

Test Report No.: 68.431.23.2312.01

Dated: 2023-06-16



Applicant : Nanjing Microne Electronics Inc.
5F,1ST Building No.699-8 Xuanwu Avenue, Xuanwu District ,Nanjing

Sample Description : IC

Product Type / End use : (SOT23 , SOT23-3/5/6/8 , SOT89-3/5 , TO92 , HTSSOP16, SOP8 , ESOP8, DIP8 , DFN , TSSOP8 , MSOP8 , SOT353 , SOT223 , SOP24 , QFN , TO-251 , TO-252 , TO-220 , TO-126 , TO263, FBP 等)
其他的 : SOP4/7/14/16 , DIP7/14 , TSSOP24 , SSOP10/16/20/24 , TO277

Test Sample Receipt Date, Location : 2023-05-18, Shenzhen

Test Period, Location : From 2023-05-19 to 2023-05-31, Shenzhen

Test Result(s) : Refer to Section 3

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Lab 1 - Chemical testing and
part of electrical testing
Lab 2 - Physical & mechanical
testing

Building 12&13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou, Nanshan District, Shenzhen, Guangdong, China

Building A2, Jin'ao Industrial Park, No. 150, Jingfang Road, Fuhai, Baoan District, Shenzhen, Guangdong, China

**Purpose Of Examination / Conclusion:**

No.	Test Item(s)	Conclusion
	Test according to Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU and its amendment Directive (EU) 2015/863	
1.	Heavy Metals Content Test (Total Cadmium, Total Lead, Total Mercury, Hexavalent Chromium)	Pass
2.	Brominated Flame Retardants (PBBs & PBDEs)	Pass
3.	Phthalates (DEHP, BBP, DBP and DIBP)	Pass

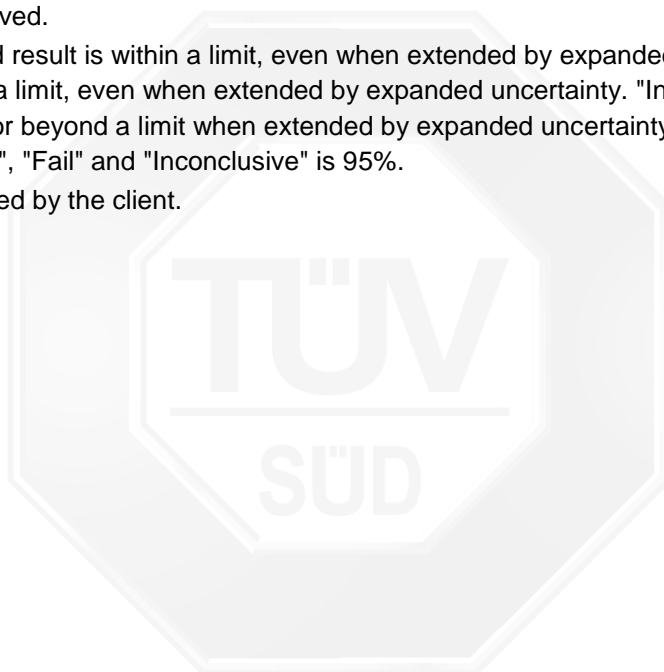
Remarks:

(1) The results relate only to the items tested.

(2) Samples are tested as received.

(3) "Pass" means the measured result is within a limit, even when extended by expanded uncertainty. "Fail" means the measured result is beyond a limit, even when extended by expanded uncertainty. "Inconclusive" means the measured result can be within or beyond a limit when extended by expanded uncertainty. The confidence level of the expanded uncertainty for "Pass", "Fail" and "Inconclusive" is 95%.

(4) The test sample was specified by the client.

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TUV SUD Group

Prepared by:

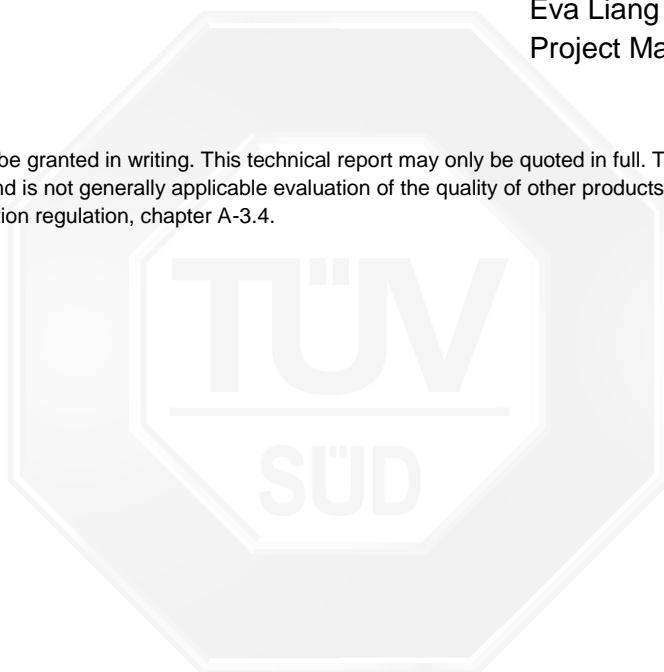
Reviewed by:



Gianna Gao
Project Manager

Eva Liang
Project Manager

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1. Description of the Submitted Sample:

Sample Description	IC

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2. List of Materials as identified by the Laboratory:

T. No.	Sample No.	Colour and Description	Photograph
T1	001	Black material (ETSSOP16)	



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3. Test Result

3.1 Heavy Metals Content Test (Total Cadmium, Total Lead, Total Mercury, Hexavalent Chromium)

Test method: Microwave digestion by ICP-OES with reference to EN 62321-4:2014+A1:2017, EN 62321-5:2014 and EN 62321-7-2:2017 (For Hexavalent Chromium)

[Reporting Limit= 10.0 mg/kg for Cadmium, Lead, Mercury and 10 mg/kg or 0.10 µg/cm² for Chromium VI]

Sample	Total Cadmium [mg/kg]	Total Lead [mg/kg]	Total Mercury [mg/kg]	Hexavalent Chromium [mg/kg]	Conclusion
001	<10.0	<10.0	<10.0	<10.0	Pass
RoHS Requirement	100	1000	1000	1000	--

Note 1. "<" denotes less than.
2. "mg/kg" denotes milligram per kilogram.



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3.2 Brominated Flame Retardants (PBBs & PBDEs)

Test Method: With reference to EN 62321-6:2015, extraction with toluene and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS).

[Reporting Limit = 5mg/kg]

Test Item		Results [mg/kg]	RoHS Requirement [mg/kg]
		Sample 001	
PBBs	Monobromobiphenyl	<5	Sum of PBBs < 1000
	Dibromobiphenyl	<5	
	Tribromobiphenyl	<5	
	Tetrabromobiphenyl	<5	
	Pentabromobiphenyl	<5	
	Hexabromobiphenyl	<5	
	Heptabromobiphenyl	<5	
	Octabromobiphenyl	<5	
	Nonabromobiphenyl	<5	
	Decabromobiphenyl	<5	
	Sum of detected PBBs	<50	
PBDEs	Monobromodiphenyl ether	<5	Sum of PBDEs < 1000
	Dibromodiphenyl ether	<5	
	Tribromodiphenyl ether	<5	
	Tetrabromodiphenyl ether	<5	
	Pentabromodiphenyl ether	<5	
	Hexabromodiphenyl ether	<5	
	Heptabromodiphenyl ether	<5	
	Octabromodiphenyl ether	<5	
	Nonabromodiphenyl ether	<5	
	Decabromodiphenyl ether	<5	
	Sum of detected PBDEs	<50	

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**3.3 Phthalates (DEHP, BBP, DBP and DIBP)**

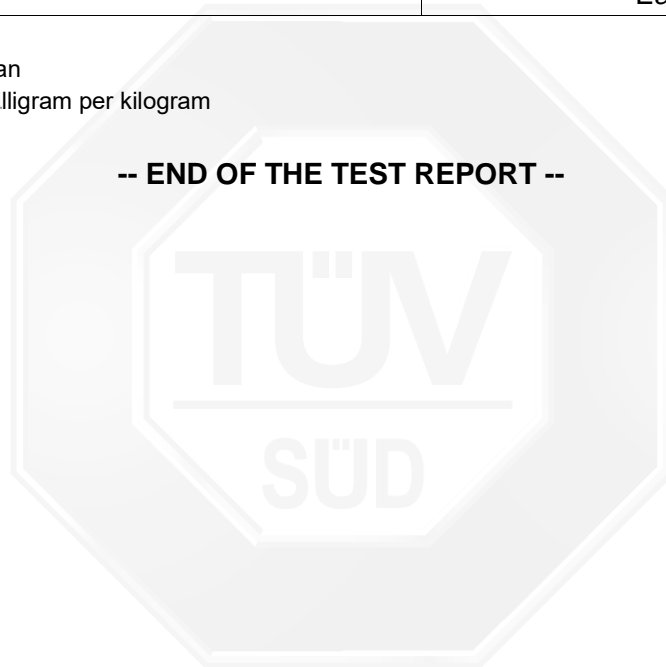
Test Method: with reference to EN 62321-8:2017, extracted by organic solvent and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS).

[Reporting Limit = 50mg/kg]

Test Item	CAS No.	Result [mg/kg]
		Sample 001
Di-iso-butyl Phthalate (DIBP)	84-69-5	<50
Di-butyl Phthalate (DBP)	84-74-2	<50
Butyl-benzyl Phthalate (BBP)	85-68-7	<50
Di-(2-ethyl-hexyl) Phthalate (DEHP)	117-81-7	<50
RoHS Requirement		Each < 1000

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-- END OF THE TEST REPORT --



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