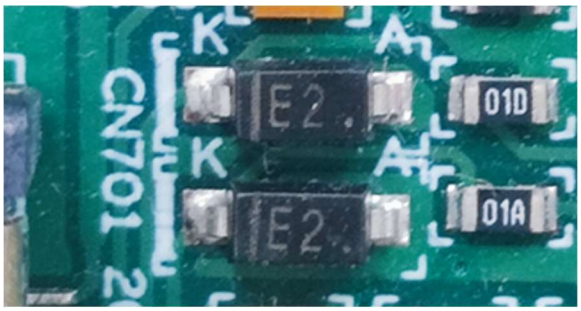


設計驗證
工程課
2025-01-14
發行
鈺緯科技開發股份有限公司

承　　認　　書

APPROVAL　SHEET

客戶名稱：	鈺緯科技開發股份有限公司
客戶料號：	3DZ5232002Y (D0166)
零件敘述：	MCC SOD123 0.9V 500mW SURFACE MOUNT ZENER
零件料號：	MMSZ5232B-TP
零件廠牌：	MCC
承認日期：	2024.12.10

客戶認可章	晨昕公司發行章
設計驗證 工程課 2025 -01- 14 發行 鈺緯科技開發股份有限公司	晨昕 發行章

SRT 晨昕科技股份有限公司
SUNRISETEK CO., LTD.

TEL:02-2226-7955　　FAX:02-2221-3858

Features

- Zener Voltages from 2.4V - 75V
- V_Z – Tolerance ± 5%
- Planar Die Construction
- ESD Rating of 16KV per Human Body Model
- Halogen Free. “Green” Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

500 mW
Zener Diode
2.4 to 75 Volts

Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance : 340°C/W Junction to Ambient(Note 2)

Parameter	Symbol	Rating	Conditions
Power Dissipation	P_D	500mW	Note 3
Maximum Forward Voltage	V_F	0.9V	I_F=10mA

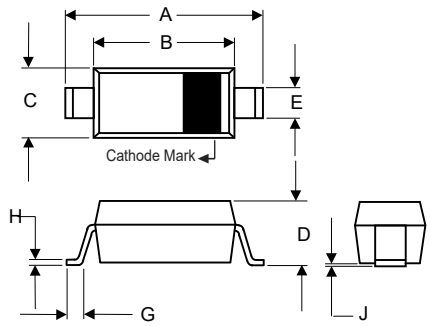
Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Note: 2. On FR - 4 Board With Minimum Recommended Solder Pad Layout

Note: 3. Mounted on 5.0mm2(0.013mm Thick) Land Areas.

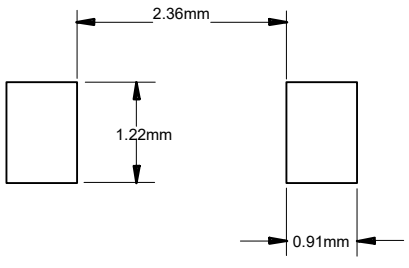
設計驗證
工程課
2025 -01- 14
發行
宜鼎科技開發股份有限公司

SOD-123



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.140	0.152	3.55	3.85	
B	0.100	0.112	2.55	2.85	
C	0.055	0.071	1.40	1.80	
D	----	0.053	----	1.35	
E	0.018	0.026	0.45	0.65	
G	0.006	----	0.15	----	
H	----	0.010	----	0.25	
J	----	0.004	----	0.10	

SUGGESTED SOLDER PAD LAYOUT



Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Nominal Zener Voltage(4,5)		Maximum Zener Impedance(6)			Maximum Reverse Leakage Current		Maximum Zener Voltage Temp	Marking Code
	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R	V_R		
	V	mA	Ω	Ω	mA	μA	V	%/°C	
MMSZ5221B	2.4	20	30	1200	0.25	100	1.0	-0.085	C1
MMSZ5222B	2.5	20	30	1250	0.25	100	1.0	-0.085	C2
MMSZ5223B	2.7	20	30	1300	0.25	75	1.0	-0.080	C3
MMSZ5225B	3.0	20	29	1600	0.25	50	1.0	-0.075	C5
MMSZ5226B	3.3	20	28	1600	0.25	25	1.0	-0.070	G1
MMSZ5227B	3.6	20	24	1700	0.25	15	1.0	-0.065	G2
MMSZ5228B	3.9	20	23	1900	0.25	10	1.0	-0.060	G3
MMSZ5229B	4.3	20	22	2000	0.25	5.0	1.0	±0.055	G4
MMSZ5230B	4.7	20	19	1900	0.25	5.0	2.0	±0.030	G5
MMSZ5231B	5.1	20	17	1600	0.25	5.0	2.0	±0.030	E1
MMSZ5232B	5.6	20	11	1600	0.25	5.0	3.0	+0.038	E2
MMSZ5233B	6.0	20	7.0	1600	0.25	5.0	3.5	+0.040	E3
MMSZ5234B	6.2	20	7.0	1000	0.25	5.0	4.0	+0.045	E4
MMSZ5235B	6.8	20	5.0	750	0.25	3.0	5.0	+0.050	E5
MMSZ5236B	7.5	20	6.0	500	0.25	3.0	6.0	+0.058	F1
MMSZ5237B	8.2	20	8.0	500	0.25	3.0	6.5	+0.062	F2
MMSZ5238B	8.7	20	8.0	600	0.25	3.0	6.5	+0.065	F3
MMSZ5239B	9.1	20	10	600	0.25	3.0	7.0	+0.068	F4
MMSZ5240B	10	20	17	600	0.25	3.0	8.0	+0.075	F5
MMSZ5241B	11	20	22	600	0.25	2.0	8.4	+0.076	H1
MMSZ5242B	12	20	30	600	0.25	1.0	9.1	+0.077	H2
MMSZ5243B	13	9.5	13	600	0.25	0.5	9.9	+0.079	H3
MMSZ5244B	14	9.0	15	600	0.25	0.1	10.5	+0.081	H4
MMSZ5245B	15	8.5	16	600	0.25	0.1	11	+0.082	H5
MMSZ5246B	16	7.8	17	600	0.25	0.1	12	+0.083	J1
MMSZ5248B	18	7.0	21	600	0.25	0.1	14	+0.085	J3
MMSZ5250B	20	6.2	25	600	0.25	0.1	15	+0.086	J5
MMSZ5251B	22	5.6	29	600	0.25	0.1	17	+0.087	K1
MMSZ5252B	24	5.2	33	600	0.25	0.1	18	+0.088	K2
MMSZ5254B	27	4.6	41	600	0.25	0.1	21	+0.090	K4
MMSZ5255B	28	4.5	44	600	0.25	0.1	21	+0.091	K5
MMSZ5256B	30	4.2	49	600	0.25	0.1	23	+0.091	M1
MMSZ5257B	33	3.8	58	700	0.25	0.1	25	+0.092	M2
MMSZ5258B	36	3.4	70	700	0.25	0.1	27	+0.093	M3
MMSZ5259B	39	3.2	80	800	0.25	0.1	30	+0.094	M4
MMSZ5260B	43	3.0	93	900	0.25	0.1	33	+0.095	M5
MMSZ5261B	47	2.7	105	1000	0.25	0.1	36	+0.095	N1
MMSZ5262B	51	2.5	125	1100	0.25	0.1	39	+0.096	N2
MMSZ5263B	56	2.2	150	1300	0.25	0.1	43	+0.097	M8
MMSZ5265B	62	2.0	185	1400	0.25	0.1	47	+0.098	N5
MMSZ5267B	75	1.7	270	1700	0.25	0.1	56	+0.099	P2

NOTE:

Note: 4 Standard Zener Voltage Tolerance is ±5% With a "B" suffix (e.g.: MMSZ5225B),Suffix "C" is ±2 % Tolerance

Note: 5 Zener Voltage (V_Z) Measurement.Guarantees the Zener Voltage When Measured at 90 Seconds While Maintaining the Lead Temperature (T_L) at 25°C, From the Diode Body.

Note: 6 Zener Impedance (Z_Z) Derivation. The Zener Impedance is Derived From the 60 Cycle AC Voltage, Which Results When an AC Current Having an Rms Value Equal to 10% of the DC Zener Current (I_{ZT} or I_{ZK}) is Superimposed on I_{ZT} or I_{ZK}.

Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Nominal Zener Voltage(4,5)		Maximum Zener Impedance(6)			Maximum Reverse Leakage Current		Maximum Zener Voltage Temp	Marking Code
	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{Zk} @ I_{ZK}	I_{ZK}	I_R	V_R		
	V	mA	Ω	Ω	mA	μA	V	%/°C	
MMSZ5229C	4.3	20	22	2000	0.25	5.0	1.0	±0.055	2G4
MMSZ5230C	4.7	20	19	1900	0.25	5.0	2.0	±0.030	2G5
MMSZ5231C	5.1	20	17	1600	0.25	5.0	2.0	±0.030	2E1
MMSZ5232C	5.6	20	11	1600	0.25	5.0	3.0	+0.038	2E2
MMSZ5233C	6.0	20	7.0	1600	0.25	5.0	3.5	+0.040	2E3
MMSZ5234C	6.2	20	7.0	1000	0.25	5.0	4.0	+0.045	2E4
MMSZ5235C	6.8	20	5.0	750	0.25	3.0	5.0	+0.050	2E5
MMSZ5236C	7.5	20	6.0	500	0.25	3.0	6.0	+0.058	2F1
MMSZ5237C	8.2	20	8.0	500	0.25	3.0	6.0	+0.062	2F2
MMSZ5238C	8.7	20	8.0	600	0.25	3.0	6.5	+0.065	2F3
MMSZ5239C	9.1	20	10	600	0.25	3.0	6.5	+0.068	2F4
MMSZ5240C	10	20	17	600	0.25	3.0	8.0	+0.075	2F5
MMSZ5241C	11	20	22	600	0.25	3.0	8.4	+0.076	2H1
MMSZ5242C	12	20	30	600	0.25	2.0	9.1	+0.077	2H2
MMSZ5243C	13	9.5	13	600	0.25	1.0	9.9	+0.079	2H3
MMSZ5244C	14	9.0	15	600	0.25	0.5	10.5	+0.081	2H4
MMSZ5245C	15	8.5	16	600	0.25	0.5	11	+0.082	H5
MMSZ5246C	16	7.8	17	600	0.25	0.1	12	+0.083	2J1
MMSZ5248C	18	7.0	21	600	0.25	0.1	14	+0.085	2J3
MMSZ5250C	20	6.2	25	600	0.25	0.1	15	+0.086	2J5
MMSZ5251C	22	5.6	29	600	0.25	0.1	17	+0.087	2K1
MMSZ5252C	24	5.2	33	600	0.25	0.1	18	+0.088	2K2
MMSZ5254C	27	4.6	41	600	0.25	0.1	21	+0.090	2K4
MMSZ5255C	28	4.5	44	600	0.25	0.1	21	+0.091	2K5
MMSZ5256C	30	4.2	49	600	0.25	0.1	23	+0.091	2M1
MMSZ5257C	33	3.8	58	700	0.25	0.1	25	+0.092	2M2
MMSZ5258C	36	3.4	70	700	0.25	0.1	27	+0.093	M3
MMSZ5259C	39	3.2	80	800	0.25	0.1	30	+0.094	2M4
MMSZ5260C	43	3.0	93	900	0.25	0.1	33	+0.095	M5
MMSZ5261C	47	2.7	105	1000	0.25	0.1	36	+0.095	N1

NOTE:

Note: 4 Standard Zener Voltage Tolerance is ±5% With a "B" suffix (e.g.: MMSZ5225B),Suffix "C" is ±2 % Tolerance

Note: 5 Zener Voltage (V_Z) Measurement.Guarantees the Zener Voltage When Measured at 90 Seconds While Maintaining the Lead Temperature (T_L) at 25°C, From the Diode Body.

Note: 6 Zener Impedance (Z_Z) Derivation. The Zener Impedance is Derived From the 60 Cycle AC Voltage, Which Results When an AC Current Having an Rms Value Equal to 10% of the DC Zener Current (I_{ZT} or I_{ZK}) is Superimposed on I_{ZT} or I_{ZK}.

Curve Characteristics

Fig. 1 - Power Derating Curve

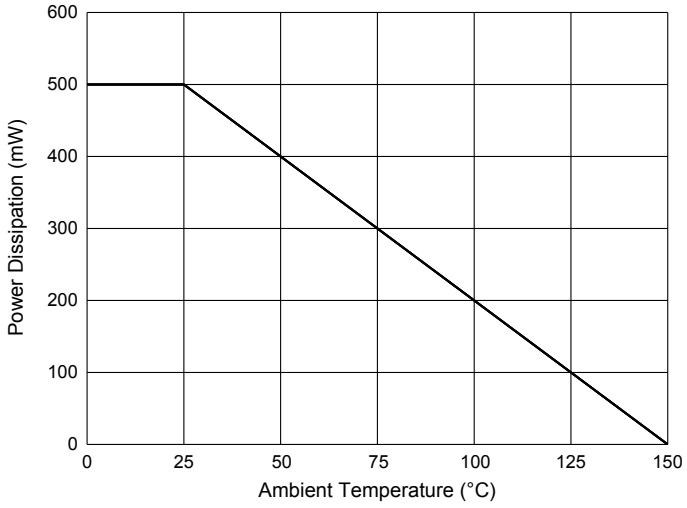


Fig. 2 - Typical Zener Breakdown Characteristics

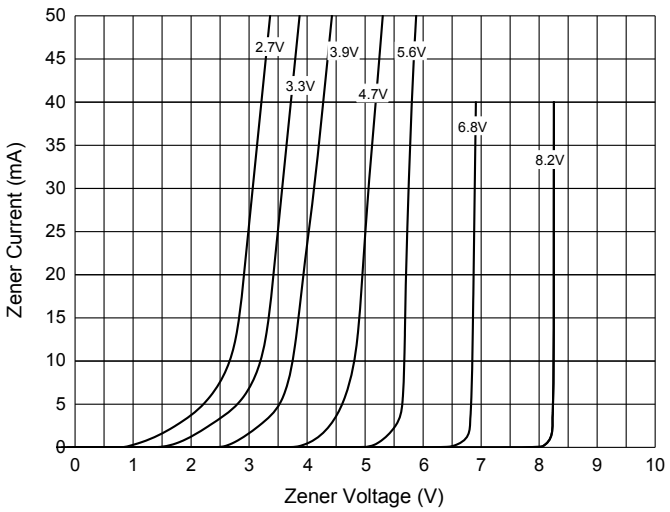


Fig. 3 - Typical Zener Breakdown Characteristics

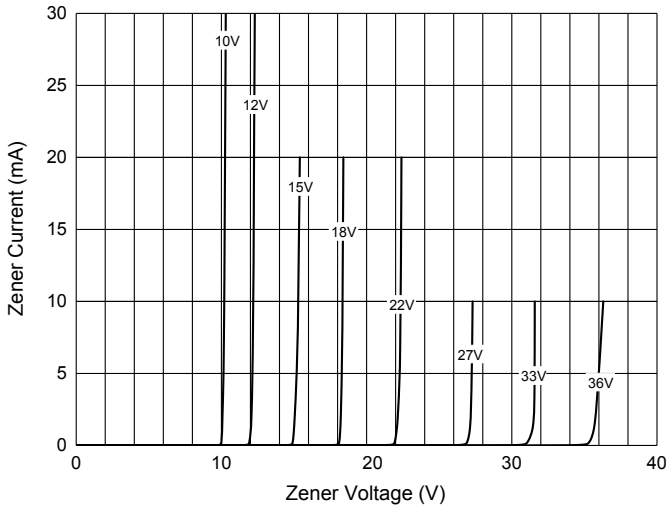
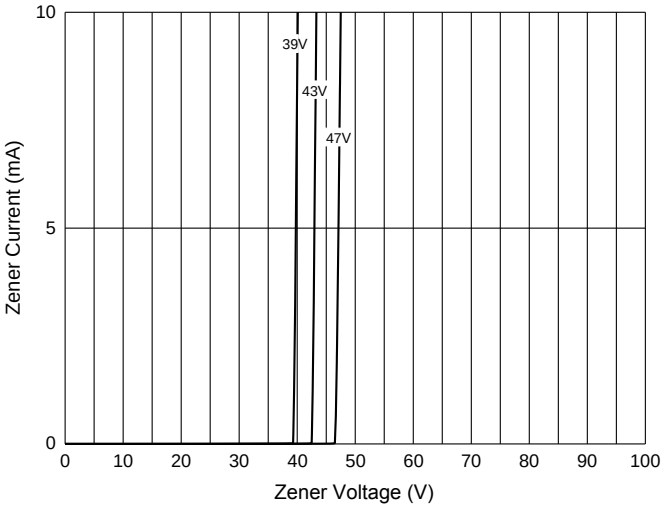


Fig. 4 - Typical Zener Breakdown Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:3Kpcs/Reel
Part Number-13P	Tape&Reel:10Kpcs/Reel

*****IMPORTANT NOTICE*****

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . ***Micro Commercial Components Corp*** . does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold ***Micro Commercial Components Corp*** . and all the companies whose products are represented on our website, harmless against all damages. ***Micro Commercial Components Corp***. products are sold subject to the general terms and conditions of commercial sale, as published at **https://www.mccsemi.com/Home/TermsAndConditions.**

*****LIFE SUPPORT*****

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

*****CUSTOMER AWARENESS*****

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources**. MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Micro Commercial Components (MCC):

MMSZ5229B-TP MMSZ5255B-TP MMSZ5235B-TP MMSZ5251B-TP MMSZ5258B-TP MMSZ5246B-TP
MMSZ5242B-TP MMSZ5228B-TP MMSZ5230B-TP MMSZ5256B-TP MMSZ5226B-TP MMSZ5250B-TP
MMSZ5240B-TP MMSZ5241B-TP MMSZ5236B-TP MMSZ5245B-TP MMSZ5254B-TP MMSZ5234B-TP
MMSZ5237B-TP MMSZ5243B-TP MMSZ5227B-TP MMSZ5225B-TP MMSZ5231B-TP MMSZ5252B-TP
MMSZ5221B-TP MMSZ5239B-TP MMSZ5259B-TP MMSZ5223B-TP MMSZ5257B-TP MMSZ5232B-TP
MMSZ5248B-TP MMSZ5233B-TP MMSZ5244B-TP MMSZ5260B-TP MMSZ5262B-TP MMSZ5238B-TP
MMSZ5263B-TP MMSZ5222B-TP MMSZ5261B-TP MMSZ5265B-TP MMSZ5258C-TP MMSZ5267B-TP
MMSZ5240C-TP MMSZ5244C-TP MMSZ5224B-TP MMSZ5247B-TP MMSZ5249B-TP MMSZ5253B-TP
MMSZ5264B-TP MMSZ5266B-TP MMSZ5252C-TP MMSZ5229C-TP MMSZ5230C-TP MMSZ5231C-TP
MMSZ5232C-TP MMSZ5233C-TP MMSZ5234C-TP MMSZ5235C-TP MMSZ5236C-TP MMSZ5238C-TP
MMSZ5239C-TP MMSZ5241C-TP MMSZ5242C-TP MMSZ5243C-TP MMSZ5245C-TP MMSZ5246C-TP
MMSZ5248C-TP MMSZ5250C-TP MMSZ5251C-TP MMSZ5254C-TP MMSZ5255C-TP MMSZ5256C-TP
MMSZ5257C-TP MMSZ5259C-TP MMSZ5237C-TP MMSZ5260C-TP MMSZ5261C-TP MMSZ5231B-13P
MMSZ5237B-13P MMSZ5238B-13P MMSZ5245B-TP-B002 MMSZ5245B-TP-HF

Test Report

No.: SHAPH24008499003 **Date:** May 24, 2024

Client Name: Jiangsu HHCK Advanced Materials Co., Ltd

Client Address: 66 Eastern Avenue,Economic & Technical Development Zone,Lianyungang,Jiangsu, China

Sample Name:	Epoxy molding compounds
Client Ref. Information:	EMG-100-XXX-XXX,EMG-120-XXX-XXX,EMG-200-XXX-XXX,EMG-250-XXX-XXX,EMG-300-XXX-XXX,EMG-350-XXX-XXX,EMG-400-XXX-XXX,EMG-400SV-XXX-XXX,EMG-430-XXX-XXX,EMG-450-XXX-XXX,EMG-460-XXX-XXX,EMG-480-XXX-XXX,EMG-500-XXX-XXX,EMG-550-XXX-XXX,EMG-580-XXX-XXX,EMG-600-XXX-XXX,EMG-600S-XXX-XXX,EMG-620-XXX-XXX,EMG-630-XXX-XXX,EMG-650-XXX-XXX,EMG-660-XXX-XXX,EMG-680-XXX-XXX,EMG-700-XXX-XXX,EMG-760-XXX-XXX,EMG-800-XXX-XXX,EMG-900-XXX-XXX,EMG-950-XXX-XXX Production date:April 2024

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

SGS Job No.:	NJIN2404000644PL02
Sample Receiving Date:	Apr 27, 2024
Testing Period:	Apr 27, 2024 ~ May 17, 2024
Test Requested:	Select 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).

Signed for and on behalf of
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Lilac Wei 魏文凤
Approved Signatory

Scan to see the report
SHAPH24008499003
Verification:
check.sgsonline.com.cn

This report is English version of SHAPH24008499004.

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

3rd Building,No.889 Yishan Road Xuhui District,Shanghai China 200233 t E&E (86-21) 61402553 f E&E (86-21)64953679 www.sgsgroup.com.cn
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t HL (86-21) 61402594 f HL (86-21)61156899 e sgs.china@sgs.com

Test Result(s):

Test Part Description：

SN ID	Sample No.	SGS Sample ID	Description
SN1	001	SHA24-0084990-0001.C001	Black solid

Remarks:

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

Halogen

Test Method: With reference to EN 14582:2016, analysis was performed by IC.

Test Item(s)	Unit(s)	MDL	001
Fluorine(F)	mg/kg	10	ND
Chlorine(Cl)	mg/kg	10	29
Bromine(Br)	mg/kg	10	ND
Iodine(I)	mg/kg	10	ND

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.

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested .
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

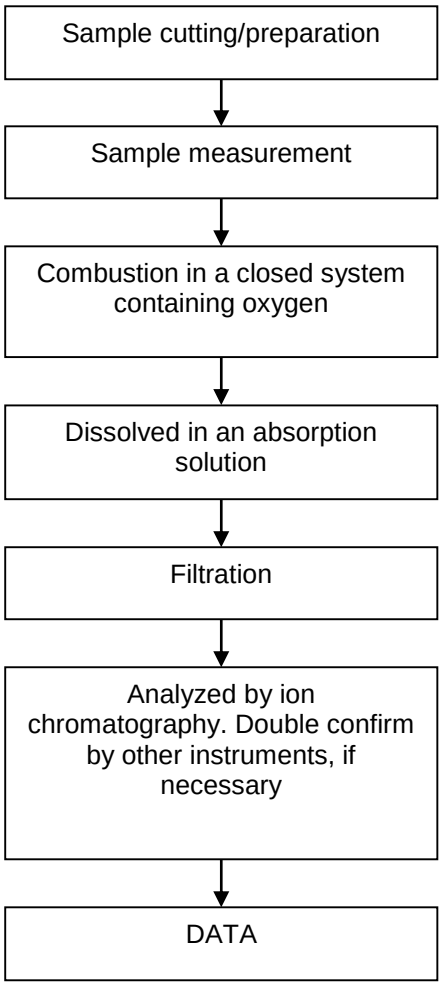
SGS-CSTC Standards Technical Services (Shanghai) Co.,Ltd. Testing Center-Chemical Laboratory.
3rd Building,No.889 Yishan Road Xuhui District,Shanghai China 200233 t E&E (86–21) 61402553 f E&E (86–21)64953679 www.sgsgroup.com.cn
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t HL (86–21) 61402594 f HL (86–21)61156899 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)

ATTACHMENTS

Halogen Testing Flow Chart

Name of the person who made testing: Andy Zhang
Name of the person in charge of testing: Gordon Mu



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested .
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. Testing Center-Chemical Laboratory
3rd Building,No.889 Yishan Road Xuhui District,Shanghai China 200233 t E&E (86–21) 61402553 f E&E (86–21)64953679 www.sgsgroup.com.cn
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t HL (86–21) 61402594 f HL (86–21)61156899 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)

Sample Photo:



SHA24-0084990-0001.C001

SGS authenticate the photo on original report only

*** End of Report ***

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested .
Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. Testing Center-Chemical Laboratory
3rd Building,No.889 Yishan Road Xuhui District,Shanghai China 200233 t E&E (86–21) 61402553 f E&E (86–21)64953679 www.sgsgroup.com.cn
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t HL (86–21) 61402594 f HL (86–21)61156899 e sgs.china@sgs.com