



客戶名稱 : **ASUSTEK**
CUSTOMER

Document No.: ENS000196230

Approval Sheet Rev.: A1

Spec. Rev. : A1

承認書

APPROVAL SHEET

產品品名/Product Model No. : **WA-C2-LA-00-003**

客戶料號/Customer No. : **14008-05860200**

專案名稱/Project Name: **GUSTO**

發行日期/ Issue Date : **2024/10/17**

承認日期/ Approved Date :

Approved by customer: (signing or stamping here)



Embedded Single-Band Antenna for WA-C2-LA-00-003

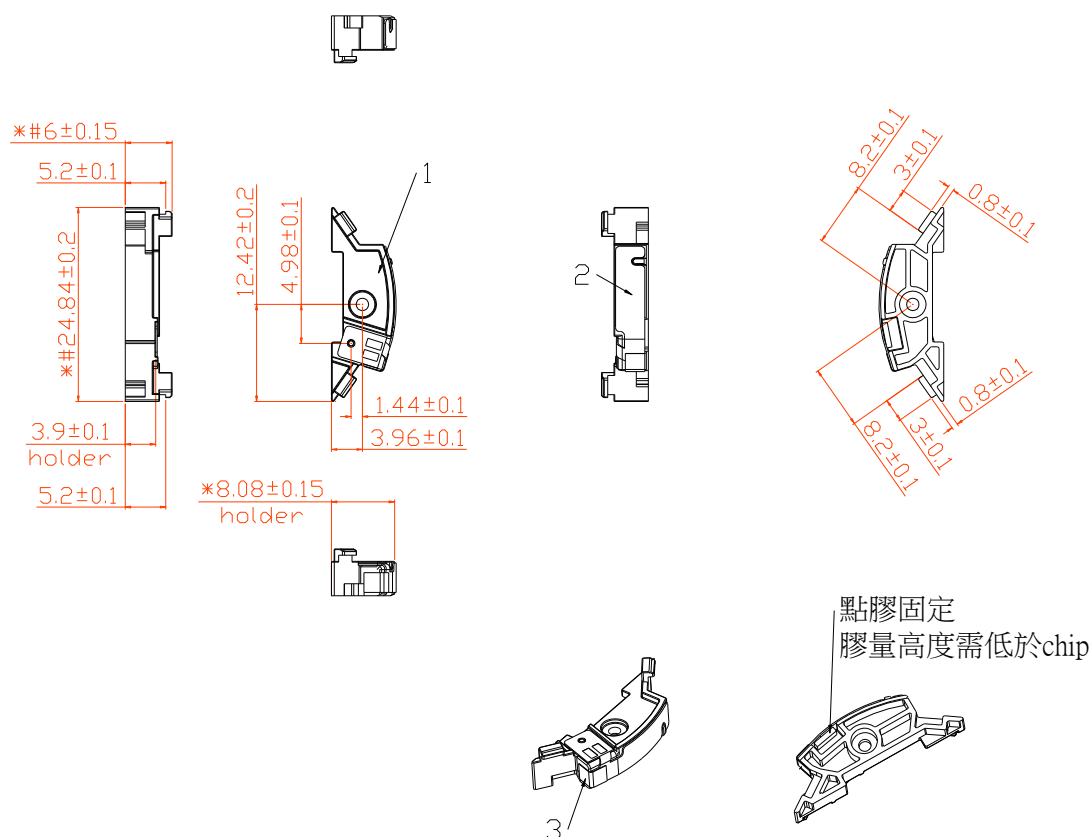
1. Explanation of part number :

WA	C2	LA	00	003
(1)	(2)	(3)	(4)	(5)

- (1) Product type : Wireless Antenna
 (2) Material : Combo-Holder+FPCB+Chip
 (3) Frequency : 2.4G
 (4) Coaxial Cable Color : No Coaxial Cable
 (5) Suffix : 003

2. Mechanical Specification :

The appearance of the antenna is according to drawing Figure 2-1-1.



UNLESS OTHER SPECIFIED TOLERANCES ON :
 X=N/A X.X=N/A X.XX=N/A
 ANGLES=N/A HOLEDIA=N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : 周敬晨

CHECKED BY : 鄭榮謀

DESIGNED BY : 洪賢修

APPROVED BY : 謝立庭

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 WA-C2-LA-00-003

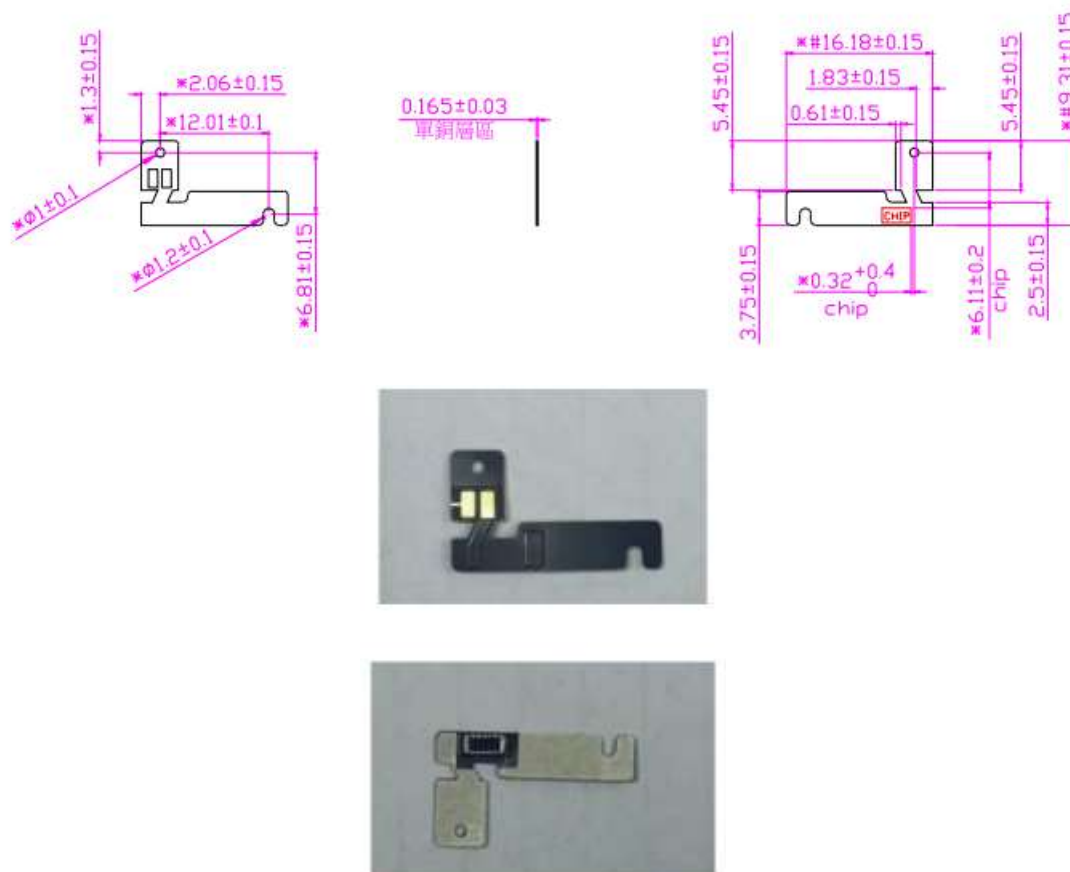
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NOTE:

1. 工程圖上*為重點尺寸標註指示
Mark * are the key dimensions.
2. 工程圖上#為Cpk量測尺寸標註指示
Mark # are CPK dimensions.



REV.A1

Figure 2-1-1 The antenna drawing

ITEM	DESCRIPTION	MATERIAL SPECIFICATION	QUANTITY	UNIT	SUPPLIER	UL NO.
1	Holder	材質:FR450 尺寸: 24.84x8.08x6	1	PCS	HA0017	E335478
2	FPCB+Chip	FPCB,T0.15mm,18.58x9.31mm Chip,ACA-3216-A2-MC-S	1	PCS	HA0081	E216543
3	Acetate tape	5x2.5x0.08mm	1	PCS	HA0026	N/A
UNLESS OTHER SPECIFIED TOLERANCES ON : X=N/A X.X=N/A X.XX=N/A ANGLES=N/A HOLEDIA=N/A  INPAQ TECHNOLOGY CO., LTD. SCALE : N/A DRAWN BY : 周敬晨 DESIGNED BY : 洪賢修 UNIT : mm CHECKED BY : 鄭榮謀 APPROVED BY : 謝立庭 THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION						
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3. Electrical Specification :

Those specifications were specially defined for **GUSTO** model **Wireless Antenna**, and all characteristics were measured under the model's handset testing jig.

3-1. Frequency Band :

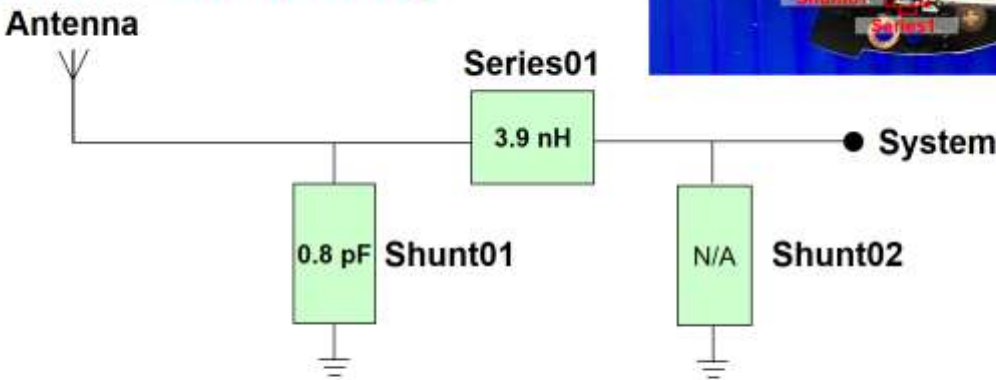
Frequency Band	MHz
BT	2400~2500

3-2. Impedance :

50 ohm nominal

3-3. Matching circuit :

Fine Tune Matching



Location	Description	Vendor
Series01	3.9 nH	Murata
Shunt01	0.8 pF	Murata
Shunt02	N/A	N/A

UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : 周敬晨

CHECKED BY : 鄭榮謀

DESIGNED BY : 洪賢修

APPROVED BY : 謝立庭

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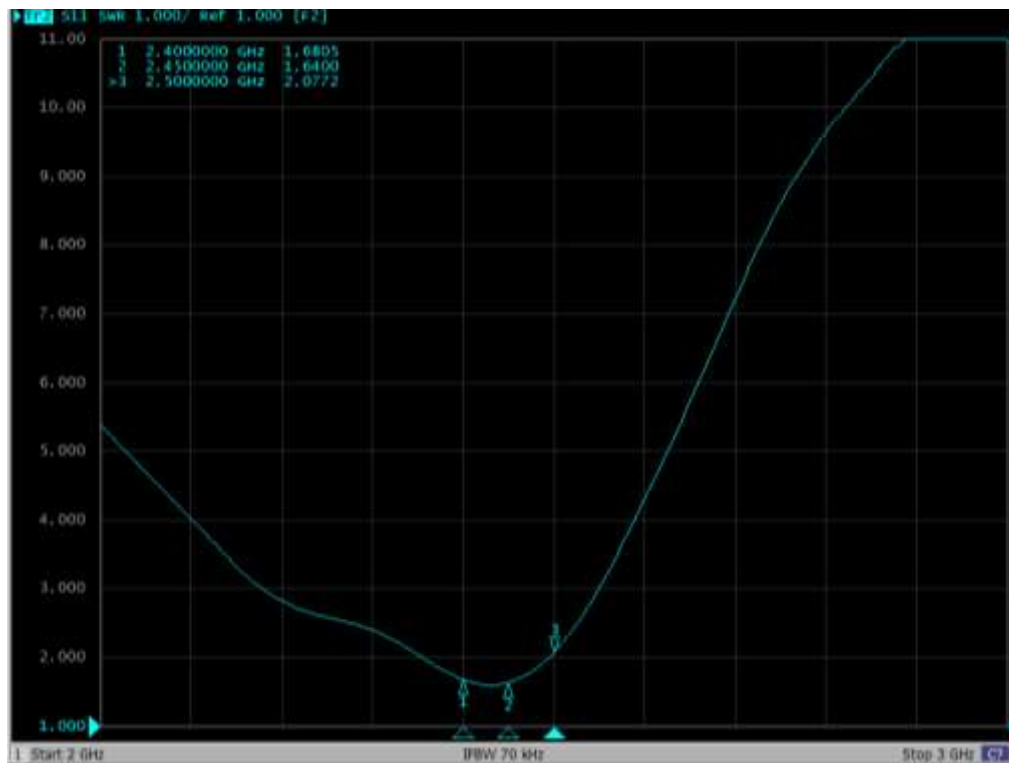
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3-4. VSWR



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SCALE : N/A	UNIT : mm			
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3-5. Efficiency

GUSTO		
Frequency (MHz)	Peak Gain (dBi)	Efficiency (dBi)
2400	-4.78	-10.47
2450	-4.52	-10.08
2500	-4.20	-10.34

UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A	UNIT : mm
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DESIGNED BY : 洪賢修	APPROVED BY : 謝立庭

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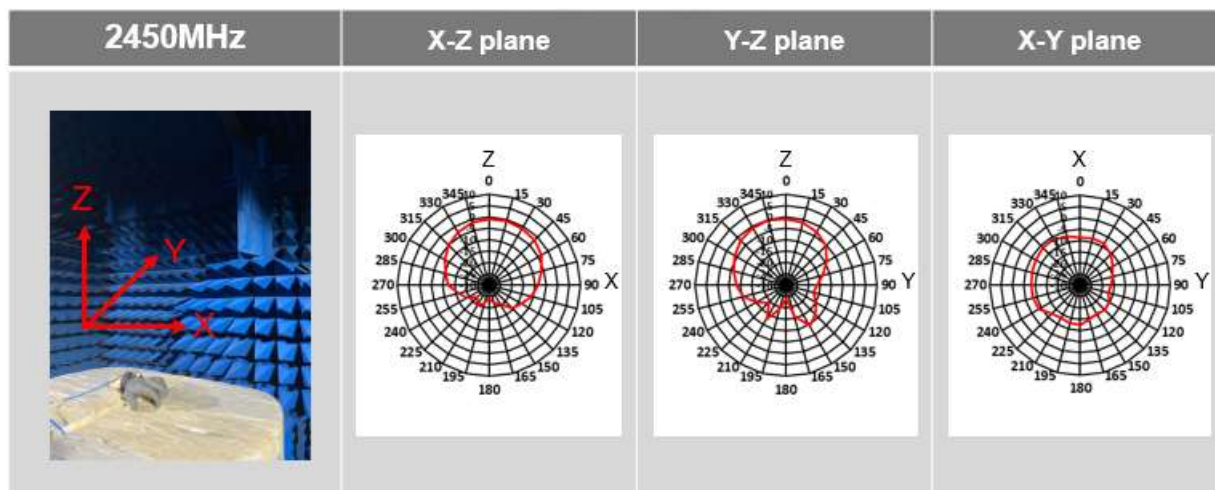
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3-6. 2D Radiation



UNLESS OTHER SPECIFIED TOLERANCES ON :
X = N/A X.X = N/A X.XX = N/A
ANGLES = N/A HOLEDIA = N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : 周敬晨

CHECKED BY : 鄭榮謀

DESIGNED BY : 洪賢修

APPROVED BY : 謝立庭

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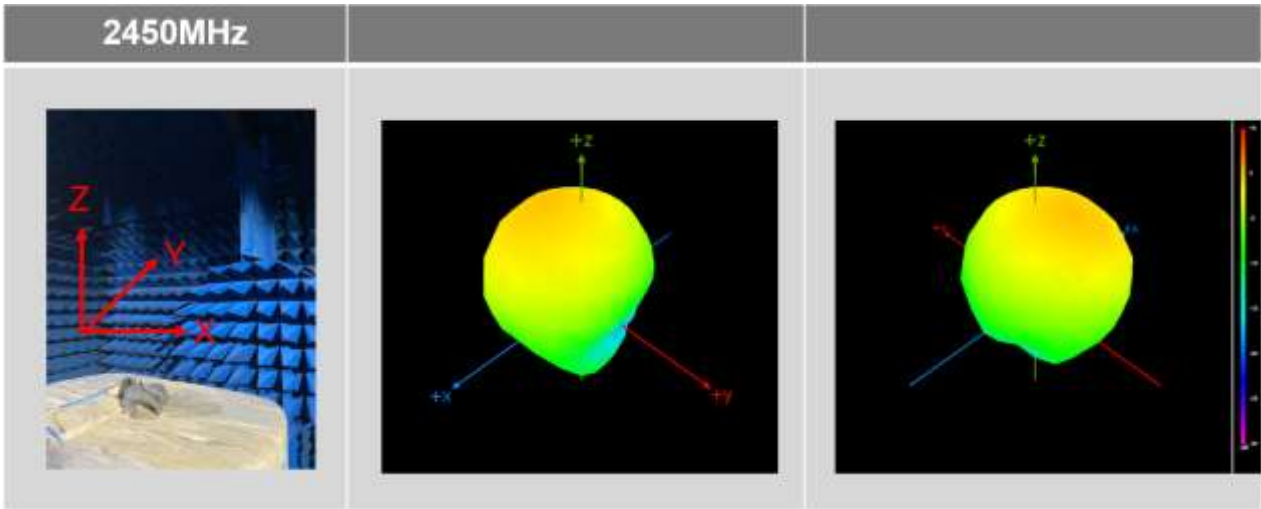
**TITLE : Embedded Single-Band Antenna for
WA-C2-LA-00-003**

**DOCUMENT
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3-7. 3D Radiation



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TITLE : Embedded Single-Band Antenna for WA-C2-LA-00-003		DOCUMENT NO.	ENS000196230	SPEC REV.	
				A1	

ZPKX2.E216543 - Wiring, Printed - Flexible Material Constructions - Component

Wiring, Printed - Flexible Material Constructions - Component

SUZHOU FLEXIBLE PCB ELE. CO LTD
No.18 Zhongcheng Rd. Meili Town
(Tonggang Industrial Park Meili Town)
Changshu, JIANGSU 215518 China

E216543

Cond Width		Max		Report		Max									
Min		Cond	SS/	Area	Date	Surface	Assembly		Solder	Solder	Oper	Meets		C	
Min	Edge	Thk	DS/	Diam	After	Mount	Process	Process	Limits	Temp	Flame	UL796F	T		
Type	mm	mm	mic	DSO	mm	2022-01-01	Technology	Temp °C	Cycles	°C	sec	°C	Class	DSR	I
Single layer flexible material construction printed-wiring boards for use in flexible applications															
F-1	0.08	0.08	35	DS	20.3	No	-	-	-	263	15	105	V-0	All	-
Single layer flexible materials interconnect constructions, Flammability Recognition only															
F-1a	-	-	-	SS	-	No	-	-	-	260	10	-	V-0	-	-
F-2 (ASP 1)	-	-	-	SS	-	Yes	Yes	260	6	-	-	-	V-0	-	-

ASP 1 - Assembly solder process evaluated to IPC-TM-650, 2.6.27 Thermal Stress Assembly Simulation.

Marking: Company name or file number and type designation. May be followed by a suffix to denote factory identification or flammability classification..

Last Updated on 2022-08-17

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Plastics - Component

COMPANY

HONG KONG SINOPLAST GROUP LIMITED

Room D,10/F, Tower A, Billion Centre
1 Wang Kwong Road, Kowloon Bay
Kowloom, Hong Kong

E335478

		Min		H	H	RTI			H	D	
		Thk	Flame	W	A	Elec	Mech		T	9	T
Dsg	Color	mm	Class	I	I	Str	Imp	Str	R	5	I
Acrylonitrile Butadiene Styrene (ABS) "POLYKING" furnished as pellets											
951-(xx)	ALL	1.5	V-0	2	1	60	60	60	2	7	1
		3.0	V-0	0	0	60	60	60	-	-	-
Acrylonitrile Butadiene Styrene/Polycarbonate (ABS/PC) furnished as Pellets, rolls or sheets											
FR450	ALL	1.5	V-0	-	-	60	60	60	-	-	-
		3.0	V-0	-	-	60	60	60	-	-	-
Acrylonitrile Butadiene Styrene/Polymethyl Methacrylate (ABS/PMMA) furnished as Pellets, rolls or sheets											
MA915-(xx)	ALL	1.5	HB	-	-	50	50	50	-	-	-
		3.0	HB	-	-	50	50	50	-	-	-
Polyamide (PA), Semi Aromatic Resin, "POLYKING" furnished as granular material											
HT-(xx)	NC, BK	0.75	V-0	0	0	65	65	65	4	-	-
		1.5	V-0	0	0	65	65	65	-	-	-
		3.0	V-0	0	0	65	65	65	-	-	-
Polyamide (PA) furnished as pellets											
221-(xx)	ALL	0.75	HB	4	0	65	65	65	1	4	0
		1.5	HB	4	0	65	65	65	-	-	-
		3.0	HB	3	0	65	65	65	-	-	-
Polybutylene Terephthalate (PBT) "POLYKING" furnished as pellets, rolls or sheets											
BT201-(xx)	ALL	0.8	V-0	1	-	75	75	75	-	-	1
		1.5	V-0	0	-	75	75	75	-	-	-
		3.0	V-0	0	-	75	75	75	-	-	-

Feedback

Polycarbonate (PC) "POLYKING" furnished as pellets											
6010-(xx)	ALL	0.8	V-0	4	0	80	80	80	-	-	1
		3.0	V-0	3	0	80	80	80	-	-	-
Polycarbonate (PC) "POLYKING" furnished as pellets, rolls and sheets											
3010-(z)(f2)	NC	0.8	-	2	0	80	80	80	2	-	2
	WT	0.8	V-2	2	0	80	80	80	-	-	-
	NC	0.85	V-2	2	0	80	80	80	-	-	-
	NC, WT	3.0	V-2	2	0	80	80	80	-	-	-
	BK	3.0-3.3	V-2	2	0	80	80	80	-	-	-
Polycarbonate (PC) furnished as pellets											
5010-(xx)	ALL	1.5	V-0	-	-	80	80	80	-	-	-
		3.0	V-0	-	-	80	80	80	-	-	-
Polycarbonate (PC)											
7015-(xx)	ALL	1.5	HB	3	1	80	80	80	3	-	-
		3.0	HB	2	1	80	80	80	-	-	-
Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS)											
FR650-(xx)	ALL	0.8	V-0	1	-	60	60	60	-	-	3
		1.5	V-0, 5VB	0	-	60	60	60	-	-	-
		3.0	V-0, 5VA	0	-	60	60	60	-	-	-
Polyethylene Terephthalate (PET) furnished as pellets, rolls or sheets											
ET301-(xx)	ALL	1.5	V-0	0	0	-	75	75	-	-	-
		3.0	V-0	0	0	-	75	75	-	-	-
Polyphenylene Sulfide (PPS), modified, "POLYKING" furnished as pellets											
HPA-(xx)	ALL	0.8	V-0	3	1	130	130	130	-	-	4
		1.5	V-0	0	1	130	130	130	-	-	-

(f2) - Subjected to one or more of the following tests: Ultraviolet Light, Water Exposure or Immersion in accordance with UL 746C, where the acceptability for outdoor use is to be determined by UL.

(xx) - Represents a one, two, three or four digit number or letter combination or any combination of numbers or letters to denote a customer code.

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Marking: Company name, material designation On container, wrapper Or finished part.

Last Updated on 2022-12-13

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Model FR450
File Number: E335478



COMPANY

HONG KONG SINOPLAST GROUP LIMITED
Room D,10/F, Tower A, Billion Centre
1 Wang Kwong Road, Kowloon Bay
Kowloom, Hong Kong

MODEL INFO

FR450
Acrylonitrile Butadiene Styrene/Polycarbonate (ABS/PC), furnished as Pellets, rolls or sheets

FLAMMABILITY PROPERTIES	额定值	测试方法
Flammability		ANSI/UL 94
1.5 mm, Color: ALL	V-0	
3.0 mm, Color: ALL	V-0	
ISO/IEC FLAMMABILITY PROPERTIES	额定值	测试方法
Flammability		IEC 60695-11-10
1.5 mm, Color: ALL	V-0	
3.0 mm, Color: ALL	V-0	
THERMAL PROPERTIES	额定值	测试方法
Relative Thermal Index - Electrical Strength		UL 746B
1.5 mm	60 °C	
3.0 mm	60 °C	
Relative Thermal Index - Mechanical Impact		UL 746B
1.5 mm	60 °C	
3.0 mm	60 °C	
Relative Thermal Index - Mechanical Strength		UL 746B

Feedback

1.5 mm	60 °C
3.0 mm	60 °C

Report Date: 2010-06-14

Revision Date: 2022-12-13

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