

Test Report

No. : CE/2012/31526F Date : 2012/07/19 Page : 1 of 12

BOURNS, INC.
1200 COLUMBIA AVE. RIVERSIDE, CA 92507, USA



The following sample(s) was/were submitted and identified by/on behalf of the client as:

Sample Description : SMD DIODES
Style/Item No. : CD0603, CD1005, CD1206, CDDFN2 SERIES
Sample Receiving Date : 2012/03/06
Testing Period : 2012/03/06 TO 2012/03/13

=====
Test Result(s) : Please refer to next page(s).

* This report is combined with reports of CE/2012/31525 and CE/2012/31526 *



Chenyu Kung / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory – Taipei

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Test Report

No. : CE/2012/31526F Date : 2012/07/19 Page : 2 of 12

BOURNS, INC.
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Test Result(s)

PART NAME No.1 : MIXED ALL PARTS (6 TYPES) (CE/2012/31525)
PART NAME No.2 : MIXED ALL PARTS (6 TYPES) (CE/2012/31526)

Test Item(s)	Unit	Method	MDL	Result	
				No.1	No.2
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	---
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	18	---
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	---
Hexavalent Chromium Cr(VI)	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.	---
Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.	---
PFOA (CAS No.: 335-67-1)	mg/kg	With reference to US EPA 3540C: 1996 method for PFOA Content. Analysis was performed by LC/MS.	10	n.d.	---
Hexabromocyclododecane (HBCDD) (CAS No.: 25637-99-4)	mg/kg	With reference to US EPA 3540C method. Analysis was performed by GC/MS.	5	n.d.	---
BBP (Benzyl butyl phthalate) (CAS No.: 85-68-7)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.	---
DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.	---
DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	%	With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.	---
PVC	**	Analysis was performed by FTIR and FLAME Test.	-	Negative	---

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Test Report

No. : CE/2012/31526F Date : 2012/07/19 Page : 3 of 12



BOURNS, INC.
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Test Item(s)	Unit	Method	MDL	Result			
				No.1	No.2		
Sum of PBBs	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	-	n.d.	---		
Monobromobiphenyl			5	n.d.	---		
Dibromobiphenyl			5	n.d.	---		
Tribromobiphenyl			5	n.d.	---		
Tetrabromobiphenyl			5	n.d.	---		
Pentabromobiphenyl			5	n.d.	---		
Hexabromobiphenyl			5	n.d.	---		
Heptabromobiphenyl			5	n.d.	---		
Octabromobiphenyl			5	n.d.	---		
Nonabromobiphenyl			5	n.d.	---		
Decabromobiphenyl			5	n.d.	---		
Sum of PBDEs			-	n.d.	---		
Monobromodiphenyl ether			5	n.d.	---		
Dibromodiphenyl ether			5	n.d.	---		
Tribromodiphenyl ether			5	n.d.	---		
Tetrabromodiphenyl ether			5	n.d.	---		
Pentabromodiphenyl ether			5	n.d.	---		
Hexabromodiphenyl ether			5	n.d.	---		
Heptabromodiphenyl ether			5	n.d.	---		
Octabromodiphenyl ether			5	n.d.	---		
Nonabromodiphenyl ether			5	n.d.	---		
Decabromodiphenyl ether			5	n.d.	---		
Halogen							
Halogen-Fluorine (F) (CAS No.: 14762-94-8)			mg/kg	With reference to BS EN 14582:2007. Analysis was performed by IC.	50	---	93
Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	50	---			114		
Halogen-Bromine (Br) (CAS No.: 10097-32-2)	50	---			n.d.		
Halogen-Iodine (I) (CAS No.: 14362-44-8)	50	---			n.d.		

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Test Report

No. : CE/2012/31526F Date : 2012/07/19 Page : 4 of 12

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- Note :**
1. mg/kg = ppm ; 0.1wt% = 1000ppm
 2. n.d. = Not Detected
 3. MDL = Method Detection Limit
 4. " - " = Not Regulated
 5. "----" = Not Conducted
 6. ** = Qualitative analysis (No Unit)
 7. Negative = Undetectable / Positive = Detectable
 8. The sample(s) was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value.

PFOS Reference Information : POPs - (EU) 757/2010

Outlawing PFOS as substances or preparations in concentrations above 0.001% (10ppm), in semi-finished products or articles or parts at a level above 0.1%(1000ppm), in textiles or other coated materials above 1µg/m².

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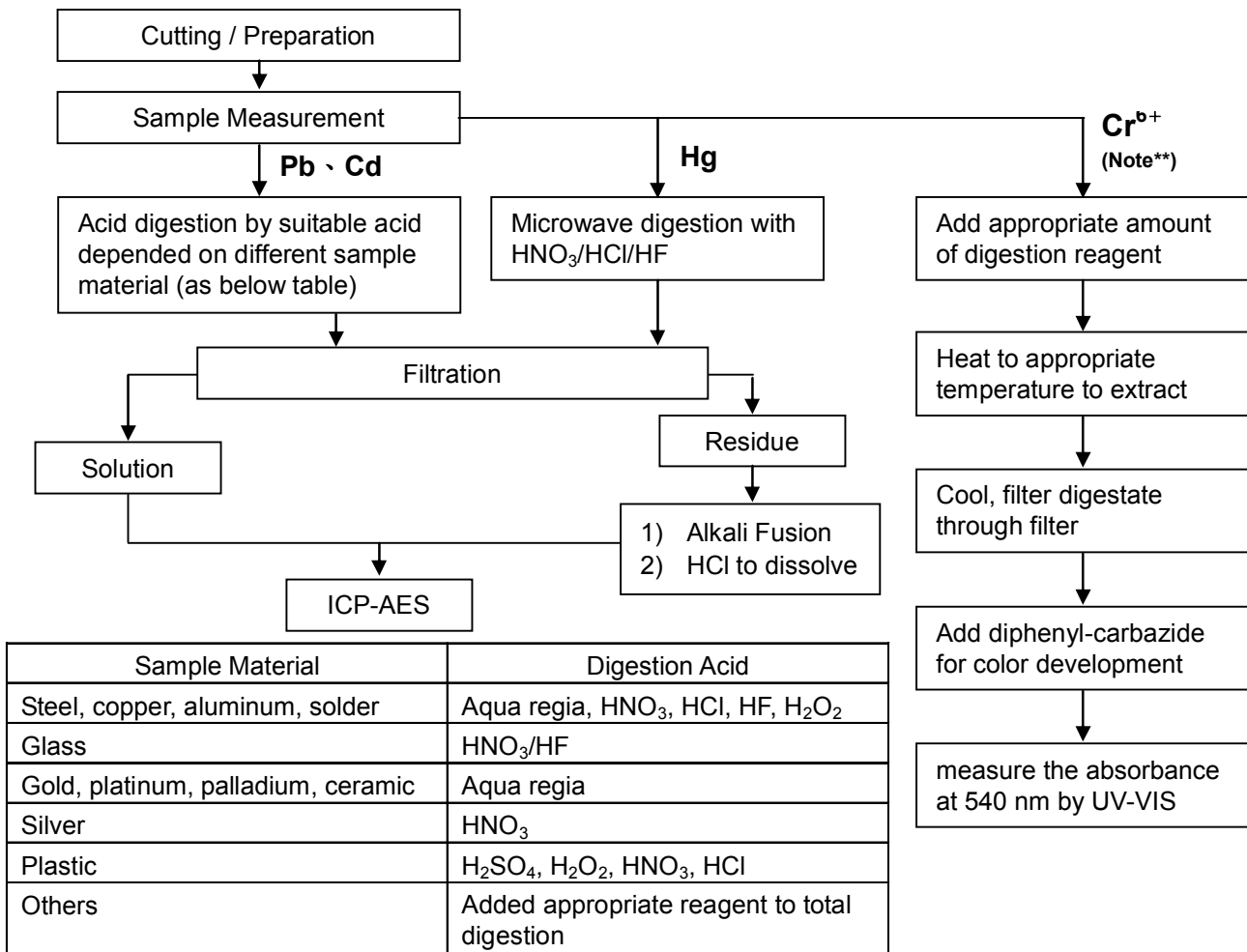
Test Report

No. : CE/2012/31526F Date : 2012/07/19 Page : 5 of 12

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- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
(Cr⁶⁺ test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



Note :** (1) For non-metallic material, add alkaline digestion reagent and heat to 90~95 °C.
(2) For metallic material, add pure water and heat to boiling.

Test Report

No. : CE/2012/31526F Date : 2012/07/19 Page : 6 of 12

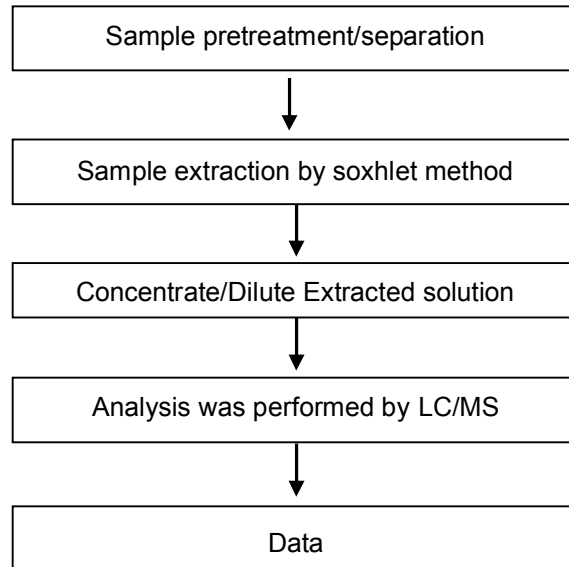
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Analytical flow chart of Soxhlet extraction (LC/MS) procedure

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

【 Test Items: PFOS/PFOA 】



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Test Report

No. : CE/2012/31526F Date : 2012/07/19 Page : 7 of 12

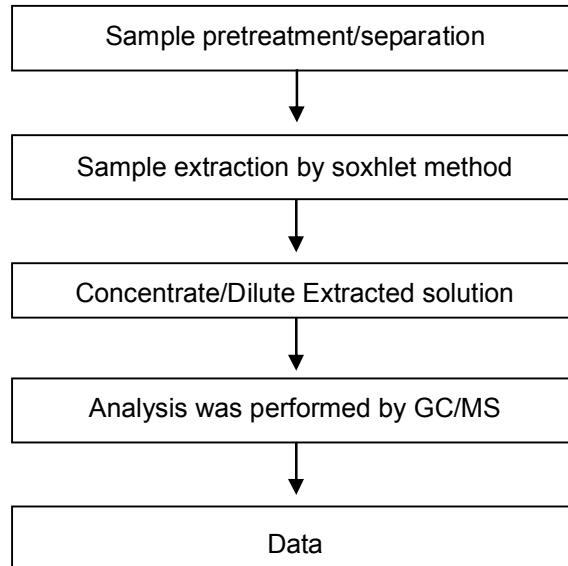
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Analytical flow chart of Soxhlet extraction (GC/MS) procedure

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang

【Test Items: Phthalate、HBCDD】



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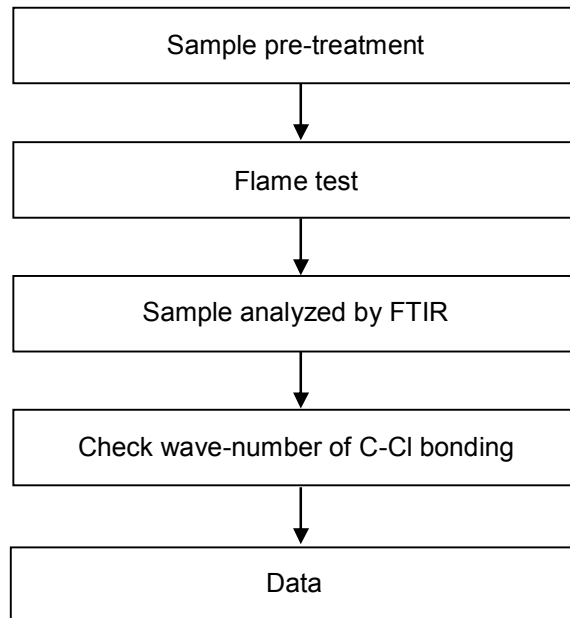
No. : CE/2012/31526F Date : 2012/07/19 Page : 8 of 12



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Analysis flow chart for determination of PVC in material

- Name of the person who made measurement: Ginny Chen
- Name of the person in charge of measurement: Troy Chang



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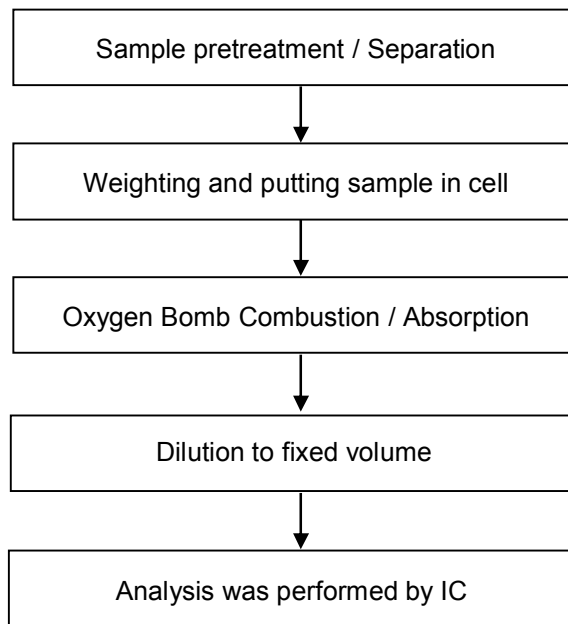
No. : CE/2012/31526F Date : 2012/07/19 Page : 9 of 12

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Analytical flow chart of halogen content

- 1) Name of the person who made measurement: Rita Chen
- 2) Name of the person in charge of measurement: Troy Chang



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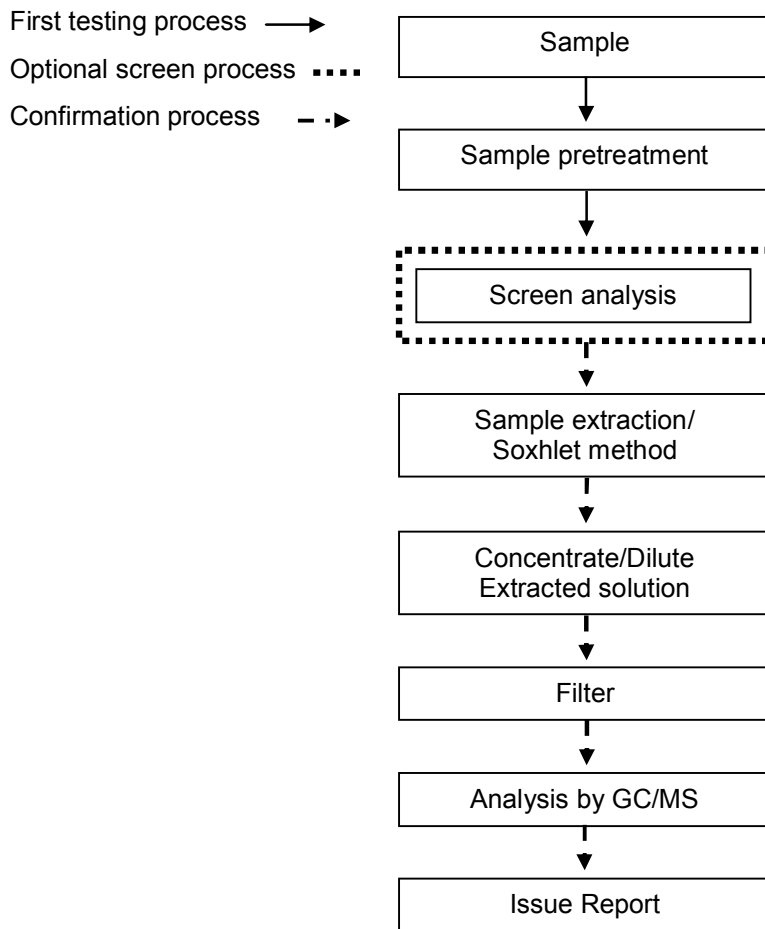
No. : CE/2012/31526F Date : 2012/07/19 Page : 10 of 12

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PBB/PBDE analytical FLOW CHART

- Name of the person who made measurement: Roman Wong
- Name of the person in charge of measurement: Troy Chang



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Test Report

No. : CE/2012/31526F Date : 2012/07/19 Page : 11 of 12

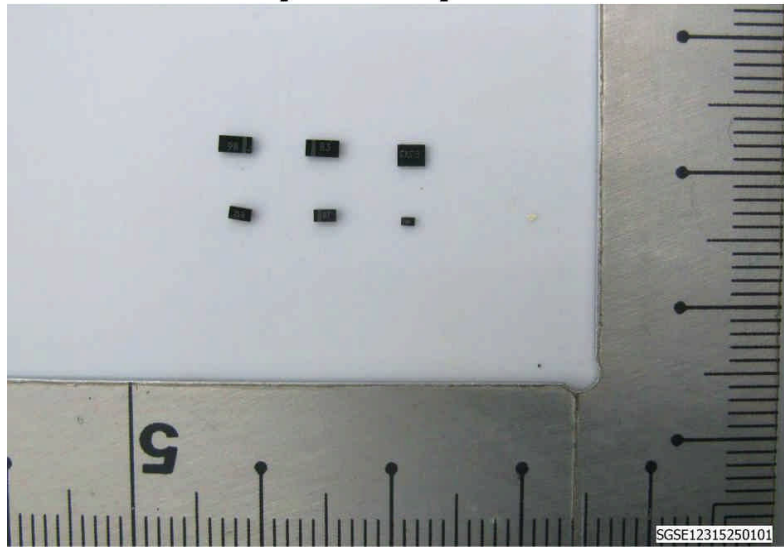
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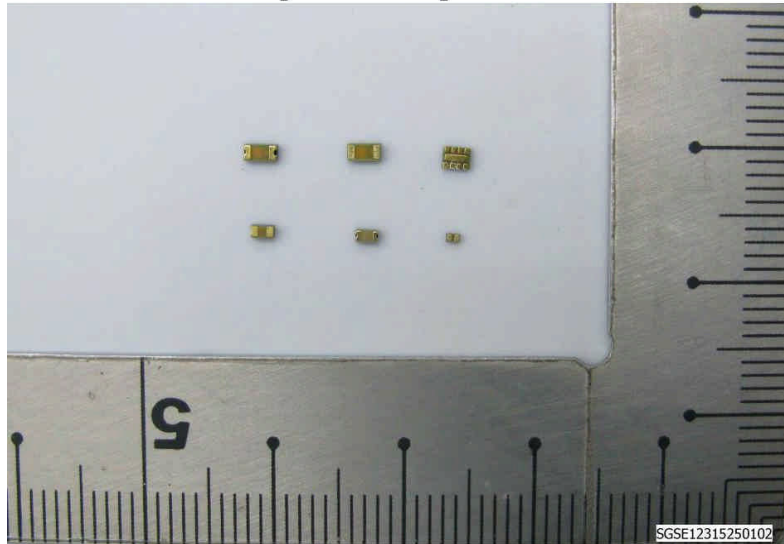
* The tested sample / part is marked by an arrow if it's shown on the photo. *

PART NAME No.1

CE/2012/31525



CE/2012/31525



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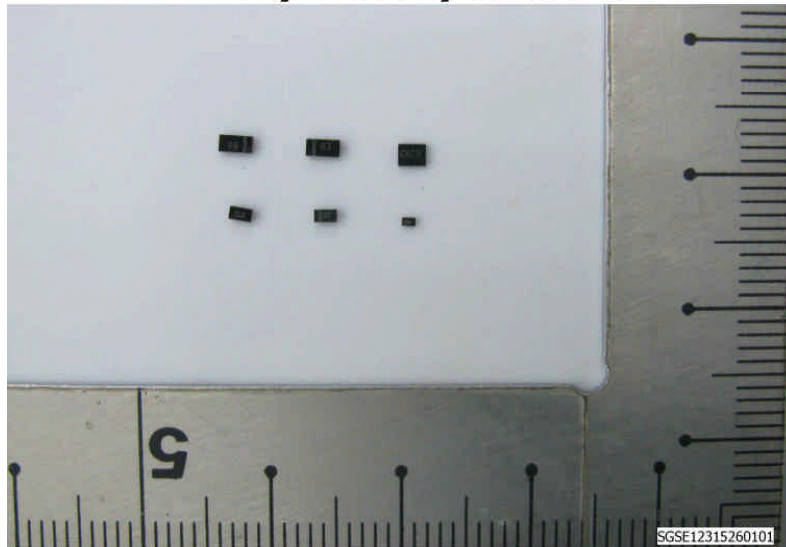
No. : CE/2012/31526F Date : 2012/07/19 Page : 12 of 12

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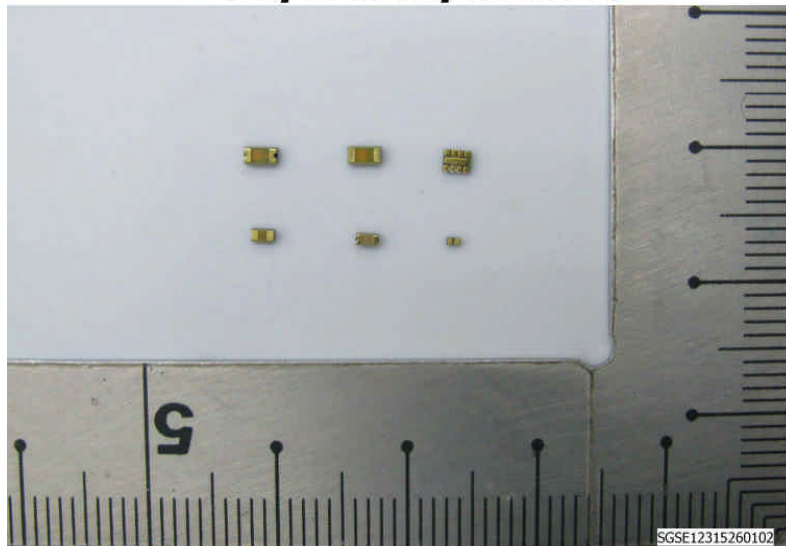


PART NAME No.2

CE/2012/31526



CE/2012/31526



** End of Report **

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