



Chuangxin Online Test Center Laboratory

Add: F/r 401 Building A, Ying Da Feng industrial No,393,Jihua Rd.LongGang
Dis. Shenzhen China
Tel: 0755-83765367 Email: engineer@iclab-cn.com

Report No:	SZ20220425008
Date:	2022/04/25
Page:	1/13

Project Inspection Report

Company :
Address :
Sample Name : T491X685K050AT
Manufacture : Kemet
Date Code : N/A
Package Type : SMD
Sample Number : 3 PCS
Check Number : 3 PCS
Date of Received : 2022/04/11
Date of Tested : 2022/04/11/17:00 ~ 2022/04/14/15:00

WE HEREBY CERTIFY THAT:

The test(s) shown in the attachment were conducted according to the indicating procedures. We assume full responsibility for the accuracy and completeness of these tests and vouch for the qualifications of all personnel performing them.

Inspected by Engineer
Nacy

Reviewed by Project Manager
Felix

Note:

1. This report will be invalid if reproduced in whole or in part.
2. This report refers only to the specimen(s) submitted to test, and is invalid if used separately.
3. This report is only valid with the examination seal and signature of this institute.
4. The tested specimen(s) will only be preserved for thirty days from the date issued, if not collected by the applicant.
5. This report is only responsible for the samples tested.



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Report No:	SZ20220425008
Date:	2022/04/25
Page:	2/13

Items test

- External visual inspection
- Pin Correlation Test
- Programming test
- Solder ability Analysis
- Radiography (X-ray)
- ROHS test
- Key Functional Testing (KFT)
- Baking
- Tape and Reel
- Internal visual inspection
- Top permanency test
- Cross Section Analysis
- EDX Analysis

Methods & Equipment

1.1 Applicable Standard

- AS6081
- GJB4027A-2006

1.2 Optical Microscope

- Equipment Spec:
Top view: FINIAL Hi-scope System SEZ-260: X7 ~ X45

1.3 Functional testing Equipment

- MIXED SIGNAL IC TESTER TR6850:
64 to 256 pin logic I/O pin with 64 pin increments.
High-precision measurement unit.
40MSPS/16bit arbitrary waveform generator, 10MSPS/14 bit digitizer.

Easy programming & debugging:

1.4 Metallographic grinding and polishing machine:

- Device model: JMP-2AW

1.5 EDX testing Equipment:

Device model: Horiba 7021-H



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Report No:	SZ20220425008
Date:	2022/04/25
Page:	3/13

1.6 Testing Environment

- Ambient Temperature: $25\pm 5^{\circ}\text{C}$
- Relative Humidity: 45%-65% RH

1.7 Testing Base

- 《KEMET T491X685K050AT》

<http://www.semice.com/6f2ffe5e-07e7-4aa6-a8e0-2af60d29edc3.html>

Analysis Summary

Cross section Analysis

Applicable Standard: GJB4027A-2006

Cross Section analysis on 1 PCS sample. Devices Shows signs of delamination between Tantalum Wire and Tantalum in all inspected.

EDX Analysis

Applicable Standard: AS6081

EDX analysis on 1 PCS sample.

Analysis element results:

#1: C, O, Al, Si, Mn, Ag。

#2: C, O, Al, Si, Mn, Ag。

#3: C, O, Si, Mn, Cu。

#4: C, O, Al, Si, Mn, Cu, Ag。

#5: C, O, Si。

#6: C, O, Al, Si, Mn, Ag。

#7: C, O, Si, Ti, Fe。

#8: C, O, Ta。

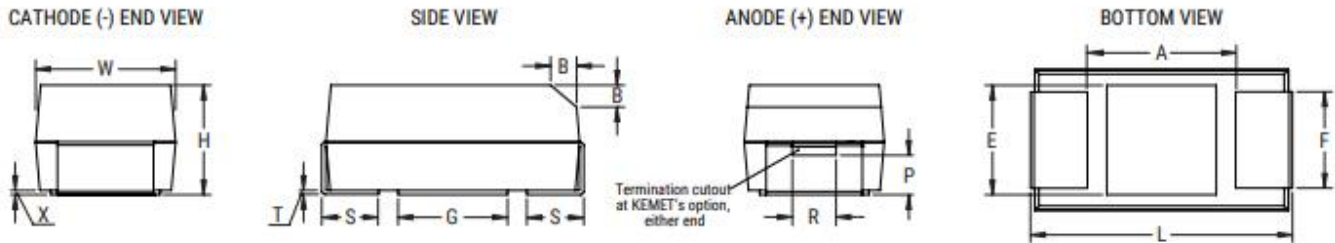


Report No:	SZ20220425008
Date:	2022/04/25
Page:	4/13

1. Device Description:

This product meets or exceeds the requirements of EIA standard 535BAAC. The T491 is classified as moisture sensitivity level (MSL) 1 under J STD 020, with unlimited floor life time at $\leq 30^{\circ} \text{C}/85\% \text{RH}$. The T491 standard terminations are available in 100% matte tin and provide excellent wetting characteristics and compatibility with today's surface mount solder systems.

2. Package Dimensions:





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Report No:	SZ20220425008
Date:	2022/04/25
Page:	5/13

3. Receiving Inspection:

Gross Weight	5.0g	Parts Total	3 PCS
Number Of Boxes	N/A	Full Label	Non Present
Package type	Bulk	Moisture protection	Non Present
MSL	N/A	ESD protection	Non Present

Note: All devices contain 3 PCS samples(#1-#3).

Received View





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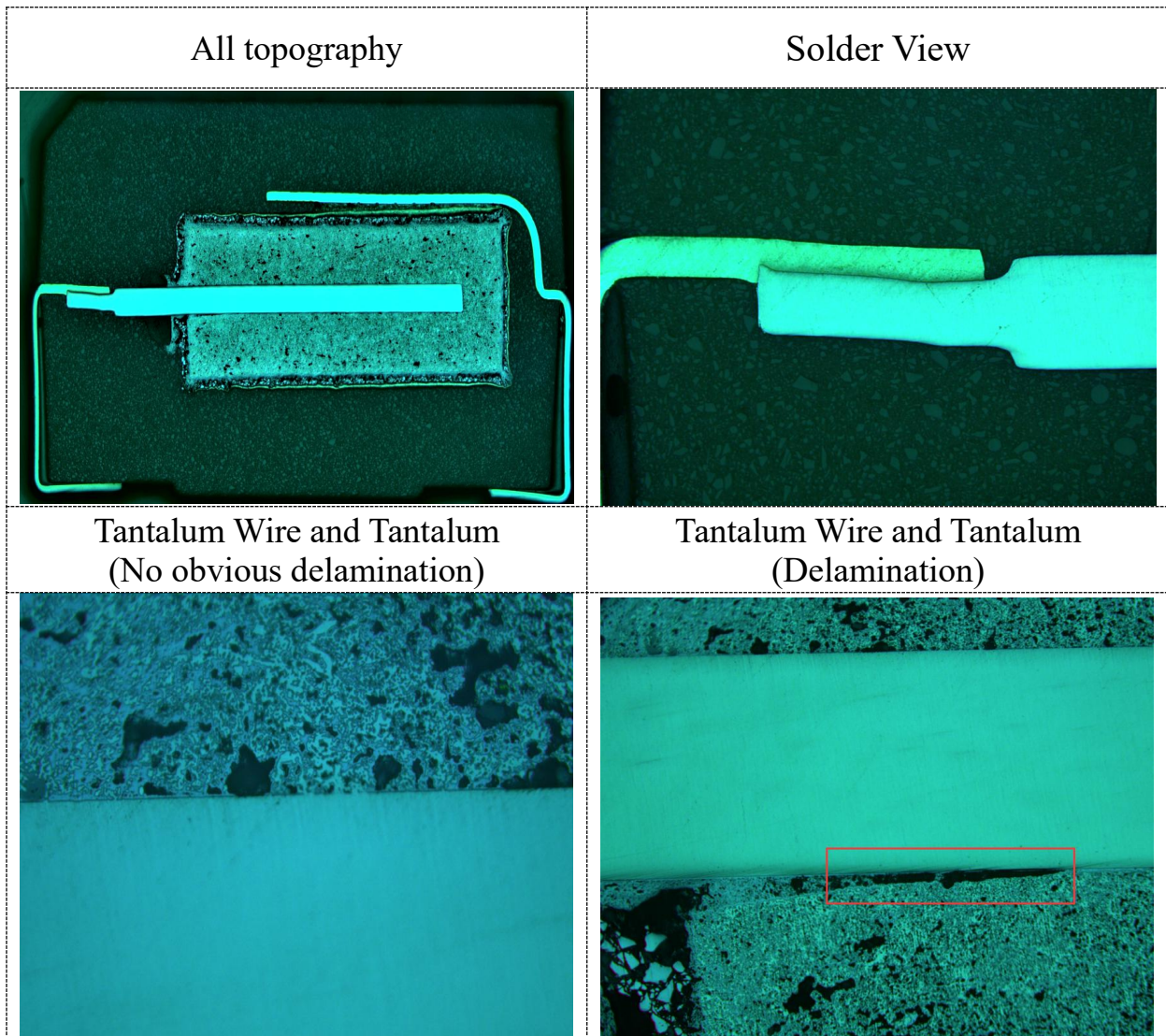


Report No:	SZ20220425008
Date:	2022/04/25
Page:	6/13

4. Cross section Analysis

Applicable Standard: GJB4027A-2006

Cross Section analysis on 1 PCS sample. Devices Shows signs of delamination between Tantalum Wire and Tantalum in all inspected.





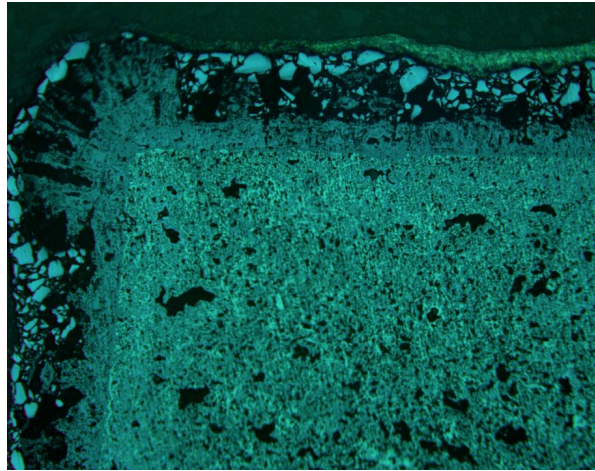
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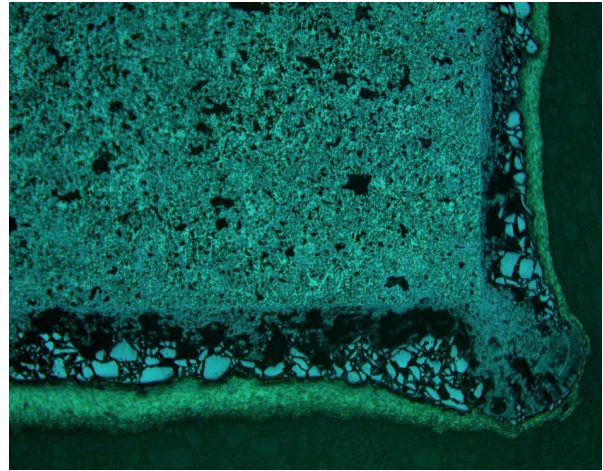


Report No:	SZ20220425008
Date:	2022/04/25
Page:	7/13

Corner View-1



Corner View-2



5. EDX Analysis

Applicable Standard: AS6081

EDX analysis on 1 PCS sample.

Analysis element results:

#1: C, O, Al, Si, Mn, Ag。

#2: C, O, Al, Si, Mn, Ag。

#3: C, O, Si, Mn, Cu。

#4: C, O, Al, Si, Mn, Cu, Ag。

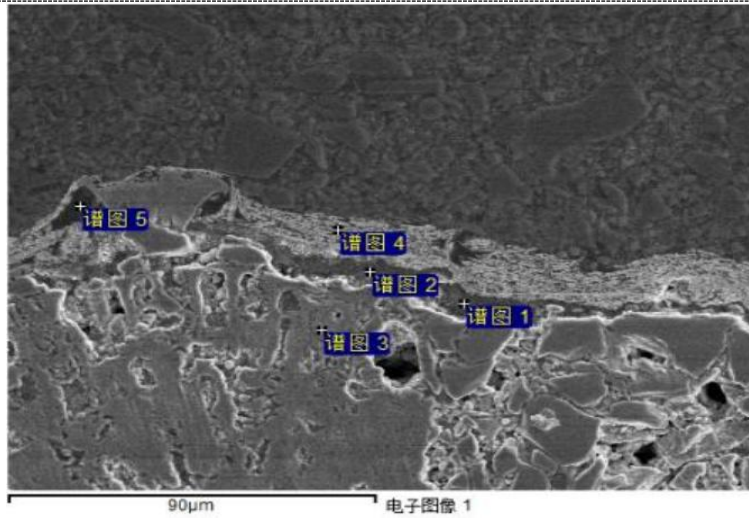
#5: C, O, Si。

#6: C, O, Al, Si, Mn, Ag。

#7: C, O, Si, Ti, Fe。

#8: C, O, Ta。

#1, #2, #3, #4, #5



Analysis element results (#1, #2, #3, #4, #5)

Processing option : All elements analysed (Normalised)

Spectrum	In stats.	C	O	Al	Si	Mn	Cu	Ag	Total
谱图 1	Yes	62.34	19.04	0.43	6.60	10.18		1.42	100.00
谱图 2	Yes	57.56	17.04	0.53	5.63	18.13		1.11	100.00
谱图 3	Yes	3.58	35.35		2.65	56.75	1.66		100.00
谱图 4	Yes	7.15	8.52	0.77	0.55	0.76	2.02	80.22	100.00
谱图 5	Yes	73.94	24.27		1.79				100.00

Max.		73.94	35.35	0.77	6.60	56.75	2.02	80.22	
Min.		3.58	8.52	0.43	0.55	0.76	1.66	1.11	

All results in weight%

Spectrum-#1,#2,#3



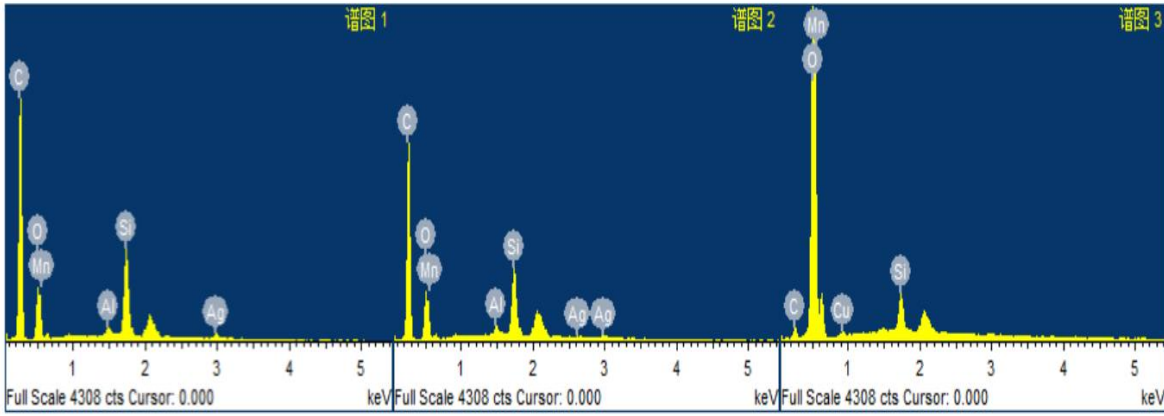
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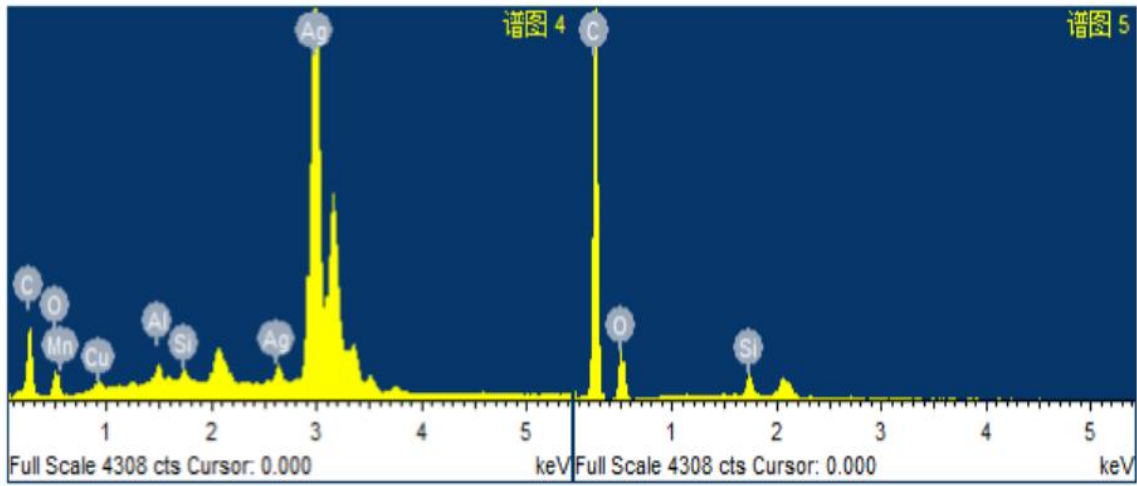


Report No:	SZ20220425008
Date:	2022/04/25
Page:	9/13

#1 #2 #3 #4 #5 2022/4/24 18:32:19



Spectrum-#4,#5



#6, #7

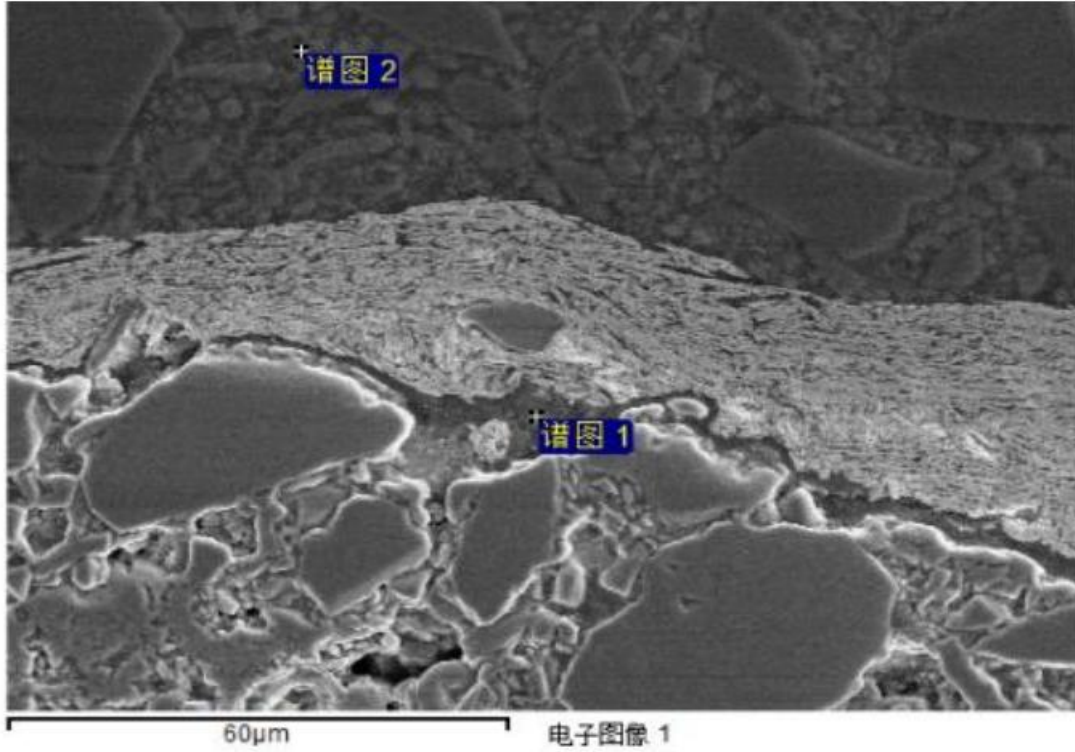


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Report No:	SZ20220425008
Date:	2022/04/25
Page:	10/13



Analysis element results (#6, #7)

Processing option: All elements analysed (Normalised)

Spectrum	In stats.	C	O	Al	Si	Ti	Mn	Fe	Ag	Total
谱图 1	Yes	52.43	21.40	1.12	6.00		16.10		2.96	100.00
谱图 2	Yes	23.83	45.06		27.17	1.41		2.53		100.00
Max.		52.43	45.06	1.12	27.17	1.41	16.10	2.53	2.96	
Min.		23.83	21.40	1.12	6.00	1.41	16.10	2.53	2.96	

Spectrum-#6, #7

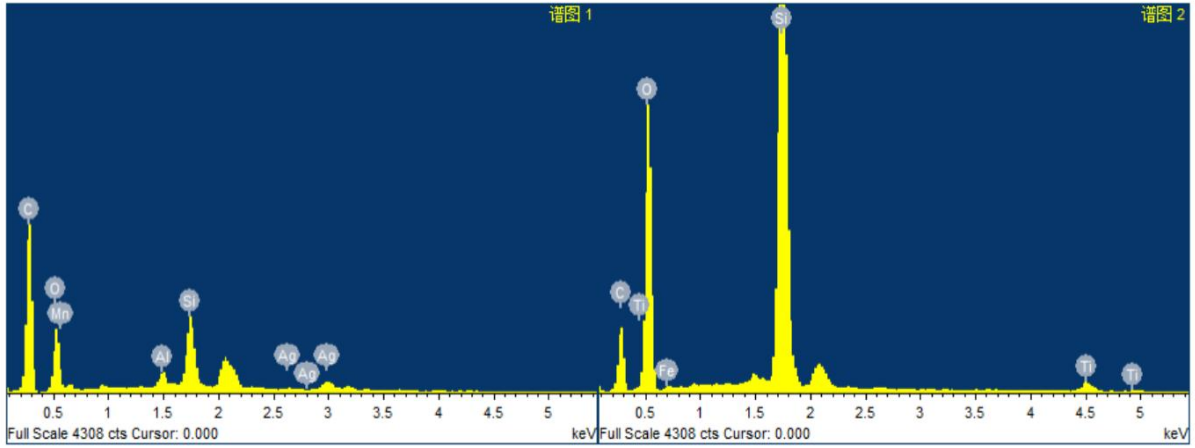


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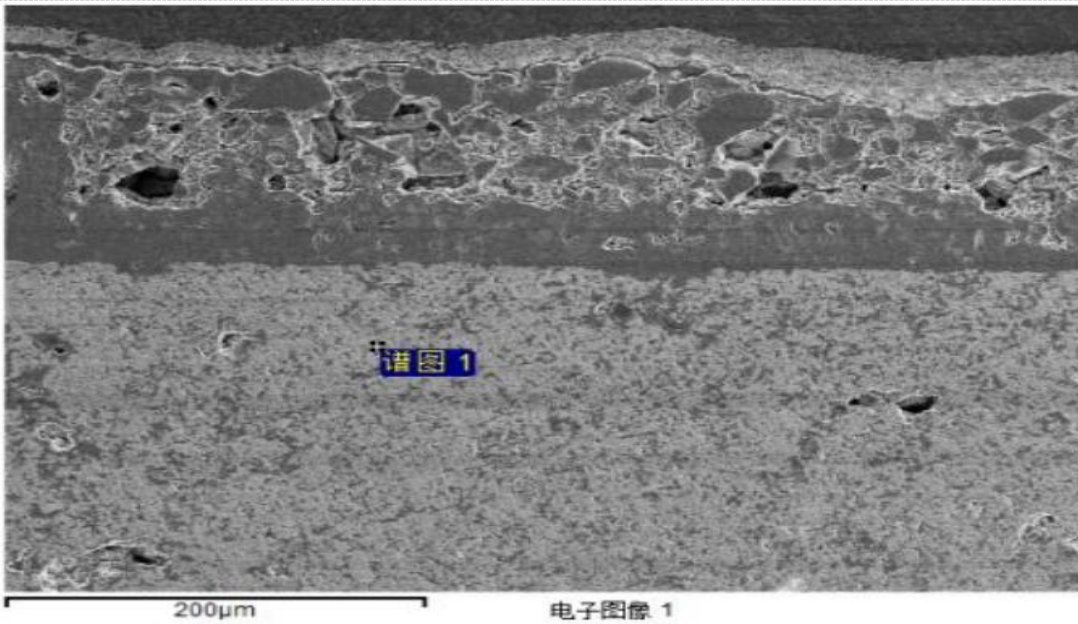
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Report No:	SZ20220425008
Date:	2022/04/25
Page:	11/13



#8



Analysis element results
(#8)



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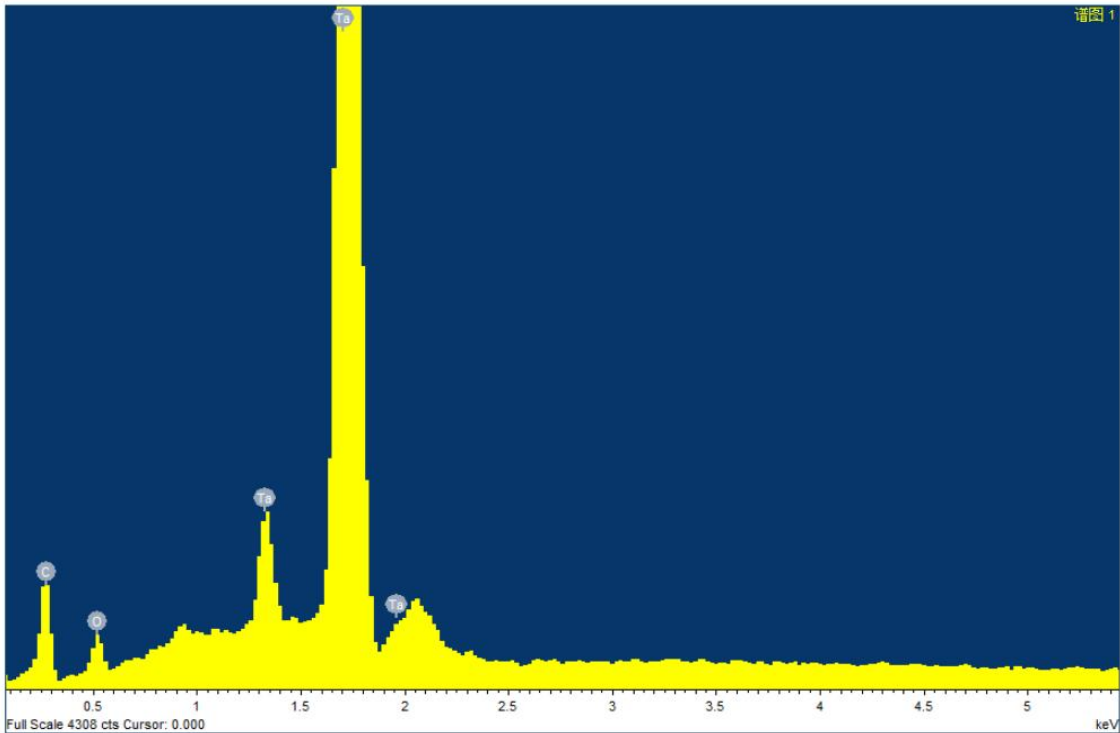


Report No:	SZ20220425008
Date:	2022/04/25
Page:	12/13

Processing option : All elements analysed (Normalised)

Spectrum	In stats.	C	O	Ta	Total
谱图 1	Yes	11.57	3.15	85.29	100.00
Mean		11.57	3.15	85.29	100.00
Std. deviation		0.00	0.00	0.00	
Max.		11.57	3.15	85.29	
Min.		11.57	3.15	85.29	

Spectrum-#8



End



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Report No:	SZ20220425008
Date:	2022/04/25
Page:	13/13

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CXO Lab WeChat official account

