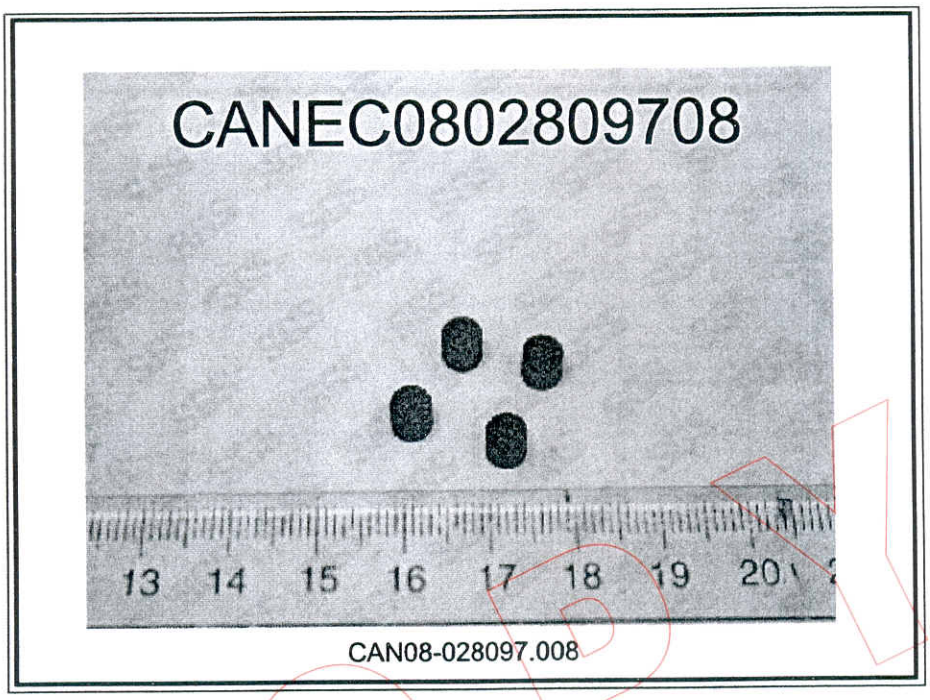


Sample photo:



CAN08-028097.008

SGS authenticate the photo on original report only

*** End of Report ***

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