

Test Report

No. CANEC2300364451

Date: 20 Feb 2023

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Client Name : LE SHAN SHARE ELECTRONIC CO, LTD

Client Address : NO.9 NANXIN ROAD,HIGH-TECH ZONE LESHAN CITY,SICHUANP.R CHINA

Sample Name : Diode
 Model No. : SHV-08
 Material No. : 11201514000545
 Client Ref. Info. : See remark
 Buyer : Midea

The above sample(s) and information were provided by the client.

SGS Job No. : 10023982 - CQ
 Date of Sample Received : 06 Jan 2023
 Testing Period : 06 Jan 2023 - 19 Jan 2023
 Test Requested : Selected test(s) as requested by the client.
 Test Method(s) : Please refer to next page(s).
 Test Result(s) : Please refer to next page(s).

Result Summary :

Test Requested	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU and client's requirement - Lead, Mercury, Cadmium and Hexavalent chromium	PASS
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU and client's requirement- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	PASS

Signed for and on behalf of
 SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch



Zm guan
 Approved Signatory

scan to see the report



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SGS-CSTC Standards Technical Services Co., Ltd.
 Guangzhou Branch

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Test Result(s) :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN23-003644.002	Black material with gray printing
SN2	CAN23-003644.003	Copper-colored metal with chip
SN3	CAN23-003644.004	Silver-gray metal pin

Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU and client's requirement - Lead, Mercury, Cadmium and Hexavalent chromium

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, analyzed by ICP-OES and UV-Vis .

Test Item(s)	Limit	Unit	MDL	003	004
Cadmium (Cd)	75	mg/kg	2	ND	ND
Lead (Pb)	600	mg/kg	2	9065 [▲]	ND
Mercury (Hg)	600	mg/kg	2	ND	ND
Hexavalent Chromium (Cr(VI))▼	-	µg/cm ²	0.10	ND	ND

Notes :

- (1) The limit was submitted by client. IEC 62321 series is equivalent to EN 62321 series.
- (2) ▼= a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI
 - b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating
 - c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination
 Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU and client's requirement- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)



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Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit	MDL	002
Cadmium (Cd)	75	mg/kg	2	ND
Lead (Pb)	600	mg/kg	2	8
Mercury (Hg)	600	mg/kg	2	ND
Hexavalent Chromium (CrVI)	600	mg/kg	8	ND
Sum of PBBs	600	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	600	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND
Dibutyl phthalate (DBP)	600	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	600	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	600	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	600	mg/kg	50	ND

Notes :

- (1) The limit was submitted by client. IEC 62321 series is equivalent to EN 62321 series.
- (2) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical



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devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

Remark: According to the declaration from the client, Lead (Pb) in specimen 003 is exempted by EU RoHS directive 2011/65/EU based on [ANNEX III 7(a)]: Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead).

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule ($w=0$) stated in ILAC-G8:09/2019.



Remark:

SHV1-01/02/03/04/05/06/07/08/09/10/11/12/13 SHV1-14/16/17/18/20/22/24/25/30/35/40/45/50
SHV-01/02/03/04/05/06/07/08/09/10/11/12/13
SHV-14/16/17/18/20/22/24/25/30/35/40/45/50
SU1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/18/20/22/25/30/35/40 H
2DF Model 2DF, followed by 005,01,02,03,04,05,06,07,08,10,12, maybe followed by M,S
DF Model DF, followed by 15,20, followed by 01,02,03,04,05,06,07,08,09,10, maybe followed by M,S
MB Model MB, followed by 05,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29, followed by S,F
MSB Model MSB, followed by 2,3,4,5,6,7,8,9,10, followed by 01,02,03,04,05,06,07,08,10,12,13,14,15,16
P4KE Model P4KE, followed by 6,8,7,5,8,2,9,1,10,11,12,13,15,16,18,20,22,24,27,30,33,36,39,43,47,51,56,62,68,75,82,91,100,110,120,130,150,160,170,180,200,220,250,300,350,400,440, maybe followed by A
P6KE Model P6KE, followed by 6,8,7,5,8,2,9,1,10,11,12,13,15,16,18,20,22,24,27,30,33,36,39,43,47,51,56,62,68,75,82,91,100,110,120,130,150,160,170,180,200,220,250,300,350,400,440, maybe followed by A
PSM Model P, followed by 4,6, followed by 6,8,7,5,8,2,9,1,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50
MBS Model MB, followed by 05,1,2,3,4,5,6,7,8,9,10, followed by 02,04,06,08,10,12, followed by M,F,S
S1FD Model S1FD, followed by 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,20,25,30,40,50,60,75 followed by A, B, C, D, E, F, G, H, U followed by 20,30,40,50,60,70,80,100,120, 160,180 maybe followed by A, B, C, D, E, F, G, H, J, K, L, M, N, P,U, DH, S, AF, GF, KF, DK, CAS
S1FU Model S1FD, followed by 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,20,25,30,40,50,60,75 followed by A, B, C, D, E, F, G, H, U followed by 20,30,40,50,60,70,80,100,120, 160,180 maybe followed by A, B, C, D, E, F, G, H, J, K, L, M, N, P,U, DH, S, AF, GF, KF, DK, CAS
S1FC Model S1FD, followed by 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,20,25,30,40,50,60,75 followed by A, B, C, D, E, F, G, H, U followed by 20,30,40,50,60,70,80,100,120, 160,180 maybe followed by A, B, C, D, E, F, G, H, J, K, L, M, N, P,U, DH, S, AF, GF, KF, DK, CAS
S2FD Model S2FD, followed by 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,20,25,30,40,50,60,70,80,90, followed by A, B, C, D, E, F, G, H followed by 20,30,40,50,60,80,100,120,160,180 maybe followed by A, B, C, D, E, F, G, H, J, K, L, M, N, LA, LF, BF, S, AF, GF, KF, DK, CAS
EPS Model 10,15,20,25,30,40,50,60,70,75,80,90, followed by EPS, followed by 06,08,10,12,14,16,20, followed by A,H,A2,C,C2,Z,DH,LH, maybe followed by A, B, C, D, E, F, G, H, K,
FD Model FD, followed by 1,2,3,4,5,6,7,8,9, 10, followed by A,B,D,E,G,J,M,A, followed by A,B,C
RD Model RD, followed by 1,2,3,4,5, 6,7,8,9,10, followed by A,B,D,E,G,J,M,A, followed by A,B,C



TDD Model TDD, followed by 25,30,35,45,50,60,70,80 followed by -, followed by 02,04,06,08,10,12,14,16,18,20,22
SF Model SF, followed by 1,1.5,2,2.5,3,3.5,4,4.5,5,6,7,8,9,10,11,12,13,14,15,16,18,20,22,25,30,35,40, followed by H
FSHV Model FSHV followed by 10,20,30,40,50,60,70,80,90,100,110,120, followed by N
IH15D/G/J/K/M, IH20D/G/J/K/M, IH25D/G/J/K/M,
BYX131/132/133/134/135/136/137/138/139/1310/1311/1312/1313/1314/1315/1316/1318/1320/1322/1325 /1330/1335/1340 P
SFA1/2/3/4/5/6/7/8/9/10/11/12 H
SMAJ(5.0/6.0/6.5/6.8/7.0/7.5/8.5/9.0/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31 /32/33/34/35/36/37/38/39/40/41/42/43/44//45/46/47/48(/A)
SMBJ(5.0/6.0/6.5/6.8/7.0/7.5/8.5/9.0/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31 /32/33/34/35/36/37/38/39/40/41/42/43/44//45/46/47/48(/A)
SMCJ(5.0/6.0/6.5/6.8/7.0/7.5/8.5/9.0/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31 /32/33/34/35/36/37/38/39/40/41/42/43/44//45/46/47/48(/A)
P4KE(50/51/350/400/440(/A) P6KE(50/51/350/400/440(/A) P4SMA (50/51/350/400/440(/A)
P6SMB(50/51/350/400/440(/A)
SMAJ(50/51/350/400/440(/A) SMBJ (50/51/350/400/440(/A) SMCJ (50/51/350/400/440(/A)
60EPS06/08/10/12/14/16/18/20
HV350R8G

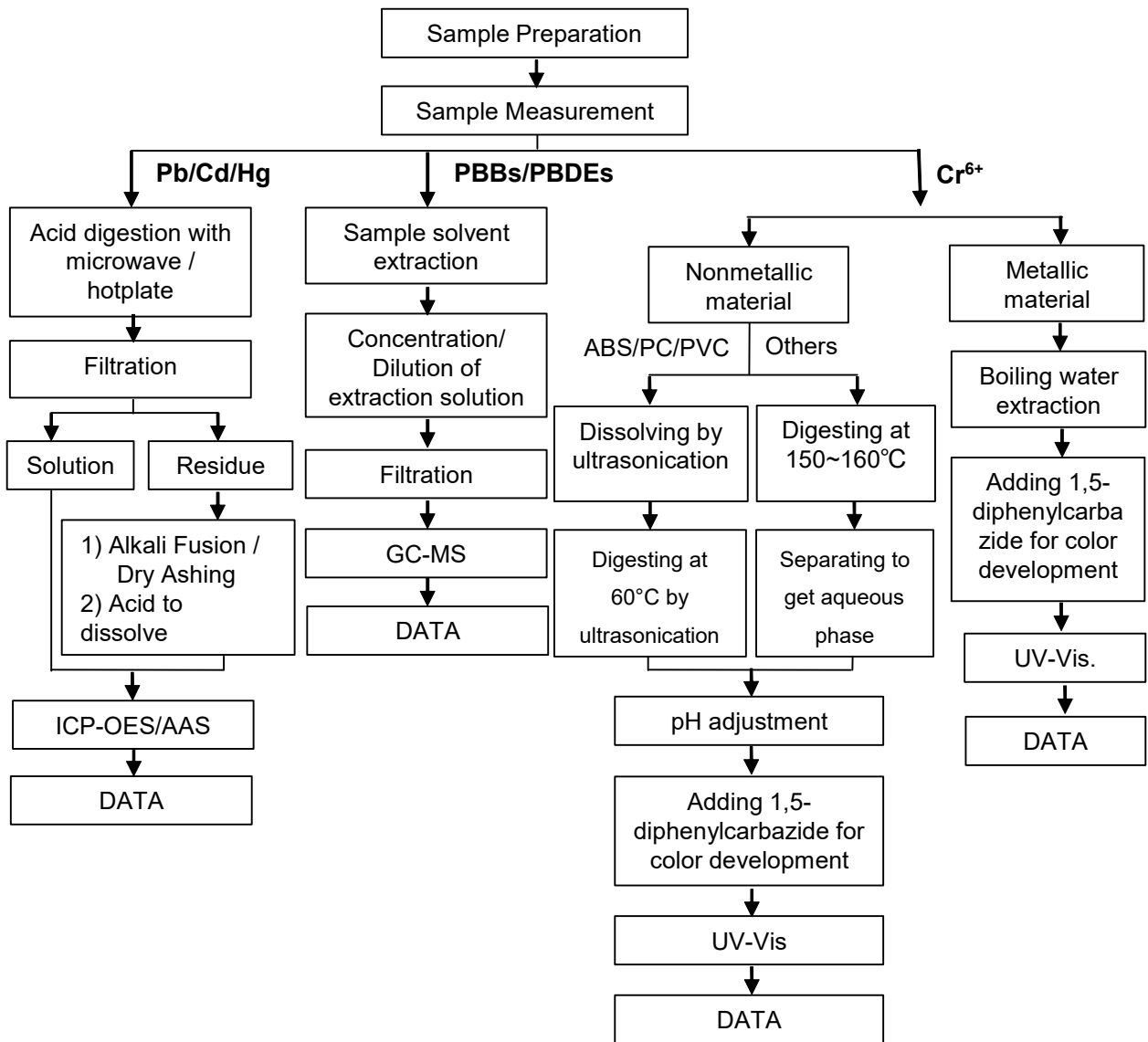


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Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

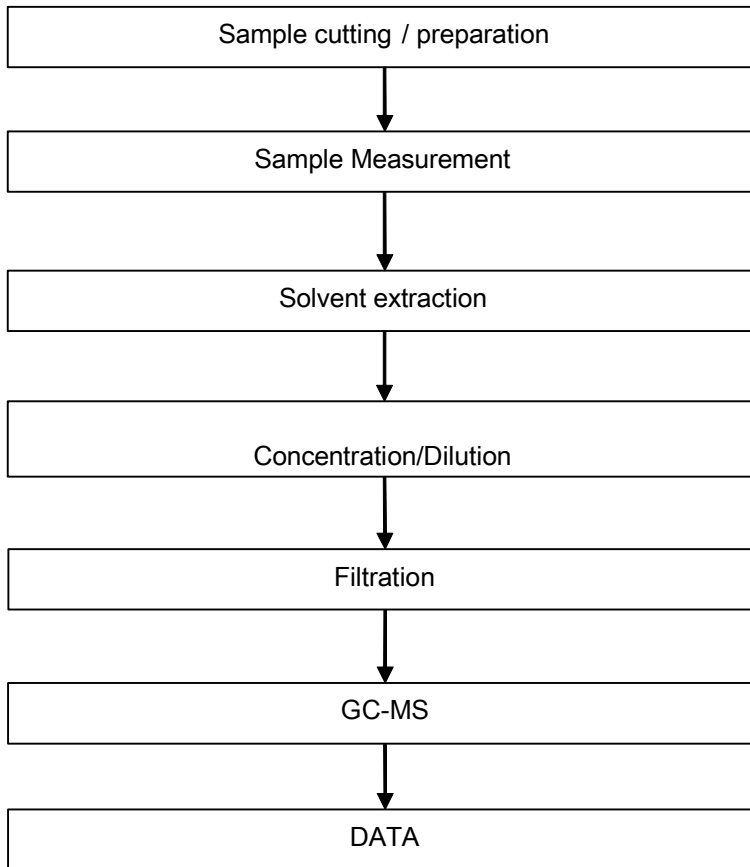
1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded).



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Phthalates Testing Flow Chart



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