



TEST REPORT

Reference No	:	WTF17F1298862C
Applicant	Ŀ.	Mid Ocean Brands B.V.
Address		Unit 201 2/f., Laford Centre, 838 Lai Chi Kok Road, Cheung Sha Wa Kownloon ,HongKong
Manufacturer	W.C.	114628
Sample Name	•	wireless charging pad
Model No	Ú.	MO9309
Test Requested		In accordance with the RoHS Directive 2011/65/EU
Test Method	on the second	 With Reference to IEC 62321-2:2013, disassembly, disjointment and mechanical sample preparation With Reference to IEC 62321-3-1:2013, screening - Lead, mercu cadmium, total chromium and total bromine by X-ray fluorescence spectrometry With reference to IEC62321-4:2013, determination of Mercury by ICP-OES With reference to IEC62321-5:2013, determination of Lead and Cadmium by ICP-OES With reference to IEC 62321-7-2:2017 and IEC 62321-7-1:2015, determination of Hexavalent Chromium by UV-Vis
		6) With reference to IEC62321-6:2015, determination of PBBs and PBDEs by GC-MS
Test Conclusion	3	Based on the performed tests on the submitted samples, the results comply with the RoHS Directive 2011/65/EU
Date of Receipt sample	NO. E.	2017-12-21 & 2018-01-09
Date of Test	:	2017-12-21 to 2018-01-11

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Please refer to next page (s)

2018-01-15

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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Compiled by:

Date of Issue

Test Result

Nelson.Liang / Project Engineer

Nelson Liang

9/10

pproved by:

Ding Zhang / Lab Manager

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Test Results:

Part Description No.		Result	of XRF	Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
EX	TEX ITEX LITER OLITERS	Cd	BL		LEX.
	The August Augus	Pb	BL	alter white while	while we
1	White plastic shell	Hg	BL	NA	Comply
	rife Muric Muric Muric Muric	Cr	BL	TEX STEX STEE	CLIE WILL
10		Br	BL	in the the	
	EL ALTE MITE WALL WALL	Cd	BL	at at at a	Et LIE
In.	In In	Pb	BL	of the wall was	2112
2	Silvery metal screw	Hg	BL	NA	Comply
Into .	mer me me	Cr	BL	se outer miter while	MUT. 2
	A LET TEX TEX	Br	W BL	211, 20, 2,	*
TE.	WILL MULL MULL MULL MI	Cd	L BL	t TEX TEX STEE	المار الماران
		Pb	BL	in mr. m.	22. 7.
3	Chip capacitor	Hg	BL	NA NA	Comply
21/2	711 711	Cr	BL	with white whi we	211
.<	t let itet it mile	Br	BL		et est
WILL	Mur. Mr. Mr.	Cd	BL	JET ALTER WITE WAL	MUL
7.	at let it ite	Pb	*OL	- M. M. 1.	*
4	Chip resistor	Hg	BL	NA NA	Comply
	The state of the s	Cr	BL	whi. Aur. Mr.	20, 2,
EX	TER SITE WITE . NA	Br	BL	A A A	TEX
11	201 20	Cd	BL	Will will a	10, 14,
	EX TEX TEX LITE	Pb	BL		et ex
5	Black sponge adhesive sheet	Hg	BL	NA NA	Comply
	at let tet tet	Cr	BL	1, 21, 22, 2	
LIE		Br	BL	to all the life	e alter
30	SALA A A Y	Cd	BL N	T. Mu. M.	7,, ,
TEX	THE STATE OF THE S	Pb	BL	LET TEX	TEX
6	Dark grey magnetic sheet	Hg	BL	NA	Comply
*	LEK TEK LIEK ALTER AND	Cr	BL		LEX X
11.	ry Mur. Mur. Mr. 2.	Br	BL	TEX LIFE OLIVE	ri, wer,
	t at at let let	Cd	BL	11 211 21.	الم الم
	WILL MALL MALL WALL	Pb	IN	EX TEX TEX	E. WITE
7	Solder	Hg	BL	Pb: 167	Comply
TEX	LIER WIFE WILL D	Cr	BL	i at at all	TEX
	2115 211 21	Br A	BL	ie alte alle me	me n
.+	LET TEX TEX STEEL W	Cd	BL	70.	Comply
10	ur, aur au	Pb	BL	- LIEN ALIEN MILE	
8	Chip capacitor	Hg	BL	NA	
	ite with white with the	Cr	BL	Et TEX TEX	TER OUTE
111,	70	Br	BL	" " " " " " " " " " " " " " " " " " "	10,







Part No.	Part Description	Result o	of XRF	Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS	
ex	THE STEE STEE STEE STEELS	Cd	BL	* * * * * * * * * * * * * * * * * * *	et e	
NIT.	ner me me a	Pb	BL	alter white white	White Mr.	
9	Chip IC	Hg	BL	NA	Comply	
E	life while while when wh	Cr	BL	TEX TEX LITER	ALTE: MIT	
-20,		Br	BL	the me me a	, 0,	
	atte mil uni war	Cd	BL	at let let !	EX LIET	
In.	Darly many plantic same of LICE	Pb	BL	Mile White Whi Whi	20	
10	Dark grey plastic core of USB socket	Hg	BL	NA	Comply	
Nr.	SOCKET	Cr	BL	ie alter miter while	Wr. a	
L	at let set set s	Br	on BLvi	20, 20, 2,	.+	
JE	WILL MULL MULL MILL MILL	Cd	BL	t let jet lier	WITE THE	
	Coldon silvery motal nin at LICE	Pb	BL	ar ar ar	25.	
11	Golden-silvery metal pin of USB socket	Hg	BL	NA NA	Comply	
-M	Socket	Cr	BL	write white where we		
	t get get all mate	Br	BL	70 V		
WILL	My My My	Cd	BL	it the alter with whi	MUT.	
10.	Chip LED	Pb	BL	DDD: ND		
12		Hg	BL	PBBs : ND PBDEs : ND	Comply	
		Cr	BL		791 79°	
CEX		Br	IN	t at at		
ال	Chip IC	Cd	BL	WILL WILL A	Comply	
L		Pb	BL	7		
13		Hg	BL	NA .		
		Cr	JUBL J	16 211 211 2		
LIE		Br	BL	to the ties like		
a_{n}	Chip glass diode	Cd	BL N	T. Mus. Mil.	Comply	
TEX		Pb	*OL	at let		
14		Hg	BL	NA		
£		Cr	BL	zn. 2.	et le	
~ ~ (1)		Br	H BL	TEX STEP STEP S	LIL WALL	
	a start all	Cd	BL		EK SLIEK	
	mite white whi whi	Pb	BL	ex lex lex l		
15 mires	Chip IC	Hg	BL	NA NA	Comply	
		Cr	BL	at at a	TEX	
		→ Br →	BL	E MITE MILL WALL	Myr. M	
.4	et let let let le	Cd	BL	24.	1	
	by my my my	Pb	BL	- TEK LIFE OLIER	Comply	
16	Red PCB	Hg	BL	NA NA		
	LEE WITE MUIT MULL AND	Cr	BL	et et et		
	74, 70	Br	BL	TO THE WALL WALL WAS	2/1	







Part No.	Part Description	Result	of XRF	Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
i.j.k	THE THE LITTER STITE OF	Cd	BL	+ .t .t	Et
	mer me me m	Pb	IN A	ex street outer white	White Mr.
17	Solder	Hg	BL	Pb: 397	Comply
	LIE WALL MALL WALL WALL	Cr	BL	TEX TEX TEX	NLTER WALTE
		Br	BL	THE ME THE T	
٠ .	et alie with which was	Cd	BL	at at all a	IEK WALTER
	111 111	Pb	*OL	ni in white whi whi	
18	Chip resistor	Hg	BL	Cr ⁶⁺ : ND	Comply
	wer we we	Cr	/ IN	TE SLIER WITE WITE	WILL I
	at at alt alt of	Br	M BL	24, 24, 24	
JE	WILL MUT MUT M	Cd	BL	t let jet je	المالة المالة
		Pb	BL	Wr. Mr. Mr.	20, 10
19	White fibrous sleeve	Hg	BL	NA NA	Comply
	t et tet i sitet	Cr	BL	TOLITE WALTE WALL WI	
		Br W	BL		
JAL!	My My My	Cd	BL	I'M alter with whi	Comply
10.	Coppery metal wire	Pb	BL	while was united	
20		Hg	BL		
		Cr	BL		
		Br	BL		
ال	Transparent glue Green transparent plastic adhesive tape	Cd	BL	NITE WALL WALL V	Comply
		Pb	BL		
21		Hg	BL	NA .	
		Cr Cr	SUBL S	he the the	
LIE		Br	BL	to the text of	
in.		Cd	BL	r. Mr. M.	
		Pb	BL	LET LET	
22		Hg	BL	NA	
		Cr	BL	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
~ ~1°		Br	BL	TEX LIER WITE	LITE MALIN
		Cd	BL	M. M. M.	
	Solder	Pb	BL	at the the	EK LIER
23		Hg	BL	NA NA	Comply
INLTEX		Cr	BL		TEX
	Any Any Any Any	→ Br →	BL	it mitter white wall	Myr, M
4	LET THE THE WAY	Cd	BL	20. 2	Comply
	Carrie Maria Maria	Pb	BL	FIFT LIFE CLIEB	
24	Silvery metal shell of micro-USB	Hg	BL	NA NA	
	socket	Cr	BL	et et et	
	14, 12,	Br	BL	TO THE WILL WILL WIT	



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Part No.	Part Description	cription Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS	
-+	LEK TEK LIER NITE IN	Cd	BL		E.F.	
	mer mer me a	Pb	BL	LIER WIEL WILL	White M	
25	Dark grey plastic core of micro-USB socket	Hg	BL	NA	Comply	
		Cr	BL	TEX TEX TEX		
1,		Br	BL	Mir Mr Mr 1		
	EL SLIFE WILL MALL WALL	Cd	BL	at at all a	LEK LIET	
MUL		Pb	BL	Nite White Whi whi	Comply	
26	Silvery metal pin of micro-USB	Hg	BL	NA		
Wr.	socket	Cr	BL	IE STEEL WITE WITE		
	I SET THE THE	Br	J BL	20, 20,		
ie.	WILL MUST AND AND AND	Cd	BL	t TEX TEX STEE	المارة المارة	
		Pb	BL	Wr. Aur Aur	20. 2.	
27	Black-red plastic wire covering	Hg	BL	NA NA	Comply	
M		Cr	BL	mite unit was we		
		Br W	BL			
MILL	Red plastic wire covering	Cd	BL	NA TOTAL MARKET	Comply	
		Pb	BL			
28		Hg	BL			
		Cr	BL			
EX		Br	BL			
12	20, 20,	Cd	BL	WILL WILL A	10. 11.	
	EX TEX ITEX TITE	Pb	BL	7	LEX LEX	
29	Silvery metal wire	Hg	BL	NA NA	Comply	
		Cr	BL	1, 2, 2,		
NIE!		Br	BL	the set of the set		
70	A A A A A A A	Cd	BL N	The Miles Miles	Comply	
TEX	THE PARTY OF THE P	Pb	BL	L A LET TET		
30	Black plastic shell	Hg	BL	NA		
		Cr	BL		it is	
		Br	BL	JET JIE NITE	Lit. White	
31	White plastic sheet	Cd	BL	21, 20, 20,	Comply	
		Pb	BL	et let liet li		
		Hg	BL	NA NA		
		Cr	BL	at at all		
	24 24 25	→ Br	BL	E all with whi		



Remark:

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(1) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (for Cr6⁺) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1: 2013 (unit: mg/kg)

Element	Polymer	Metal	Composite Materials
Cd	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	BL ≤ $(70-3\sigma)$ < IN < $(130+3\sigma)$ ≤ OL	LOD < IN < (150+3σ) ≤ OL
Pb	$BL \le (700-3\sigma) < IN < (1300+3\sigma) \le OL$	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (500-3σ) < IN < (1500+3σ) ≤ OL
Hg	$BL \le (700-3\sigma) < IN < (1300+3\sigma) \le OL$	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (500-3σ) < IN < (1500+3σ) ≤ OL
Cr	BL ≤ (700-3σ) < IN	BL ≤ (700-3σ) <in< td=""><td>BL ≤ (500-3σ) < IN</td></in<>	BL ≤ (500-3σ) < IN
Br	BL ≤ (300-3σ) < IN	st write write write w	BL ≤ (250-3σ) < IN

BL= Below Limit

OL= Over Limit

LOD = Limit of Detection

-- = Not Regulated

- (2) "IN" expresses the inconclusive region, and further chemical testing to confirm whether it complies with the requirement of RoHS Directive.
- (3) The XRF screening test for RoHS elements the reading may be different to the actual content in the sample be of non-uniformity composition.
- (4) ppm = mg / kg, based on the dry weight of tested sample.
- (5) ND = Not Detected, less than the value of Method Detection Limit.
- (6) NA = Not Applicable, as the XRF screening test result was below the limit, it was not need to conduct the wet chemical testing.
- (7) MDL= Method Detection Limit in wet chemical test

	Test Items	Pb	Cd	Hg	Cr ⁶⁺		PBB	PBDE
	Units	mg/kg	mg/kg	mg/kg	mg/kg	μg/cm ²	mg/kg	mg/kg
5	MDL	2.50	2	2	2	0.1	5	5 5

The MDL for single compound of PBBs and PBDEs is 5mg/kg, MDL of Cr⁶⁺ for polymer and composite sample is 2mg/kg and MDL of Cr⁶⁺ for metal sample is 0.1µg/cm².

(8) According to IEC 62321-7-1:2015, determined of Cr⁶⁺ on metal sample by boiling water extraction test method, and result is shown as Positive/Negative.

Boiling water extraction:

Negative = Absence of Cr⁶⁺ coating, the detected concentration in boiling water extraction solution is less than 0.10ug/cm².

Positive = Presence of Cr⁶⁺ coating, the detected concentration in boiling water extraction solution is greater than 0.13ug/cm².

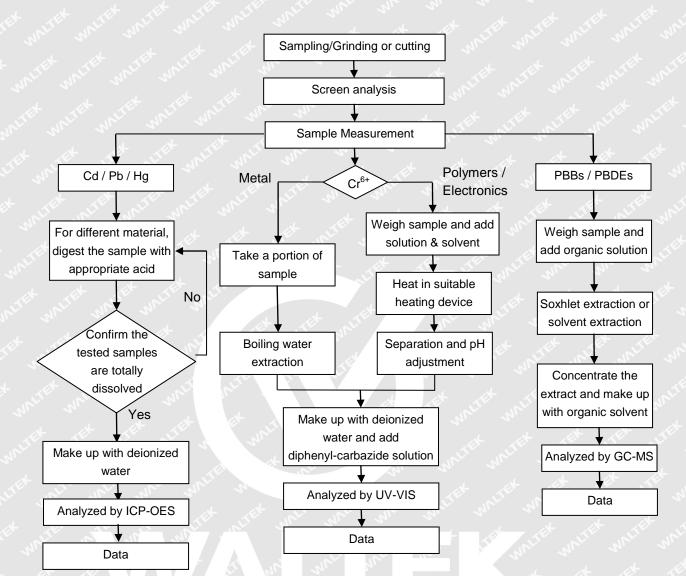
Information on storage conditions and production date of the tested sample is unavailable and thus Cr⁶⁺ results represent status of the sample at the time of testing.

- (9) * = According to the declaration from client, the source of lead in test sample could be from the glass or ceramic material of that electronic component which is exempted by Directive 2011/65/EU.
- (10) The testing standard "IEC62321-7-2:2017" does not been accredited by CNAS.
- (11)As per client's requirement, all results of specimen are extracted from report No. WTF17F1298852A1C.

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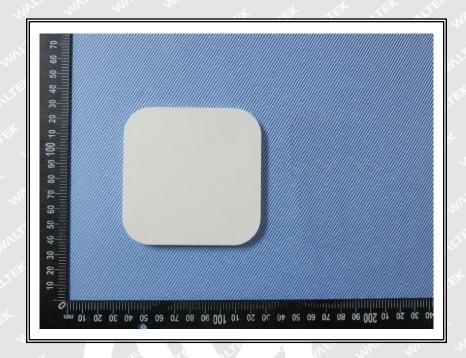
Measurement Flowchart:



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Sample Photo:

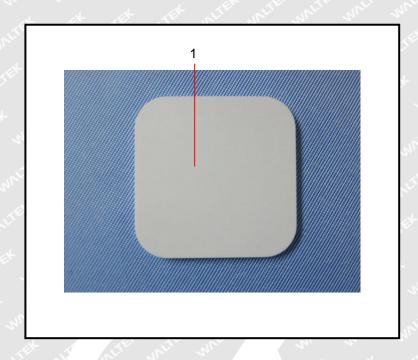


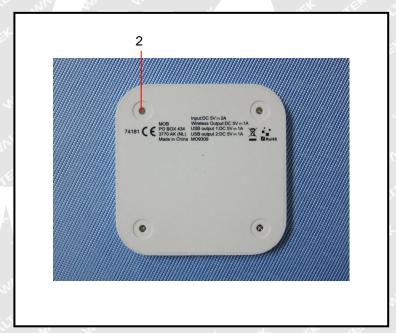




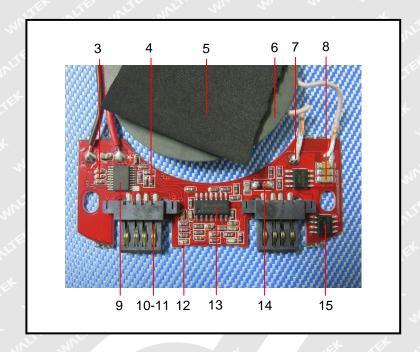
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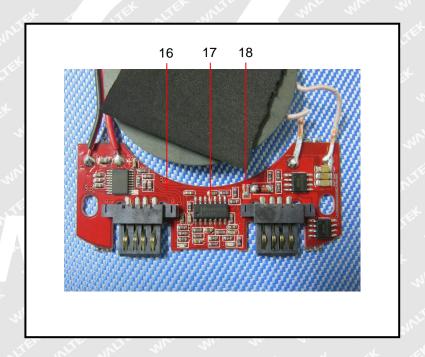
Photograph of parts tested:



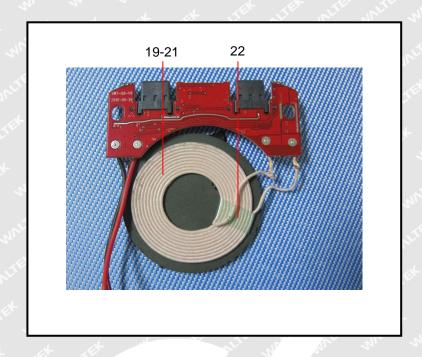


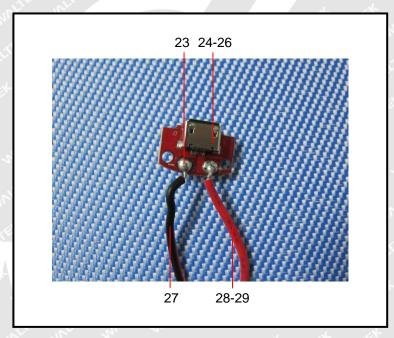




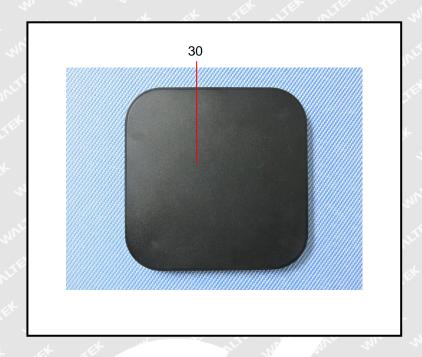


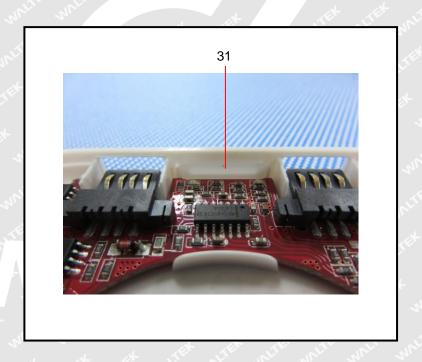












===== End of Report =====