



MURATA MANUFACTURING CO., LTD.

Page 1 of 2
No.: HEMCG1-0925A
Date: Oct. 20, 2009

Attention:

Re: Notification for Ceramic / Inner Electrode Material Change
(MLCC: Monolithic Ceramic Capacitor)

Dear valued customer,

Thank you very much for your patronage and support to our capacitor products (MLCC).
Murata would like to notify you of the material change being used for Murata MLCC product as shown below.
Please kindly review the attached document for the details of the changes and accept I in this change.

1. Applied Part Numbers and Murata Product Types

- (1) Murata Product Types: GRM series
(2) Applied TC Type: Temperature Compensating Type (CLASS I), C / U / 1X series

2. Contents of change

- (1) Inner Electrode/Ceramic/Termination Electrode Material

Table with 4 columns: Item, Current, New, notes. Rows include Inner Electrode, Termination Electrode, and Ceramic.

- (2) Others - Please refer to details of each item on Appendix (1).
(3) There is no change in the specification. Please refer to the attached data.

3. Reason of Change

- (1) Murata has been expanding the products that are used base metal for inner electrode material as standard products.
(2) The Lead (Pb) is used in ceramic material for some MLCC products. Now, this material in ceramic is excepted by EU RoHS regulation.

4. Schedule

- (1) We would like to start this change after your acceptance.
(2) Please feel free to contact us, if you have any question, or request on our proposal.
(3) We will terminate production of attached types after Jul.30, 2010.
(4) Please place order by the end of Apr.2010 as the last one shot order if necessary.

5. Others

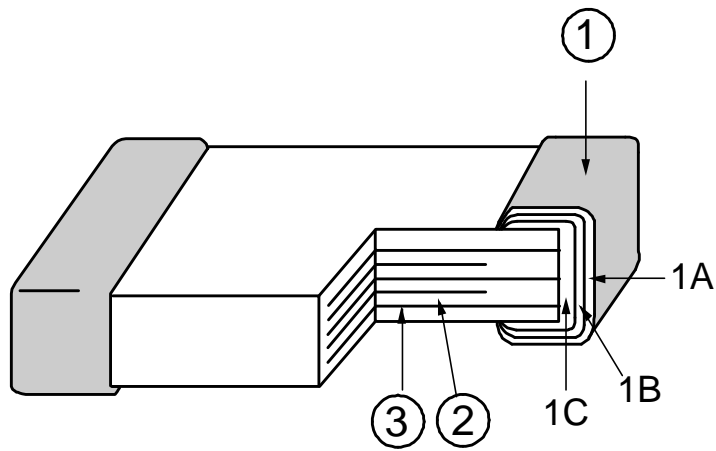
This change will be applied to all Murata production factory of Chip MLCC, as follows.
Fukui Murata Mfg.Co.,Ltd., Izumo Murata Mfg.Co.,Ltd., Okayama Murata Mfg.Co.,Ltd., Murata Electronics Singapore(Pte.)Ltd., Beijing Murata Eletronics Co.Ltd., Wuxi Murata Electronics Co.,Ltd.

We really appreciate your kind cooperation given to us on this change.

## Appendix 1

# Monolithic Ceramic Chip Capacitor

### 1. Structure



### 2. Material

No	Name	Precious Metal Inner Electrode Material	Base Metal Inner Electrode Material
1.	termination		
1A	plated layer	Tin	Tin
1B	plated layer	Nickel	Nickel
1C	electrode	Silver/Palladium or Silver	Copper
2.	dielectric layer	SrTiO <sub>3</sub>	CaZrO <sub>3</sub>
3.	inner electrode	Palladium or Silver/Palladium	Nickel