



RoHS TEST REPORT

Prepared for:

SHENZHEN CLOUD EMBEDDED TECHNOLOGY CO., LTD.

4th Floor, Sanhe international building A, Laiwushan Village, Dalang Street, Longhua District, Shenzhen, Guangdong, China

Product: Industrial PC

Trade Name: CLOUD EMBEDDED

Model Name: PPC-0861A, PPC-xxxyz, KLD-xxxyz, IPC-xxxyz, FPM-xxxyz, TPC-xxxyz

Date of Test: Jun. 06, 2018 - Jun. 13, 2018

Date of Report: Jun. 13, 2018

Report Number: HUAK180611226-1RR

Prepared By:

Shenzhen HUAK Testing Technology Co., Ltd.

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TEST RESULT CERTIFICATION

Applicant : SHENZHEN CLOUD EMBEDDED TECHNOLOGY CO., LTD.

4th Floor, Sanhe international building A, Laiwushan Village, Dalang

Address : Street, Longhua District, Shenzhen, Guangdong, China

Manufacturer : SHENZHEN CLOUD EMBEDDED TECHNOLOGY CO., LTD.

4th Floor, Sanhe international building A, Laiwushan Village, Dalang

Address : Street, Longhua District, Shenzhen, Guangdong, China

Product name : Industrial PC

PPC-0861A, PPC-xxxyz, KLD-xxxyz, IPC-xxxyz, FPM-xxxyz,

Product model : TPC-xxxyz

Trade Name : CLOUD EMBEDDED

Date of Sample Received : Jun. 06, 2018

Testing Period : Jun. 06, 2018 - Jun. 13, 2018

Test Requested: Conclusion

(1) Heavy Metals and Flame Retardants Content – European Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

PASS

(2) Phthalates content – European Council Directive 2011/65/EU and Change-Directive (EU) 2015/863 on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

PASS

Prepared by:

Project Engineer

Chris Yao

Checked By:

Project Sup

Approved by:

Technical Director



Test Method:

Heavy Metals and Flame Retardants Content – European Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

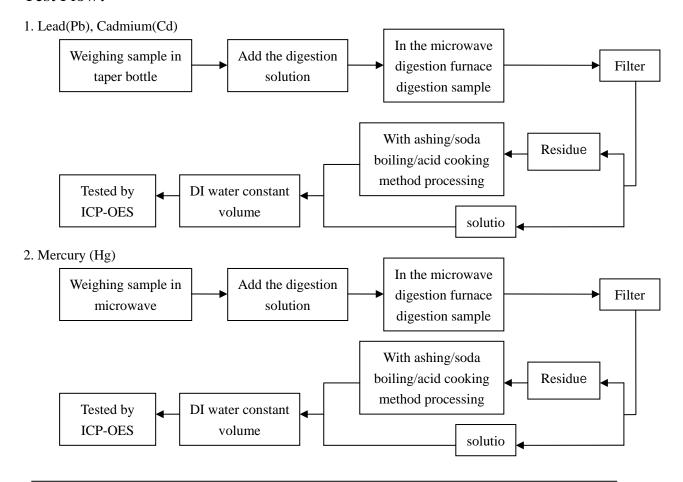
Testing item	Pretreatment method	Measuring instrument	MDL
Lead(Pb)	EN 62321-5:2014	ICP-OES	2 mg/kg
Cadmium(Cd)	EN 62321-5:2014	ICP-OES	2 mg/kg
Mercury(Hg)	EN 62321-4:2014	ICP-OES	2 mg/kg
Chromium(Cr VI)	EN 62321:2012	UV-Vis	2 mg/kg
PBBs/ PBDEs	EN 62321:2012	PY-GC-MS	5 mg/kg

Testing item	Pretreatment method	Measuring instrument	MDL
HBCDD	EPA3540:1996	GC-MS	10 mg/kg

Phthalates content – European Council Directive 2011/65/EU and Change-Directive (EU) 2015/863 on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Test Method: Sample was extracted with organic solvent and then analyzed by Gas Chromatograph Mass Spectrometer.

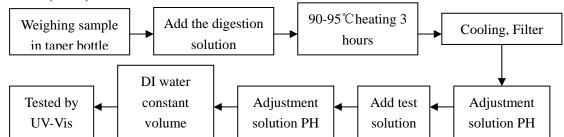
Testing item	Pretreatment method	Measuring instrument	MDL
DEHP/DBP/BBP/ DIBP	EN 14372:2004	GC-MS	0.003 mg/kg

Test Flow:

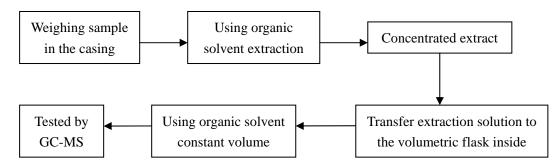




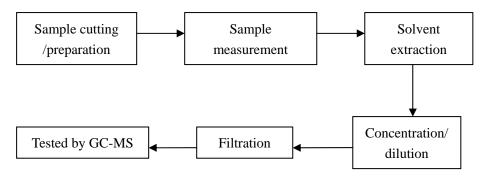
3. Chromium(Cr VI)



4. PBBs/ PBDEs



5. HBCDD/ DEHP/ BBP/ DBP/ DIBP





Test Results:

Testing Item	Unit	ROHS	Result					
		Limit	1	2	3	4	5	6
Lead(Pb)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cadmium(Cd)	mg/kg	100	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury(Hg)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium(Cr VI)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sum of PBBs/ PBDEs	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Monobromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tribromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Pentabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Heptabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Octabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nonabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Decabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Monobromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tribromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Pentabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Heptabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Octabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nonabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Decabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromocyclododecane (HBCDD)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Bis-(2-ethylhecyl) Phthalate (DEHP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzylbutyl Phthalate (BBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibutyl Phthalate (DBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Di-isobutyl phthalate (DIBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

- 1 Screen panel
- 2 Post-IO
- 3 Screen board
- 4 Rear cover
- 5 heat sink
- 6 Motherboard

Testing Item	Unit	ROHS			Re	sult		
		Limit	7	8	9	10	11	12
Lead(Pb)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cadmium(Cd)	mg/kg	100	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury(Hg)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium(Cr VI)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sum of PBBs/ PBDEs	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Monobromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tribromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Pentabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Heptabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Octabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nonabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Decabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Monobromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tribromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Pentabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Heptabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Octabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nonabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Decabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromocyclododecane (HBCDD)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Bis-(2-ethylhecyl) Phthalate (DEHP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzylbutyl Phthalate (BBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibutyl Phthalate (DBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Di-isobutyl phthalate (DIBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

- 7 hard disk
- 8 touch screen
- 9 Touch controller
- 10 2P aerial plug
- 11 LCD screen
- 12 Serial line

Testing Item	Unit	ROHS	Result					
		Limit	13	14	15	16	17	18
Lead(Pb)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cadmium(Cd)	mg/kg	100	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury(Hg)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium(Cr VI)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sum of PBBs/ PBDEs	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Monobromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tribromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Pentabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Heptabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Octabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nonabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Decabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Monobromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tribromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Pentabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Heptabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Octabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nonabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Decabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromocyclododecane (HBCDD)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Bis-(2-ethylhecyl) Phthalate (DEHP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzylbutyl Phthalate (BBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibutyl Phthalate (DBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Di-isobutyl phthalate (DIBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

- 13 USB cable
- 14 Touch control line
- 15 LED
- 16 2P power cord
- 17 switch
- 18 Boost plate

Testing Item	Unit	ROHS	Result					
		Limit	19	20	21	22	23	24
Lead(Pb)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cadmium(Cd)	mg/kg	100	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury(Hg)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium(Cr VI)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sum of PBBs/ PBDEs	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Monobromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tribromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Pentabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Heptabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Octabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nonabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Decabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Monobromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tribromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Pentabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Heptabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Octabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nonabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Decabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromocyclododecane (HBCDD)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Bis-(2-ethylhecyl) Phthalate (DEHP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzylbutyl Phthalate (BBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibutyl Phthalate (DBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Di-isobutyl phthalate (DIBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

- 19 LCD line
- 20 LCD power cord
- 21 Thermal pad
- 22 Silicone Rubber
- 23 Countersunk head screws
- 24 Screws

Testing Item	Unit	ROHS	Result					
		Limit	25	26	27	28	29	30
Lead(Pb)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Cadmium(Cd)	mg/kg	100	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Mercury(Hg)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromium(Cr VI)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Sum of PBBs/ PBDEs	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Monobromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tribromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Pentabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Heptabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Octabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nonabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Decabromobiphenyl	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Monobromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tribromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Tetrabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Pentabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Heptabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Octabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Nonabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Decabromodiphenyl ether	mg/kg	/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Hexabromocyclododecane (HBCDD)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Bis-(2-ethylhecyl) Phthalate (DEHP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzylbutyl Phthalate (BBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibutyl Phthalate (DBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Di-isobutyl phthalate (DIBP)	mg/kg	1000	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

- 25 Combination screws
- 26 Acetate tape
- 27 Serial screw
- 28 Spring screw
- 29 Antenna plug
- 30 Gasket



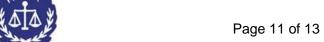
Notes:

1mg/kg=1ppm = 0.0001%

N.D. = Not Detected (<MDL)

MDL = Method Detection Limit
/=Not Regulated
---=Not Applicable

Breakdown of product



Sample photo: 1



Sample photo: 2





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Sample photo: 3



Sample photo: 4





Sample photo: 5



Sample photo: 6

