



Innovator in Electronics

Angela Garrett
Anglia
Sandall Road
Wisbech
Cambridgeshire
PE13 2PS

7th December 2006

Dear Angela

Re: Murata PCN Ref No PNIDB300
(Addition of another Marking Method on Body for MLCC
Safety Standard Recognized Capacitor)

I have been informed by our factory that Murata Japan will add a new process of body marking for MLCC Safety Capacitor to meet increasing demand and will start supply on 1st February 2007.

Effected Items & Alternative Items

MLCC Safety Standard Recognized Capacitors : Type GB, GC, GD, GF [PN : GA3**]

I would be most grateful if you would approve this letter by 19th January 2007.

To comply with Murata Electronics (UK) Ltd's BS9001:2000 and TS16949 accreditation we have to ensure that we have proof of notifying affected customers of such information and I would be grateful if you could sign and return this letter so that we have such proof on our records.

If there are any problems with regard to signing this letter please give me a call on our main office number detailed below.

Best regards

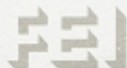
Aya Tonooka
Marketing Manager

Registered Office:

Oak House, Ancells Road,
Ancells Business Park,
Fleet,
Hampshire. GU51 2QW
Registered in England No. 1640046



Certificate No. BS 21934



INVESTOR IN PEOPLE



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Electronics (UK) Ltd**

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Web: www.murata.co.uk

Attn. : _____


**Izumo Murata
Manufacturing Co., Ltd**

 Hikawa-cho, Hikawa-gun,
Shimane Pref., Japan 699-0696

Phone : +81-853-72-4551

Fax : +81-853-72-3891

 Request: **ADDITION** of another **Marking Method on Body** for
MLCC Safety Standard Recognized Capacitor

Dear Sir and/or Madam,

Thank you for your usual patronage on our ceramic capacitor.

We would like to inform you of the Addition of Marking Method for MLCC Safety Standard Recognized Capacitor.

We hope you will allocate some of your time to review this matter.

1. Object items : MLCC Safety Standard Recognized Capacitor

Type GB, GC, GD, GF [Our Part Number : GA3~]2. Additional Marking Method : **INKJET Printing Method** (add to current Stamp Method)

Marking Method	TypeGB	TypeGC	TypeGD	TypeGF	Material of Ink
Stamp					Pigment : Carbon black Resin : Epoxy
<<Addition>> Inkjet					Pigment : Carbon black Resin : Acrylic

*Above both methods Ink Materials comply with RoHS restricted 6 substances (2002/95/EC).

*Besides above, Marking symbol, electrical performance, and our Part Number are same as current.

3. Reason : To increase Production capacity

We believe that we can serve continuously better delivery by this additional new method.

4. Schedule : Start to Produce and **Supply after 1st Feb 2007.**We will start production and supply with Inkjet Method product after 1st Feb 2007.

5. Expectations from Customers

Please review above matter, and if you have any questions or requirements,
please inform us by 22th Jan 2007.

6. Appendix

* Comparison of Solvent Resistance, Reliability ,and BDV(Breakdown volt) data

* Objective Part Number list

Sincerely yours,

K. Kubota

 Issued by
Product Engineering Section
High Voltage Capacitor Group
Izumo Murata Mfg. Co., Ltd.

High Temperature Loading

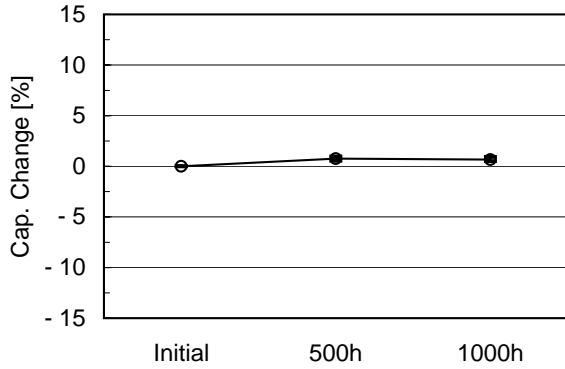
MURATA PN : GA342QR7GD471KW01L

Condition : Temperature ... 125°C
Voltage ... AC425V(r.m.s.)

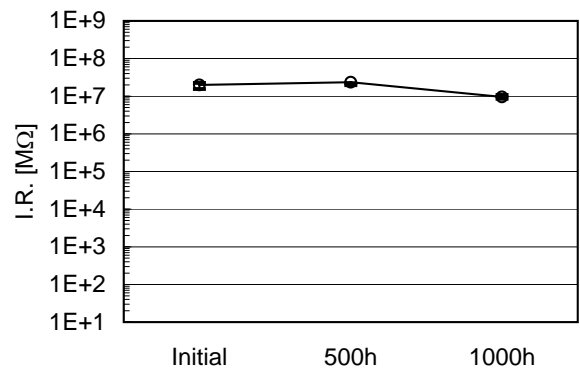
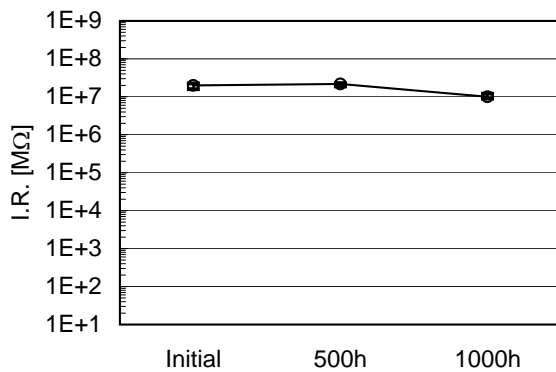
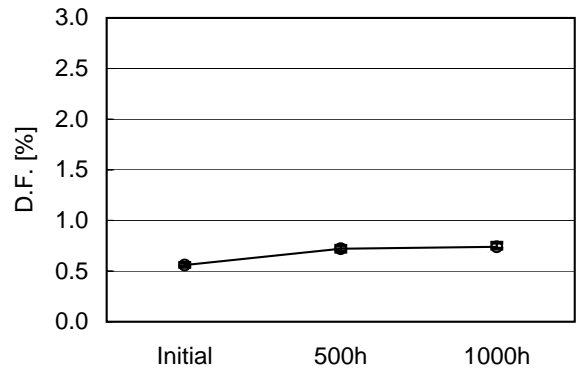
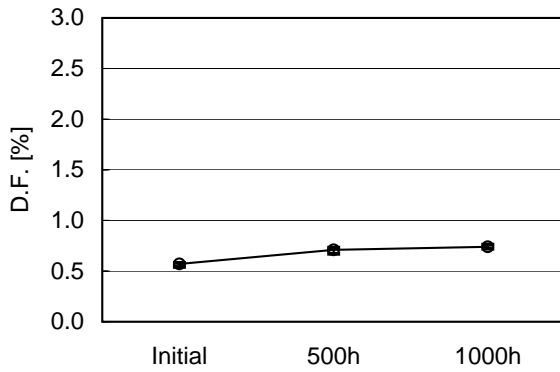
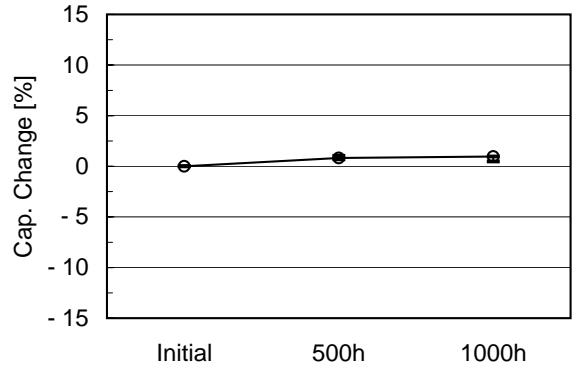
Pre-treatment : Store at 150 °C for 1 h, and then, place at room condition for 24 h.
Post-treatment : Place at room condition for 1 to 2 h.

Sample Qty. : 10 pcs.

stamp Method



inkjet Method



Note
The above data is just for a reference, not assured one.

PRODUCT ENGINEERING SECTION
HIGH VOLTAGE CAPACITOR GROUP
IZUMO MURATA MFG. CO., LTD.

AC - B.D.V.

MURATA PN : GA342QR7GD471KW01L

Condition : (Rising Step) 0.2 kV(r.m.s.)/s
(Cut-off Current) 10 mA(r.m.s.)

Equipment : TOKYO SEIDEN / ITS-10050T-AC

Sample Qty. : 20 pcs.

No.	AC-BDV [kV(r.m.s.)]	
	Stamp Method	Inkjet Method
1	2.63	3.00
2	2.73	3.14
3	2.91	3.14
4	2.98	3.42
5	3.26	3.46
6	3.35	3.46
7	3.50	3.49
8	3.54	3.54
9	3.56	3.54
10	3.57	3.57
11	3.61	3.58
12	3.62	3.58
13	3.69	3.61
14	3.73	3.65
15	3.74	3.72
16	3.74	3.74
17	3.75	3.75
18	3.75	3.83
19	3.83	3.97
20	3.88	4.01
mean	3.469	3.560
max.	3.88	4.01
min.	2.63	3.00
S _{n-1}	0.373	0.257

Note

The above data is just for a reference, not assured one.

PRODUCT ENGINEERING SECTION
HIGH VOLTAGE CAPACITOR GROUP
IZUMO MURATA MFG. CO., LTD.

Humidity Loading

MURATA PN : GA342QR7GD471KW01L

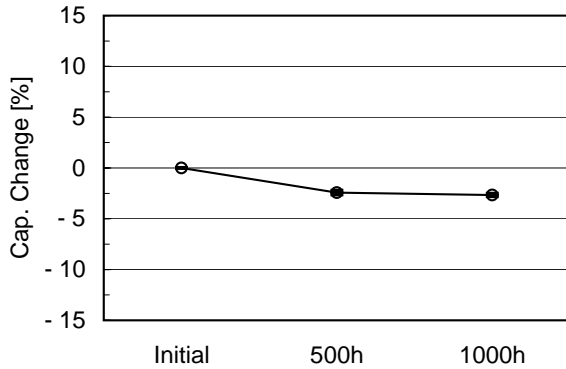
Condition : Temperature ... 60 Relative humidity ... 95%
 Voltage ... AC250V(r.m.s.)

Pre-treatment : Store at 150 °C for 1 h, and then, place at room condition for 24 h.

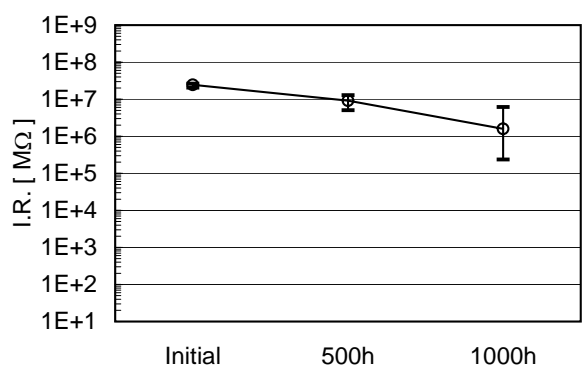
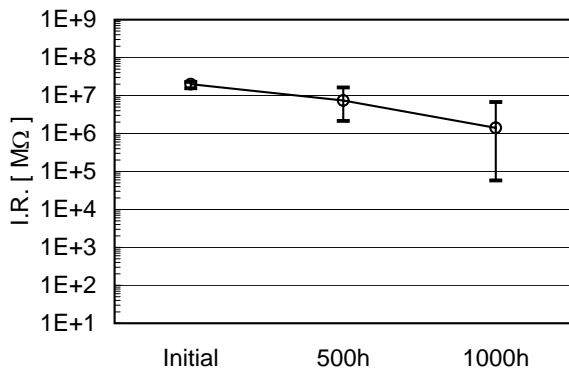
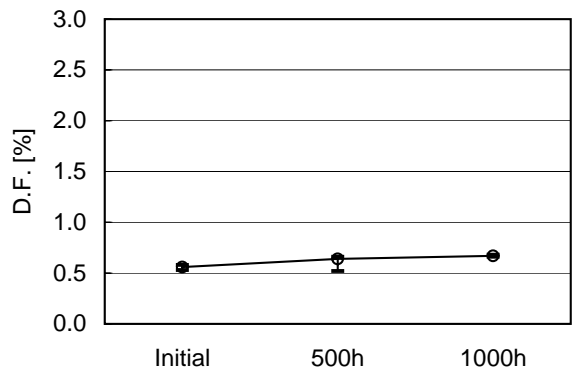
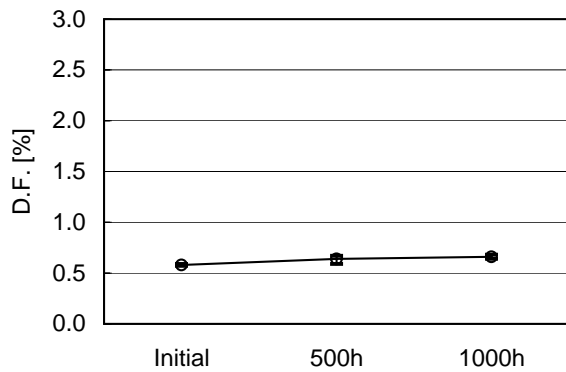
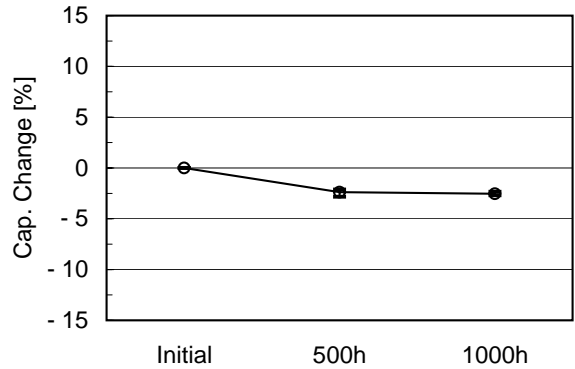
Post-treatment : Place at room condition for 1to 2 h.

Sample Qty. : 10 pcs.

Stamp Method



Inkjet Method



Note
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PRODUCT ENGINEERING SECTION
 HIGH VOLTAGE CAPACITOR GROUP
 IZUMO MURATA MFG. CO., LTD.

Solvent Resistance

MURATA PN : GA342QR7GD471KW01L

Condition : (Solvent) Isopropyl alcohol
 (Temp. of solvent) 23±5°C
 (Immersion time) 5±0.5 min.

Testing Method : The capacitor should be immersed into a solvent for 5min,
 then draw it out from the solvent and keep it for 5min.
 in ordinary temp. after that rubbing of the surface of capacitor
 for 10 times using on absorbent cotton.

Appearance : No remarkable defect in the appearance and warring.

Sample Qty. : 10 pcs.

Result

No.	Stamp Method	Inkjet Method
1	G	G
2	G	G
3	G	G
4	G	G
5	G	G
6	G	G
7	G	G
8	G	G
9	G	G
10	G	G