

亞 驪 企 業 股 份 有 限 公 司

ARISTOTLE ENTERPRISES

承 認 申 請 書

客戶名稱: 技嘉科技股份有限公司
 Customer
 廠商料號: RFA-02-C14H1-70B120C
 Part No.
 品名: 2.4GHZ,L=120mm,SW1.13G,白
 Description
 圖號: RFA-02-C14H1-70B120C.DWG
 Drawing No.
 客戶料號:
 Drawing No.



出廠簽章:

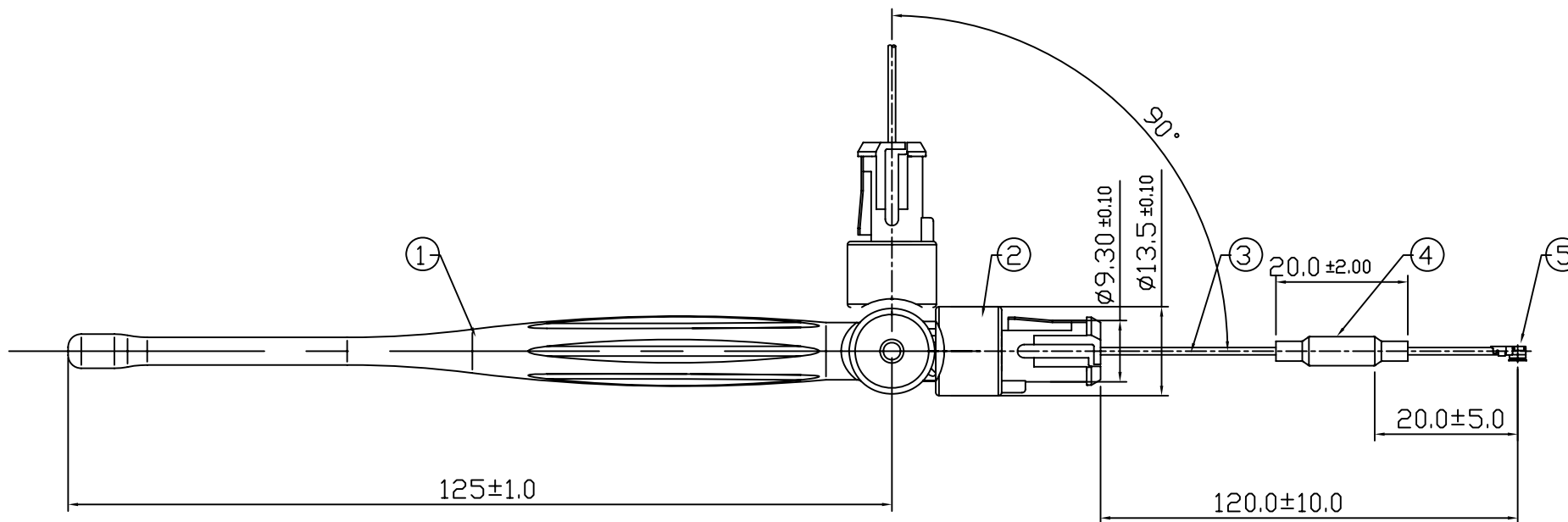
檢 查 TEST BY	核 對 CHECK BY	承 認 APPROVE BY
周沂珮	黃秋芳	廖煥文

承認簽章:

檢 查 TEST BY	核 對 CHECK BY	承 認 APPROVE BY

地址: 台北縣中和市莒光路 63 號 8 樓
 電話: 02-2225-8209
 傳真: 02-2225-7523

NO.	NAME	FINISH	MAT'L	Q'TY	MEMO
1.	ANT. Shell	WHITE	TPU	1	
2.	Hinge	WHITE	ABS	1	
3.	Cable	BLACK	TEFLON	1	ø1.13黑
4.	Core	BLACK	IRON	1	D4.0Xd2.0X10L
5.	Connector	GOLD PLATED	BRASS	1	



ARISTOTLE 亞 驥 企 業 股 份 有 限 公 司
ENTERPRISES INC.

PROJECTION	UNITS	mm	TITLE	SHEET
	SCALE	1/1	RFA-02-C14H1-70B120C	1/1
	PAPER	A4	DWG NO.	REV.
4.	APPD.		RFA-02-C14H1-70B120C	A
3.	CHKD			
2.	DESIGN			
1.	DRAW	J.W.Lee	20/05/08	
REV	ECN	NAME	DATE	



Brand / Model : C5M3009

Remark :

Sample No.

Tested by : ALEX

Location: **RF Chamber3**

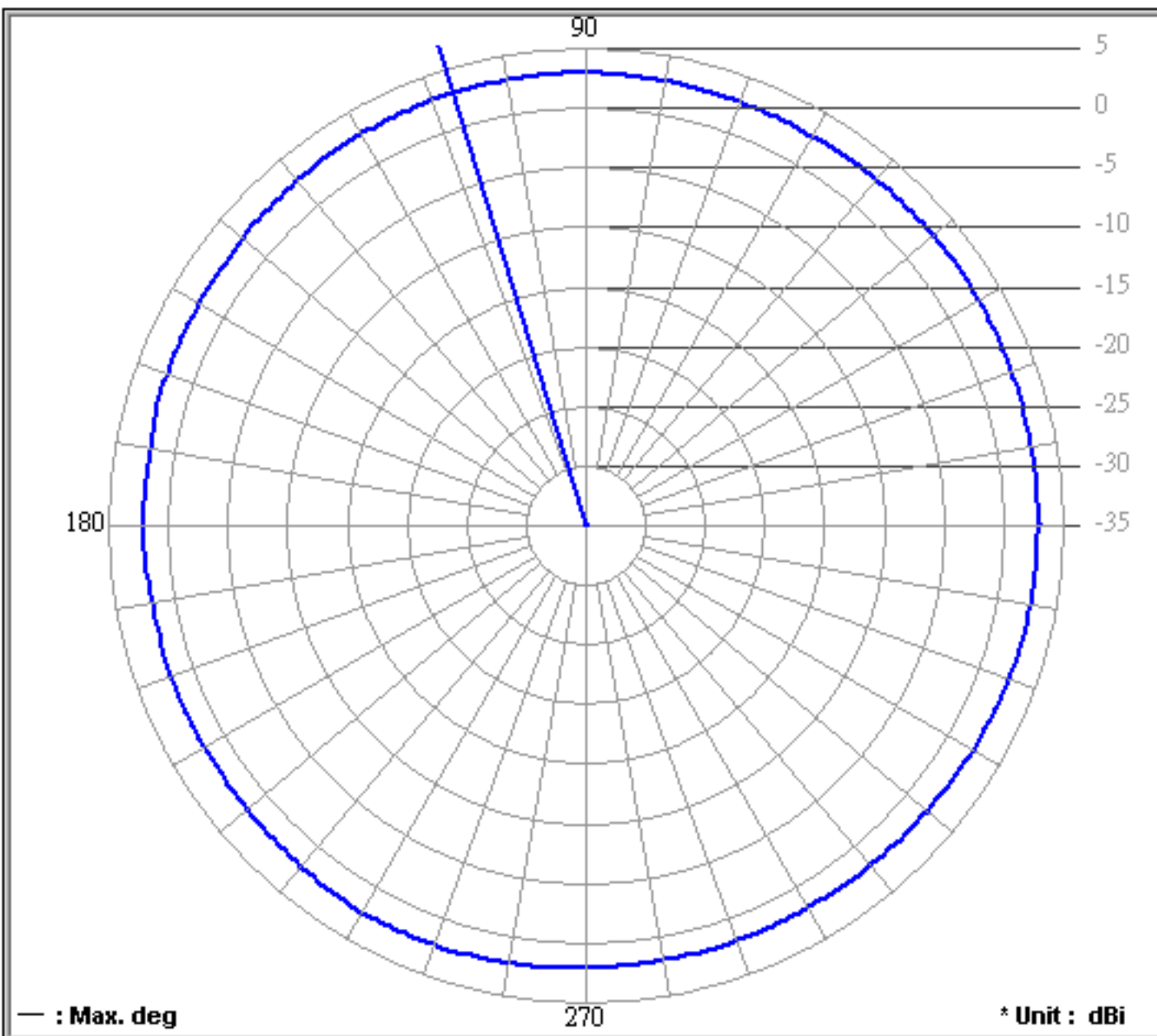
Date: **2008/1/21**

Time: **17:55:35**

Temperature (°C): **25**

Humidity (%): **75**

Approved by:



Frequency (MHz) : **2450.00**

Antenna Polarity : **Vertical**

Average Value (dB) : **2.49**

Maximum Value (dB) : **2.98**

Maximum Value (degree) : **107**

Minimum Value (dB) : **1.87**

Minimum Value (degree) : **192**



Brand / Model : C5M3009
Remark :
Sample No.
Tested by : ALEX

Location: **RF Chamber3**

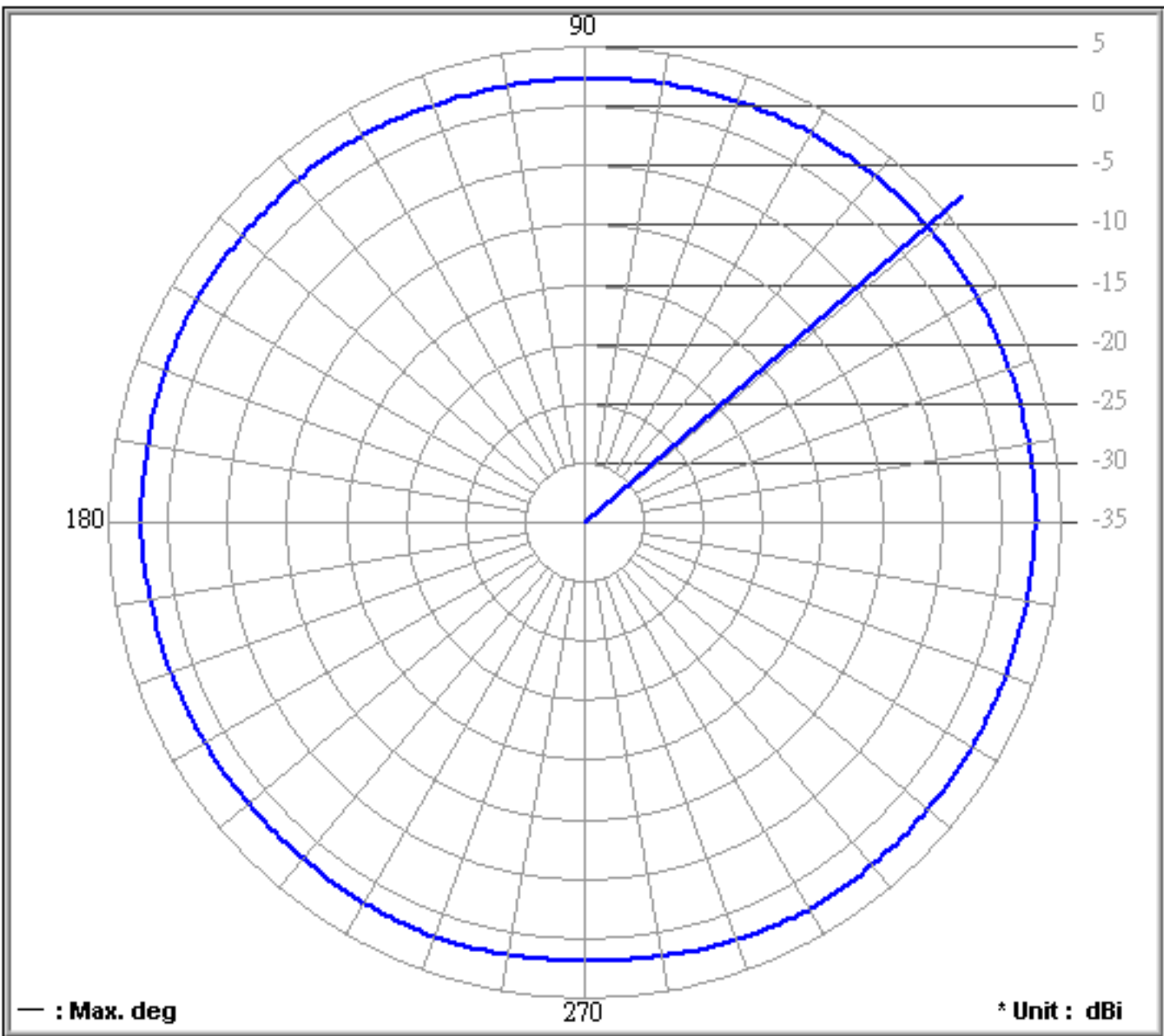
Date: **2008/1/21**

Time: **17:57:09**

Temperature (°C): **25**

Humidity (%): **75**

Approved by:



Frequency (MHz) : **2400.00**

Antenna Polarity : **Vertical**

Average Value (dB) : **2.44**

Maximum Value (dB) : **3.07**

Maximum Value (degree) : **41**

Minimum Value (dB) : **1.79**

Minimum Value (degree) : **226**



Brand / Model : C5M3009

Remark :

Sample No.

Tested by : ALEX

Location: **RF Chamber3**

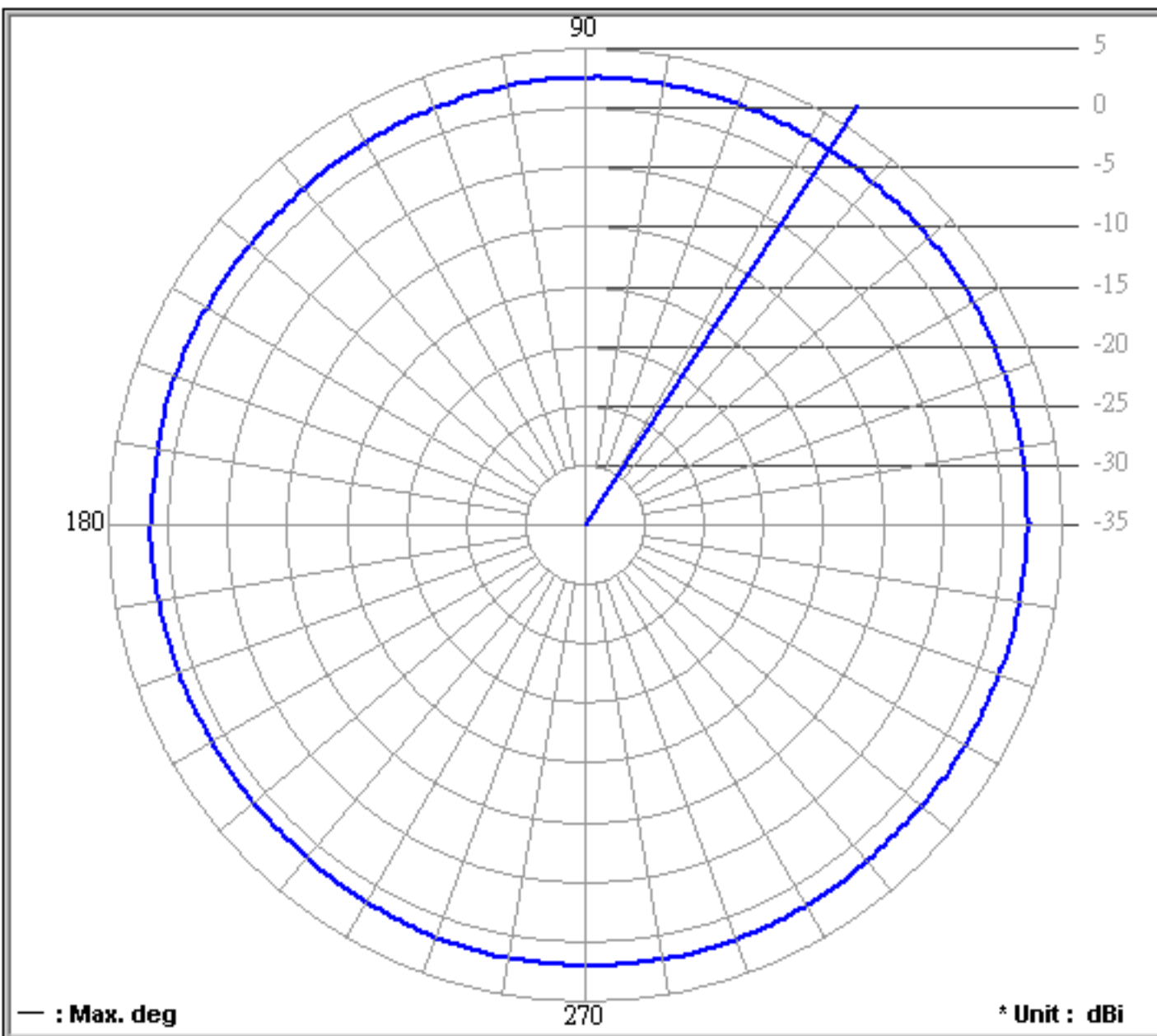
Date: **2008/1/21**

Time: **17:53:58**

Temperature (°C): **25**

Humidity (%): **75**

Approved by:



Frequency (MHz) : **2500.00**

Antenna Polarity : **Vertical**

Average Value (dB) : **1.96**

Maximum Value (dB) : **2.62**

Maximum Value (degree) : **57**

Minimum Value (dB) : **1.21**

Minimum Value (degree) : **207**



CHI MEI CORPORATION

59-1 SAN CHIA, JEN TE, TAINAN COUNTY, TAIWAN R.O.C. TEL: 886-6-266-5000, FAX: 886-6-266-5555-7

泛用級 ABS, POLYLAC[®] PA-757

V1W

材料特性

特性(Properties)	測試方法(Test Method)	測試條件(Test Condition)	單位(Unit)	PA-757
引張強度 Tensile Strength	ASTM D638	1/8", 6 mm/min	Kg/cm ² (lb/in ²)	480(6800)
延伸率 Tensile Elongation	ASTM D638	1/8", 6 mm/min	%	20
彎曲強度 Flexural Strength	ASTM D790	1/4", 2.8 mm/min	Kg/cm ² (lb/in ²)	820(11660)
彎曲彈性率 Flexural Modulus	ASTM D790	1/4", 2.8 mm/min	Kg/cm ² (lb/in ²)	27000(380000)
IZOD 衝擊強度 Izod Impact Strength	ASTM D256(Notched)	1/4", 23°C 1/8", 23°C	Kg-cm/cm(ft-lb/in) Kg-cm/cm(ft-lb/in)	18(3.3) 20(3.7)
流動係數 Melt Flow Index	ASTM D1238	200°C, 5Kg	g/10min	1.8
硬度 Hardness	ASTM D785	1/2"	R Scale	116
比重 Specific Gravity	ASTM D792	23°C	-	1.05
軟化點 Vicat Softening Temp	ASTM D1525	1/8", 50°C/hr	°C (°F)	105(221)
熱變形溫度 H.D.T Annealed(85°C, 8hr) Unannealed	ASTM D648	1/4", 120°C/hr	°C (°F)	99(210) 88(190)
燃燒率 Flammability	UL 94	-	-	1/16"HB

以上數據僅代表一般通用數據，不代表每一產品的規格值

若有任何疑問請洽產品推廣課 06-2665000, 06-2663000



奇美實業股份有限公司

台灣省台南縣仁德鄉三甲村59-1號。電話：886-6-266-5000，傳真：886-6-266-5555~7

1/2(A-GHE)

物質安全資料表

VIW

1. 物品及廠商資料

產品名稱	Polylac[®]	PA-707	PA-757	PA-757N	PA-717C	PA-727	PA-747	PA-709
製造商	奇美實業股份有限公司							
地址	台灣省台南縣仁德鄉三甲村 59-1 號							
電話	886-6-2663000		Ext. 1361 (產品推廣課)					
緊急電話	886-6-2663000		Ext. 1361 (產品推廣課)					
傳真電話	886-6-2667981							

2. 成品辨識資料

單一產品或混合物	單一產品
化學名稱	Acrylonitrile-Butadiene-Styrene Copolymer
含量	>98% (添加劑≤2%)
化學式	(C ₃ H ₃ N, C ₄ H ₆ , C ₈ H ₈) _x
CAS No.	9003-56-9
危害性不純物	無

3. 危害性分類

健康危害效應	無
環境影響	無
物理性及化學性危害	無
特殊危害	無

4. 急救措施

吸入	若吸入熔融樹脂逸出之氣體，將患者移至通風處，立即送醫。
皮膚接觸	若接觸到塑膠粒或塑膠粉末，以清水沖洗。 若接觸到熔膠，以大量(肥皂)水沖洗患部及衣物，立即送醫。
眼睛接觸	若接觸到塑膠粒或塑膠粉末，以大量清水至少沖洗 15 分鐘。 若有不適，立即送醫。 若接觸到高溫熔融樹脂逸出之氣體，以大量清水至少沖洗 15 分鐘。 若有不適，立即送醫。
吞食	催吐，以清水漱口，若有不適，立即送醫。

5. 消防措施

適用滅火劑	水、泡沫、乾粉
滅火時可能遭遇之特殊危害	無
特殊滅火程序	移除可燃物
消防人員之特殊防護設備	使用供氧式呼吸防護具

6. 洩漏處理方法

個人應注意事項	若塑膠粒或塑膠粉末殘留於地面上，可能會導致人員滑倒。
環境注意事項	為防止鳥類或魚類由排水系統中攝食，須徹底回收
清理方法	回收或廢棄

7. 安全處置與儲存方法

處置	操作處所須嚴禁煙火，做好整理整頓以避免粉塵累積。為防止塵爆，空氣輸送管路、袋濾器及儲槽須加裝靜電消除裝置，並確實接地。袋濾器之濾材採導電性材質。
儲存	存放於陰涼處所，避免直射陽光、雨淋及急速之溫差。儲存處嚴禁煙火



奇美實業股份有限公司

台灣省台南縣仁德鄉三甲村59-1號. 電話: 886-6-266-5000, 傳真: 886-6-266-5555~7 2/2(A-GHE)

8. 暴露預防措施

容許濃度(TLV)	未定
通風設備	排除粉塵、煙及氣體時使用
個人防護設備	呼吸防護 清洗成型機時使用防毒面具。 手部防護 接觸熔膠時使用皮手套。 眼睛防護 平時使用安全眼鏡，清洗成型機時使用護目鏡

9. 物理及化學性質

物質狀態	米白色膠粒
形狀	粒狀
顏色	米白色
氣味	無
閃火點	404 °C
自燃溫度	466 °C
爆炸界限	45 g/m ³
最小著火能量	3.6 mJ
最大爆炸壓力	7 × 10 ⁵ Pa
最大壓力上升速度	3.2 × 10 ⁷ Pa/S
比重	1.03-1.10
溶解度	無

10. 安定性及反應性

安定性	依一般操作及儲存程序時，安定性佳。
危害性分解物	CO, HCN, AN, SM and NO
燃燒能量	3.53 × 10 ⁷ J/kg (8424 Kcal/kg)

11. 毒性資料

刺激性	分解後之塑膠所產生的煙及蒸氣會刺激眼睛。
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12. 生態資料

為防止被海洋生物或鳥類攝食，嚴禁丟棄至海洋或水域。

13. 廢棄物處理

適當之焚化爐燃燒或掩埋法。不適當之焚化爐可能會產生有毒氣體如 CO, HCN, AN and SM.

14. 運送資料

未分類

15. 法規資料

無

16. 其他資料

無

CHI MEI CORPORATION

59-1 SAN CHIA JEN TE TAINAN HSIEN TAIWAN

Material Designation: PA-757 (+)

Product Description: Acrylonitrile Butadiene Styrene (ABS), designated "Polylac" furnished as pellets.

Color	Min. Thick. (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	IEC GWIT	IEC GWF1
ALL	1.5	HB	4	0	85	80	85	-	-
	3.0	HB	3	0	85	80	85	-	-
CTI: 0	IEC CTI: -	HVTR: 1			D495: 1			IEC Ball Pressure (°C): -	
Dielectric Strength (kV/mm): -		Volume Resistivity (10⁹ohm-cm): -			Dimensional Stability(%): -		ISO Heat Deflection (°C): -		
ISO Tensile Strength (MPa): -		ISO Flexural Strength (MPa): -			ISO Izod Impact (kJ/m²): -		ISO Charpy Impact (kJ/m²): -		
ISO Tensile Impact (kJ/m²): -									

(+) Optional prefix or suffix may be used to denote 0-0.5% acid scavengers.

Report Date: 6/23/1983

Underwriters Laboratories Inc®

UL94 small-scale test data does not pertain to building materials, furnishings and related contents. UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in components and parts of end-product devices and appliances, where the acceptability of the combination is determined by

ULI.



CHI MEI CORPORATION

59-1 SAN CHIA, JEN TE, TAINAN COUNTY, TAIWAN R.O.C.

TEL: 886-6-266-5000,

FAX: 886-6-266-5617

Data issued: May 25, 2005

We hereby certify that the follow Polylac ABS resin (list as follow) produced by Chi Mei Corporation

GP-Grade	PA-707, PA-757, PA-717C, PA-727, PA-747, PA-709,
HF-Grade	PA-756, PA-756S, PA-756H, PA-756B, PA-716, PA-746, PA-746H, PA-737
Extrusion Grade	PA-747F, PA-747R, PA-747S, PA-709S
HH-Grade	PA-777B, PA-777D, PA-777E
Transparent Grade	PA-758

conforms to the requirement that no chemicals as following are added.

1. PBBEs (Poly Bromo Bisphenyl Ethers)
2. PBBs (Poly Bromo Bisphenyls)
3. Ozone Depleting Chemicals(CFC's&HCFC'S)
4. Chlorinated Paraffin (C10-C13)
5. Polyvinyl Chloride (PVC)
6. Mercury(Hg) and its compounds,
7. Lead(Pb) and its compounds,
8. Cadmium(Cd) and its compounds,
9. Chromium(Cr) and its compounds,
10. Arsenic(As) and its compounds,
11. Antimony(Sb) and its compounds,
12. Selenium(Se) and its compounds,
13. Barium(Ba) and its compounds,
14. Chromium(Cr) VI and its compounds
15. Organic tin compounds
16. Polychlorinated Biphenyls(PCB's) and Terphenyls(PCT's)
17. Poly naphthalenes
18. Azo compounds
19. Polychlorinated biphenyl
20. Polychlorinated naphthalene
21. Asbestos
22. Phthalates

With regard to composition of above grade, they can comply with the Directives of RoHS (2002/95/EC), 2003/11/EC, TCO'99, Blue Angel and SONY (SS-00259)

Sincerely Yours,

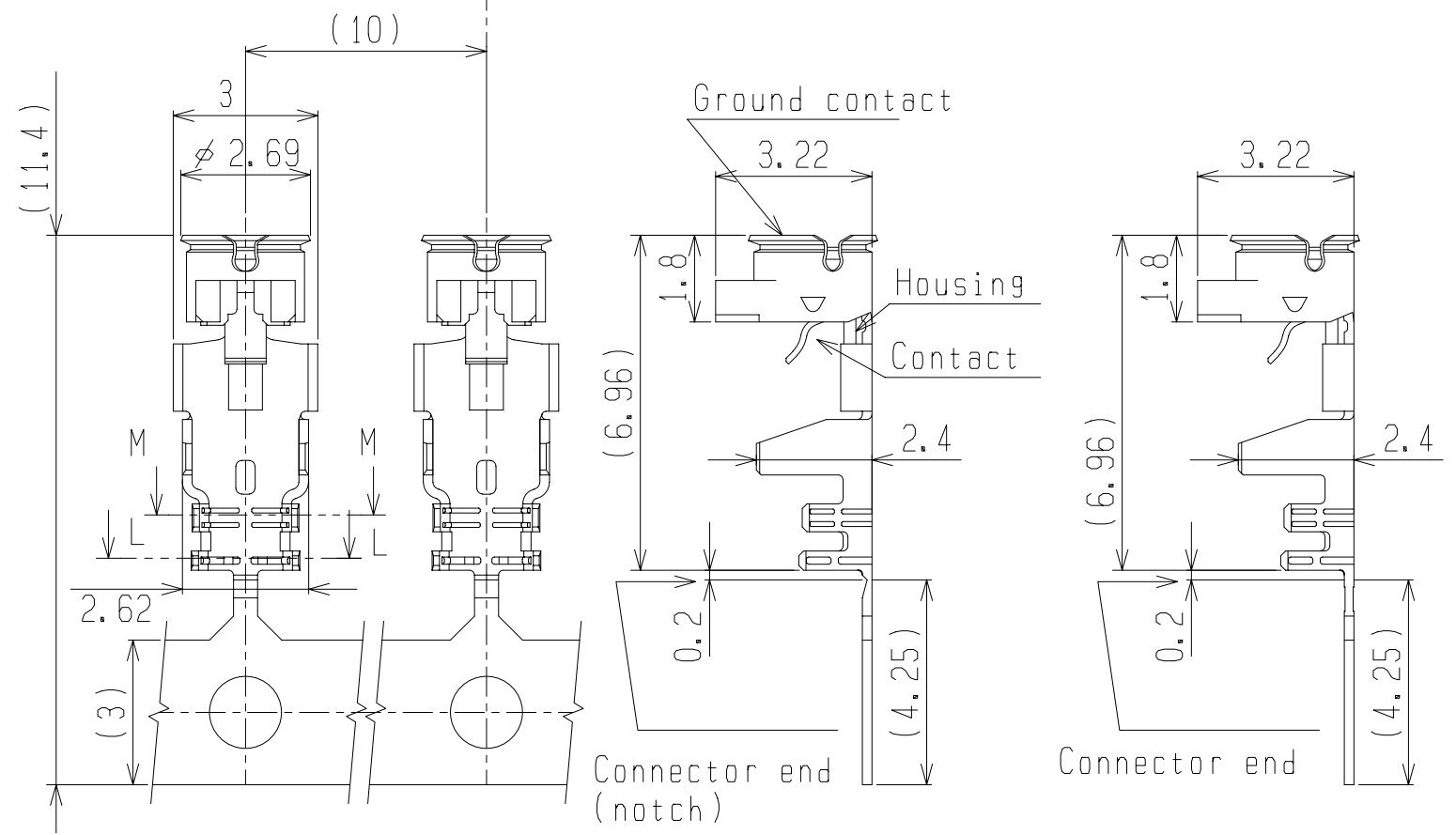
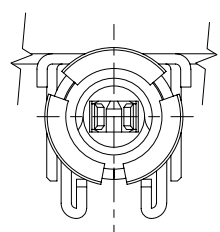
Eric Chou

Manager

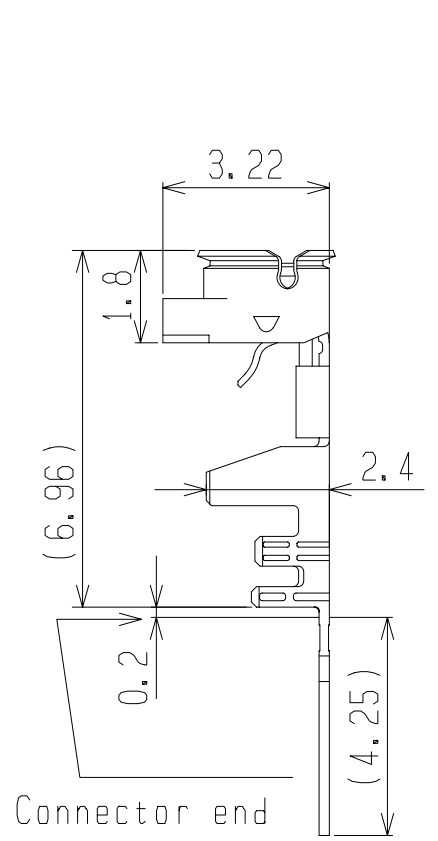
Department of Product Strategy & Service

This statement is based on our current level of knowledge and covers the above resins as supplied by CHI MEI CORPORATION at the date of issue. Since conditions of use are outside CHI MEI CORPORATION's control, CHI MEI CORPORATION makes no warranties, express or implied, and assumes no liability in connection with any use of this information.

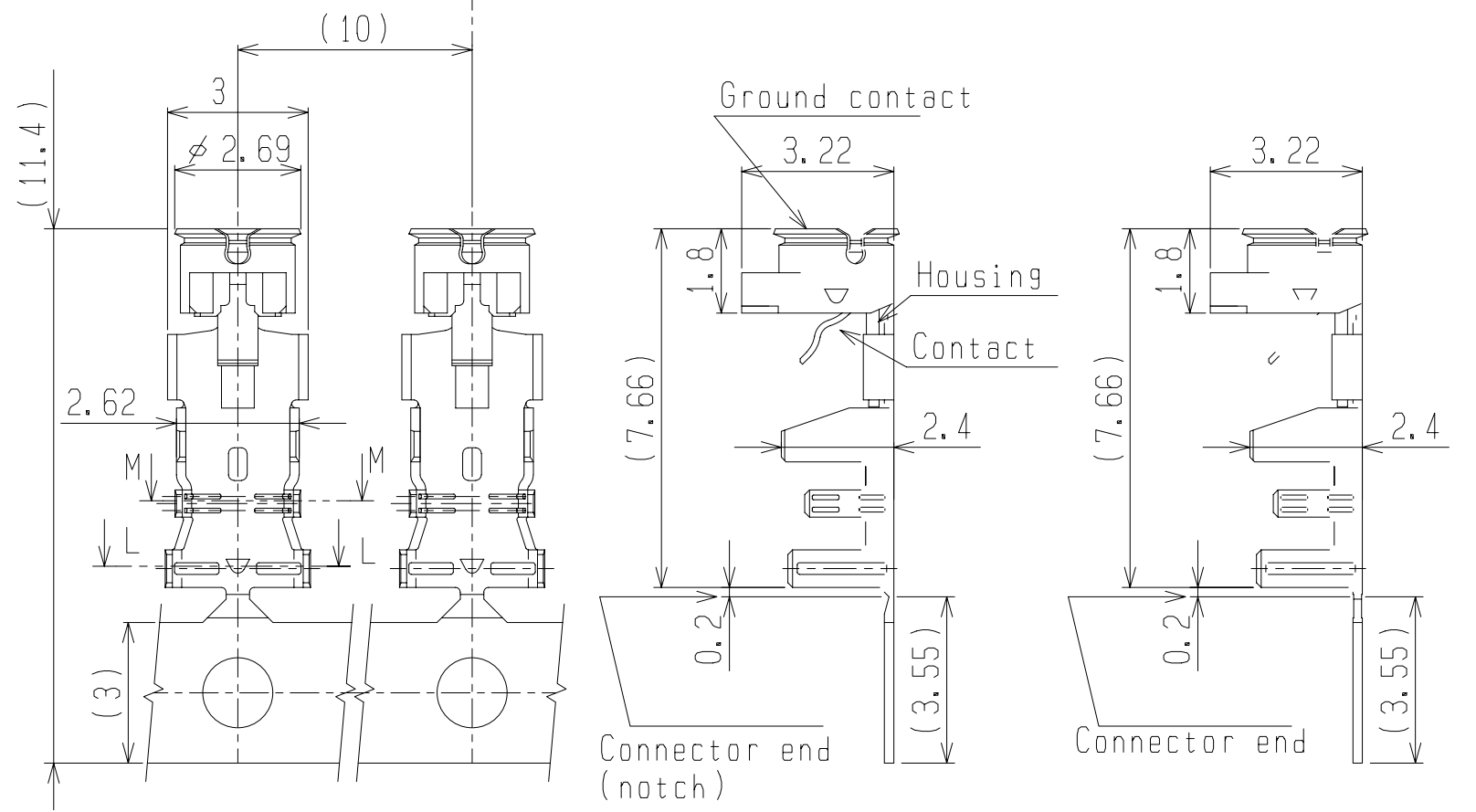
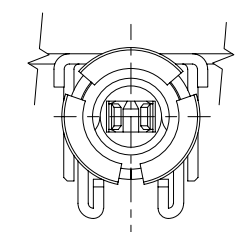
PART NO.
20278-**1R-**



Part No. 20278-101R-08
20278-101R-13
20278-101R-32
For hand tool
(with notch)



Part No. 20278-111R-08
20278-111R-13
20278-111R-32
For semi auto
termination machine
(without notch)



Part No. 20278-101R-18
For hand tool
(with notch)

Part No. 20278-111R-18
For semi auto
termination machine
(without notch)

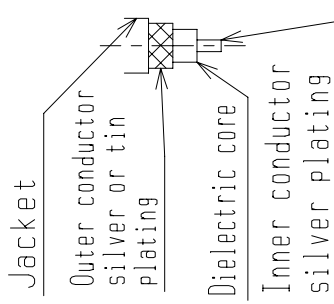
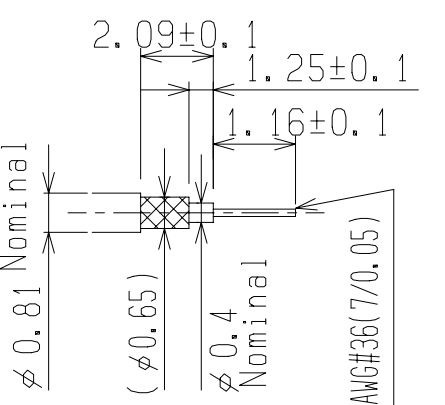
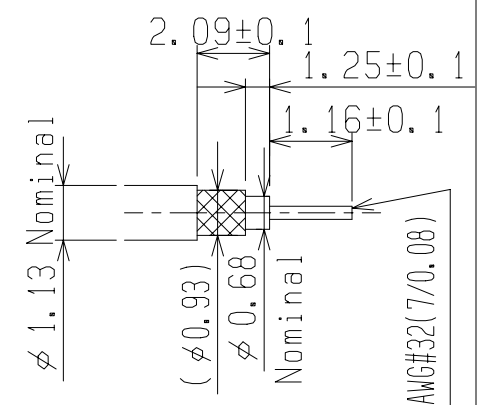
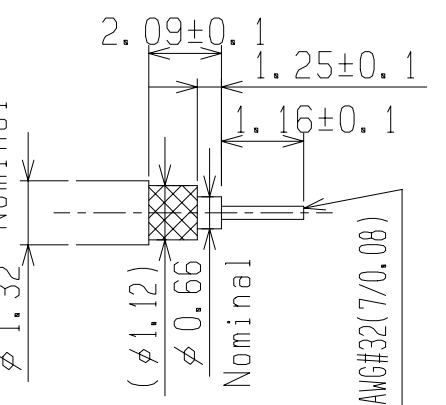
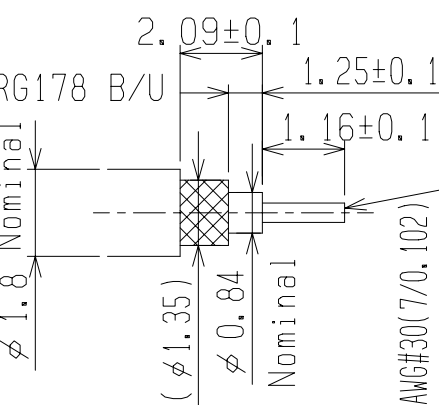
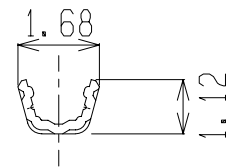
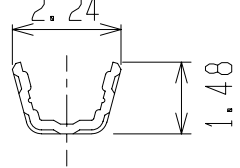
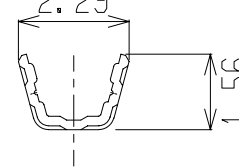
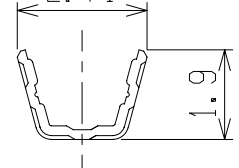
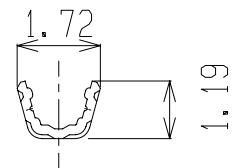
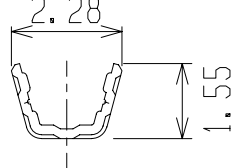
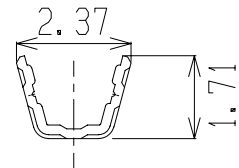
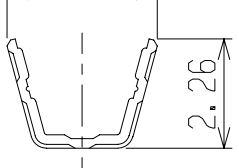
GENERAL TOLERANCE	
6 MAX.	±0.2
6 OVER MAX. 30	±0.3
30 OVER MAX. 120	±0.5
ANGLE	±2°

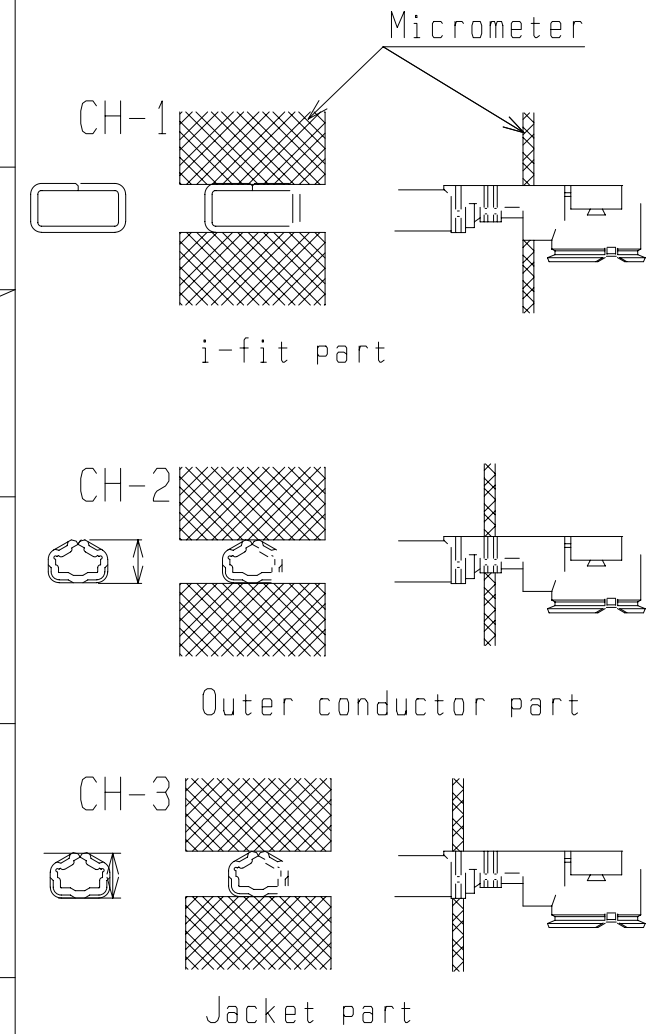
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10C	Z3014	K.O	JAN/31/03	K.K	3	Z1256	K.O	NOV/14/01	K.K
9C	Z2239	K.O	NOV/15/02	E.K	2	Z1197	K.O	AUG/27/01	K.K
8C	Z2224	K.O	OCT/17/02	E.K	1	Z1118	K.O	JUN/26/01	K.K
7B	Z2180	K.O	JUL/29/02	E.K	0	Z1109	K.O	JUN/13/01	
13C	Z3074	A.H	May/22/'03	K.K	6B	Z2146	K.O	JUN/24/02	K.K
12C	Z3052	K.O	Apr/16/'03	K.K	5B	Z2117	A.H	MAY/17/02	K.K
REV	ECN	BY	DATE	APP	REV	ECN	BY	DATE	APP
REV. RECORD									
SERIES No. 2814									

DESIGN'D BY	DATE
K. Ohbayashi	JUN/13/01
CHK'D BY	DATE
APP'D BY	DATE
K. Katabuchi	JUN/13/01
CUSTOMER COPY	PROJECTION
	6/1



TITLE	
MHF series micro coaxial connector plug vertical (ground contact : gold plating)	
SCALE	UNIT
6/1	mm
DWG. No.	SHEET
20278	1/3
REV.	
13C	

Part No.	20278-101R-08 20278-111R-08	20278-101R-13 20278-111R-13	20278-101R-32 20278-111R-32	20278-101R-18 20278-111R-18	
Applicable cable nominal dimension 					
Braided shield of Outer conductor 外部導体の編組	Single / 1重編組	Single / 1重編組	Double / 2重編組	Single / 1重編組	
P/N of hand Tool	90187-008C	90187-013C	90187-032C	90233-018	
P/N of semi auto termination machine	90213-008C	90213-013C	90213-032C	90232-018	
Sect. M-M					
Sect. L-L					
Crimp Height	CH-1	1.34~1.40	1.34~1.40	1.34~1.40	1.34~1.40
	CH-2	0.76~0.84	1.06~1.14	1.20~1.30	1.41~1.49
	CH-3	0.85~0.97	1.15~1.35	1.26~1.46	1.70~1.80



Crimp Height

NOTE-1
中心導体, 外部導体への半田コーティングは不可
Must not use solder coated inner conductor and outer conductor.

GENERAL TOLERANCE	
6 MAX.	±0.2
6 OVER MAX. 30	±0.3
30 OVER MAX. 120	±0.5
ANGLE	±2°

DESIGN' D BY	DATE			
CHK' D BY	DATE			
APP' D BY	DATE			
REV	ECN	BY	DATE	APP
REV. RECORD				
SERIES No.		2814		
CUSTOMER COPY		PROJECTION		

I-PEX Interconnect and Packaging Electronics TOKYO, JAPAN

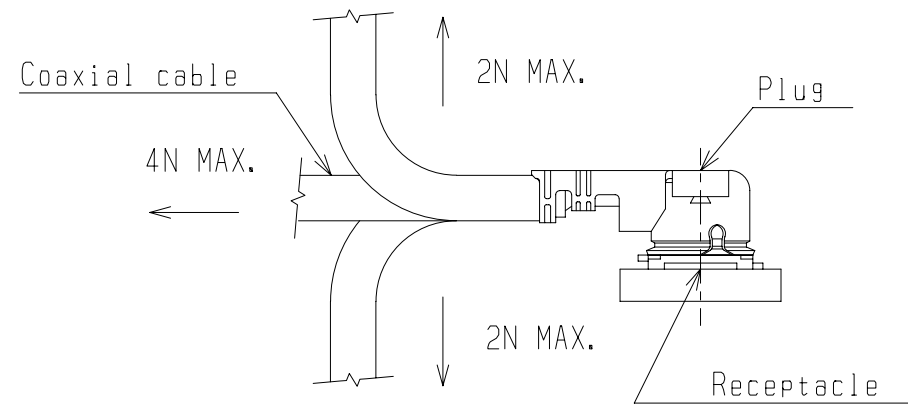
TITLE
MHF series micro coaxial connector plug vertical (ground contact : gold plating)

SCALE UNIT DWG. No. SHEET REV.
-/- mm 20278 2/3 13C

Notes

1. Material
 (1) Housing : PBT , UL94V-0 , black
 (2) Contact
 phosphor bronze
 gold plating 0.1 μ m MIN.
 over nickel 1.27 μ m MIN.
 (3) Ground contact
 phosphor bronze
 gold plating 0.05 μ m MIN.
 over nickel 1.27 μ m MIN.
 2. Packing : reel
 3. Mating partner part No.
 : 20279-001E-01
 4. Permissible load of cable at mating

1. 材料
 (1) ハウジング:PBT, UL94V-0, 黒色
 (2) コンタクト
 いん青銅
 金メッキ0.1 μ m MIN.
 下地 ニッケル1.27 μ m MIN.
 (3) グランドコンタクト
 いん青銅
 金メッキ0.05 μ m MIN.
 下地 ニッケル1.27 μ m MIN.
 2. 梱包 : リール
 3. かん合相手 part No.
 : 20279-001E-01
 4. コネクタかん合後のケーブルに対する荷重

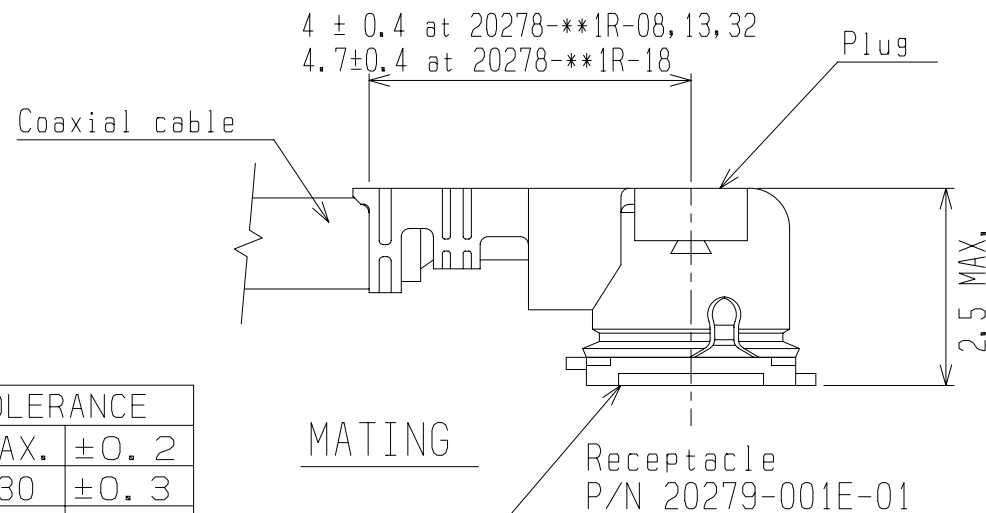


5. Suggestions for mating & unmating operation.

5. コネクタかん合時および抜去時の注意

5-1 Mating.
 Please mate the connector straightly to vertical direction as much as possible, adjusting the mating axis of plug and receptacle. As excessive slant angle mating may break the connector , please don't do it.

5-1 コネクタ挿入時
 PlugとReceptacleのかん合軸を合わせ、できるだけ垂直に挿入して下さい。極端な斜め挿入は行わないで下さい。コネクタ破損の原因となりますので、過度なこじり挿抜は行わないで下さい。

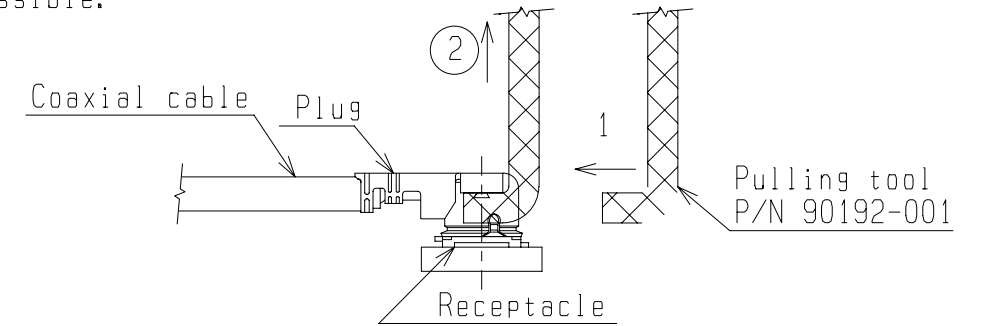


5-2 Unmating.

5-2 コネクタ抜去時

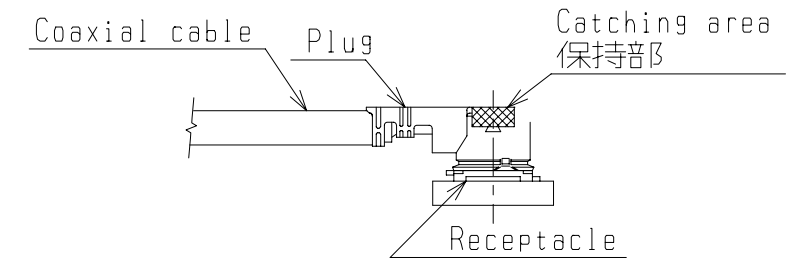
(1) In case of unmating by pulling tool.
 Please use the pulling tool as the following drawing, and please pull plug to vertical direction as directly as possible.

(1) 抜去ジグを用いる場合
 下図のようにできるだけ垂直に引き抜いて下さい。



(2) In case of unmating directly by hand
 Please catch the catching area of plug , and please pull plug to vertical direction as directly as possible.

(2) 手で直接引き抜く場合
 下図の保持部をつかみ、できるだけ垂直に引き抜いて下さい。



5-3 Crimp over standards of outer conductor

Standards: Less than 10% from total numbers of outer conductor
 (Numbers of outer conductor's crimp over from outer conductor's barrel)

5-3 外部導体はみ出し量

外部導体はみ出し量規定
 : 外部導体トータル本数の10%以下
 (外部導体バレルの外にはみ出した量)

5-4 Caution about Heat shrinkage tubes

Please be careful not to melt housing when using heat shrinkage tubes. It will become cause of open circuit.

5-4 熱収縮チューブについての注意
 熱収縮チューブで外部導体を覆う場合は、導通不良の原因になりますので、熱によりハウジングを溶融させないよう注意してください。

GENERAL TOLERANCE	
6 MAX.	±0.2
6 OVER MAX. 30	±0.3
30 OVER MAX. 120	±0.5
ANGLE	±2°

DESIGN' D BY	DATE	Interconnect and Packaging Electronics TOKYO, JAPAN									
CHK' D BY	DATE										
APP' D BY	DATE										
REV	ECN	BY	DATE	APP	TITLE	MHF series micro coaxial connector plug vertical (ground contact : gold plating)					
REV. RECORD					CUSTOMER COPY	PROJECTION	SCALE	UNIT	DWG. No.	SHEET	REV.
SERIES No. 2814							-/-	mm	20278	3/3	13C

Date :

Our Spec. No. WS03-M051

MESSRS.

SPECIFICATION
FOR
HIGH FREQUENCY COAXIAL CABLE
" KHCX - 32AWG - SB - TA "

SHOWA ELECTRIC WIRE & CABLE CO., LTD.

TORANOMON

TOKYO JAPAN

James Huang

LANTRRA INDUSTRIAL CO., LTD.
F.14, NO. 92, SHING TEH ROAD,
SAN CHUNG, TAIPEI, TAIWAN
TEL:886-2-8511-1178
FAX:886-2-8511-1179
Email:sales@lanterra.com.tw
www.lanterra.com.tw
www.terraview.com.tw

T. Mori

T. Mori
Manager, Engineering Section
Engineering Dept.
Electronic Wire Business Unit

1. 適用(SCOPE)

本仕様書は電子機器などの内部配線に使用される細径同軸“KHCX-32AWG-SB-TA”の構造と特性について定める。

This specification covers the construction and characteristics of coaxial cable “KHCX-32AWG-SB-TA” for internal wiring of electronic equipment.

2. ケーブル型名の説明 (EXPLANATION OF CABLE TYPE)

KHCX-32AWG-SB-TA

(1) (2) (3)

- (1) ケーブル略称 (Cable Abbreviation)
- (2) 導体サイズ (Conductor Size)
- (3) 外部導体タイプ (Outer Conductor Type)

3. 構造(CONSTRUCTION)

項目 Item		要求特性 Requirement
内部導体 Inner conductor	材質 Material	銀めつき軟銅線 Silver coated annealed copper wire
	構成 Stranding	7/0.08mm
	外径 Diameter	標準 0.24mm Nom. 0.24mm
絶縁体 Insulation	材質 Material	FEP
	色別 Color	自然色 Natural
	厚さ Thickness	標準 0.22mm Nom. 0.22mm
	外径 Diameter	標準 0.68mm Nom. 0.68mm
外部導体 Outer conductor	材質 Material	錫めつき軟銅線 Tinned annealed copper wire braid shield
	構成 Stranding	16/4/0.05 mm
シース Sheath	材質 Material	FEP
	色別 Color	灰・白・黒 Gray・White・Black
	厚さ Thickness	標準 0.10mm Nom. 0.10mm
仕上外径 Overall diameter		標準 1.13mm Nom. 1.13mm
概算質量 Approximate mass		3 kg/km

4. 電気特性(20℃) (ELECTRICAL CHARACTERISTICS at 20 degree)

項目 Item	単位 Unit	要求特性 Requirements
導体抵抗 Conductor Resistance	Ω/km	520 以下 Max. 520
絶縁抵抗 Insulation Resistance	MΩ km	1,500 以上 (DC 500V 1 分間充電後) Min. 1,500 (After charge DC 500V for 1 min.)
耐電圧 Dielectric Strength	V/1min.	AC 1,000
静電容量 Capacitance	pF/m	標準 97 (at 1kHz) Nom. 97 (at 1kHz)
特性インピーダンス Characteristic Impedance	Ω	標準 50 (TDR にて測定) Nom. 50 (at TDR)

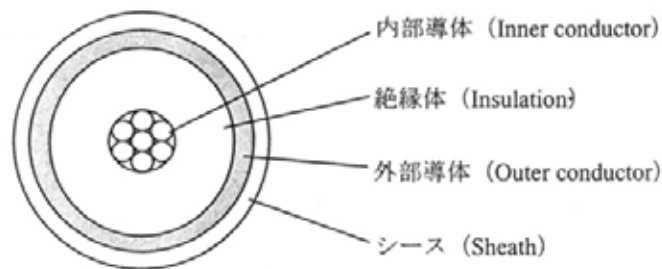


図1.ケーブル構造図

Fig.1. Cable Cross-Section

5. 梱包及び荷札の表示 (PACKING AND MARKING ON TAG)

完成品は運送中及び保管中に損傷を生じぬ荷造りをする。

また、荷札の表示は以下の通りとする。

The completed cables shall be coiled and packing in such a manner as to be adequately protected from damage during packing, shipping, and normal handling.

The following items shall be marked in the Tag which is attached to the products.

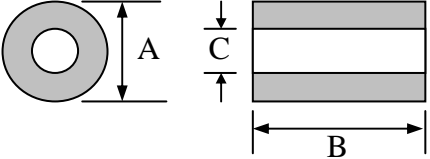
- 1) 品名 (Type of Cable)
- 2) 導体サイズ (Conductor size)
- 3) 条長 (Length)
- 4) 製造者名または略称 (Manufacturer's name or trade mark)
- 5) 製造年月 (The year and month of manufacture)

なお、完成品にはジョイントを有する場合がある。その場合は条長明細を記載する。

Note : The spool may contain joints. In that case, the detail of length is indicated.

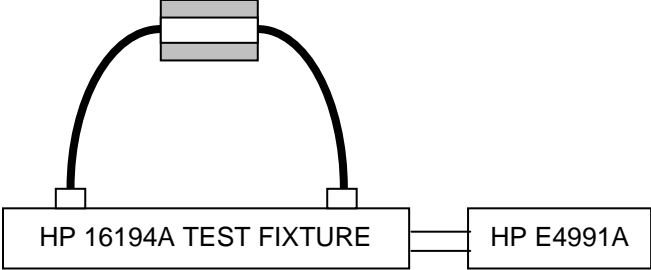
SPECIFICATION

Customer : 亞 驪	Item : B15 RH 3.5x9x1.3	Date : 1,OCT.05
----------------	-------------------------	-----------------

	Ref. No : K5B RH 3.5x9x1.3																								
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">A</td> <td style="width: 20%;">3.50</td> <td style="width: 70%;">±0.15mm</td> </tr> <tr> <td>B</td> <td>9.00</td> <td>±0.30mm</td> </tr> <tr> <td>C</td> <td>1.30</td> <td>±0.15mm</td> </tr> <tr> <td>D</td> <td></td> <td></td> </tr> <tr> <td>E</td> <td></td> <td></td> </tr> <tr> <td>F</td> <td></td> <td></td> </tr> <tr> <td>G</td> <td></td> <td></td> </tr> <tr> <td>H</td> <td></td> <td></td> </tr> </table>	A	3.50	±0.15mm	B	9.00	±0.30mm	C	1.30	±0.15mm	D			E			F			G			H		
A	3.50	±0.15mm																							
B	9.00	±0.30mm																							
C	1.30	±0.15mm																							
D																									
E																									
F																									
G																									
H																									

Electrical Requirement			
Impedance	MIN 46	Test Frequency	25 MHz
Impedance	MIN 72	Test Frequency	100 MHz
Impedance		Test Frequency	
Impedance		Test Frequency	

Test equipment : HP E4991A

	Wire : TCWφ0.65x63mm Winding : 1 Turn Material : B15 Nickel/Zinc
---	--

REMARK :

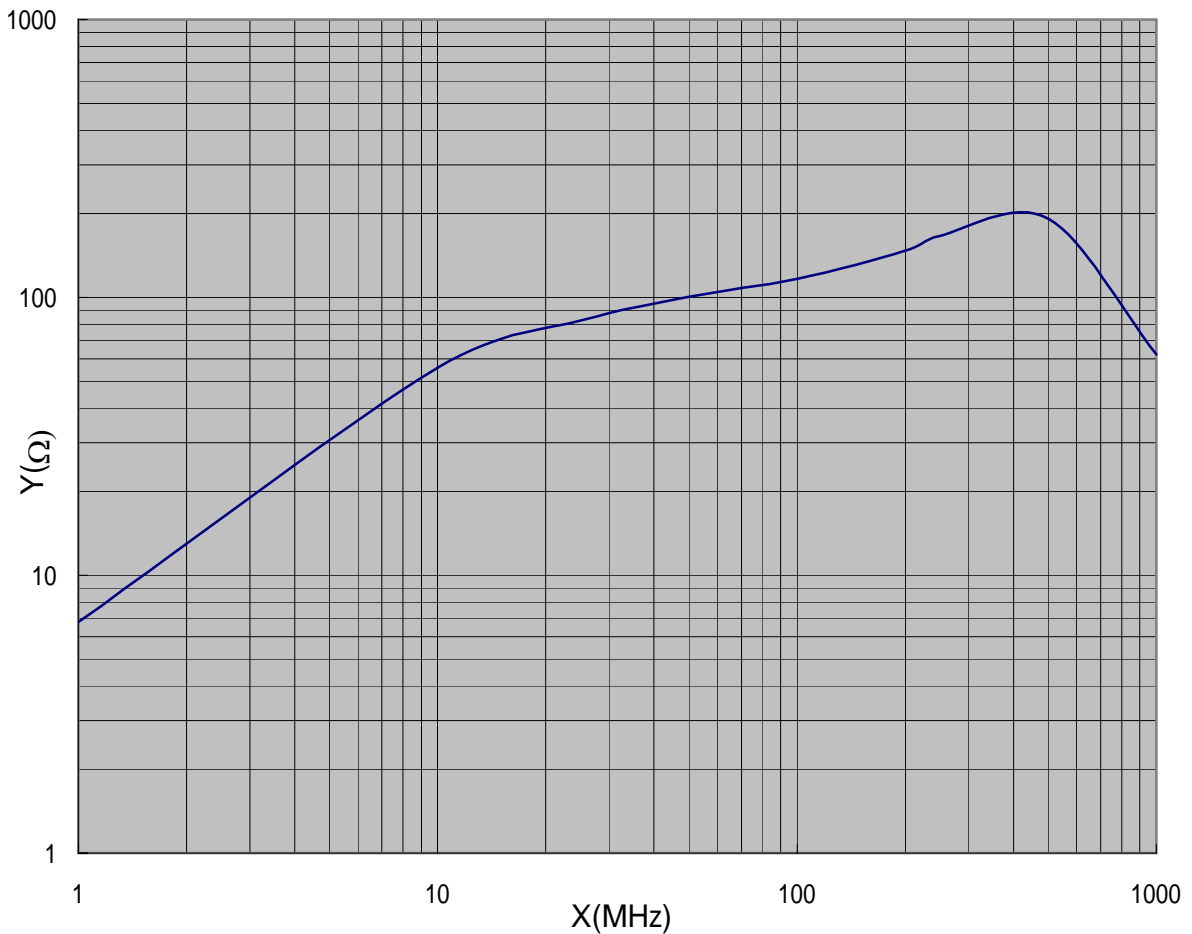
Approved by	Checked by	Reported by	Approved by Customer



B & F ELECTRONICS CO., LTD.

INSPECTION DATA

Customer	亞 驪		Date	1-Nov-05			
Item	B15 RH 3.5x9x1.3		Ref. No.	K5B RH 3.5x9x1.3			
Part No.			Test Frequency	1~1000 MHz			
Test equipment	HPE4991A/16194A		Coil Spec.	TCWφ 0.65x63mm at 1 turn			
	Impedance			Dimension (Unit : mm)			
FREQ.		25 MHz	100 MHz	A OD	B HT	C ID	
SPEC.		MIN 46Ω	MIN 72Ω	±0.15 3.50	±0.30 9.00	±0.15 1.30	
1		82.5	116.4	3.54	9.11	1.39	
2		82.9	116.8	3.56	9.05	1.37	
3		83.2	117.5	3.55	9.08	1.40	
4		82.6	116.9	3.53	9.09	1.36	
5		82.2	116.5	3.56	9.03	1.38	
6							
7							
8							
9							
10							
X							
R							



ZHI YAN ELECTRONICS CO., LTD

11F.-8, No.109, Sec1, Jhongsan Rd, Sinjhuang City,
Taipei County 242, Taiwan (R.O.C)
TEL(886)2-8522-7261 FAX(886)2-8522-7265

PRODUCT SPECIFICATION

FEBULARY 16, 2004

1st Edition

1. APPLICABLE SPECIFICATION

(1) This specification covers the requirements for
Flexible Heat-Shrinkable Polyolefin Cross-Link
Tubing Class I

(2) Voltage 600V Temperature 125°C Rating

2. REFERENCE STANDARD

- (1) UL224 : Extruded Insulating Tubing
(2) CSA C22.2 NO.198.1-99 : Extruded Insulating Tubing

3. SHRINKABLE PROPERTIES

- (1) Radial shrinkage : 50% min.
(2) Longitudinal shrinkage : 10% max.
(3) Minimum shrink temperature : 90°C

4. Product Name

- (1) Heat-Shrinkable Tubing LHS-125FR

5. STANDARD SIZE

Nominal Size (mm)	Size as supplies (mm)		Size as recovered (mm)		Standard Length (M)
	Inside Diameter	Wall Thickness	Maximum Inside Dimeter	Minimum Wall Thickness	
1.0 X 0.2	1.5 ± 0.2	0.20	0.50	0.33	200
1.5 X 0.2	2.1 ± 0.2	0.20	0.75	0.36	200
2.0 X .02	2.7 ± 0.2	0.20	1.00	0.44	200
2.5 X 0.2	3.2 ± 0.2	0.25	1.25	0.44	200
3.0 X 0.25	3.7 ± 0.3	0.25	1.50	0.44	200
3.5 X 0.25	4.2 ± 0.3	0.25	1.75	0.44	200
4.0 X 0.25	4.7 ± 0.3	0.25	2.00	0.44	200
5.0 X 0.25	5.7 ± 0.3	0.25	2.50	0.56	100
6.0 X 0.25	6.7 ± 0.4	0.25	3.00	0.56	100
7.0 X 0.25	7.7 ± 0.4	0.25	3.50	0.56	100
8.0 X 0.25	8.7 ± 0.4	0.25	4.00	0.56	100
9.0 X 0.25	9.7 ± 0.4	0.25	4.50	0.56	100
10.0 X 0.25	10.7 ± 0.4	0.25	5.00	0.56	100
11.0 X 0.25	11.7 ± 0.4	0.25	5.50	0.56	100
12.0 X 0.25	12.7 ± 0.4	0.25	6.00	0.56	100
13.0 X 0.30	13.7 ± 0.4	0.30	6.50	0.69	50
14.0 X 0.30	14.7 ± 0.4	0.30	7.00	0.69	50
15.0 X 0.30	15.7 ± 0.5	0.30	7.50	0.69	50
16.0 X 0.30	16.7 ± 0.5	0.30	8.00	0.69	50
18.0 X 0.35	18.7 ± 0.5	0.35	9.00	0.77	50
20.0 X 0.35	20.7 ± 0.6	0.35	10.0	0.77	50
22.0 X 0.40	22.7 ± 0.6	0.40	11.0	0.77	50
25.0 X 0.40	25.8 ± 0.8	0.40	12.5	0.87	50

LHS-125FR(厚壁)

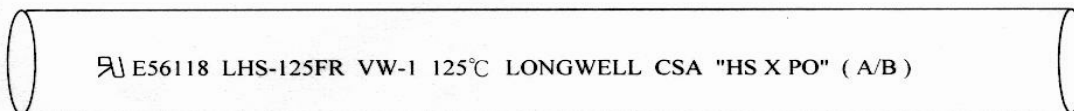
6. CHARACTERISTICS

Property	Test Condition	Values
Radial shrinkage	150°C x 10min	50% min.
Longitudinal shrinkage		15% max.
Tensile strength		10.4 Mpa min.
Elongation		200% min.
Tensile strength after aging	158°C x 7days and 134°C x 60days	Retains min.70% of original value
Elongation after aging		100% min.
Flexibility		No crack
Deformation	125°C x 1hr	50% max.
Heat shock	136°C x 1hr	No crack
Cold bend	-30°C x 1hr	No crack
Corrosion of bare copper	Aging at 158°C x 7days after humidity conditioned for 1day	No discoloration or corrosion of copper
Copper stability		100% min. elongation
Flammability		Self-extinguish satisfied VW-1
Dielectric withstand		No breakdown for 60 sec. At 2.5kV (AC)
Breakdown voltage		2.5kV (AC) min.
Dielectric withstand after aging	158°C x 7days and 134°C x 60days	No breakdown for 60 sec. At 2.5kV (AC)
breakdown voltage after aging		2.5kV (AC) min. and retains min. 40% of original value
Volumn resistvivity		10 ¹⁴ Ω-CM min.

7. MARKING

The following information shall be legible cleanly by durably ink-printed on the surface of the tubing.

- (1) UL FILE NO.
 - (2) Manufactue's name
 - (3) Flame retardant test class
 - (4) Temperature Rating
 - (5) Nominal Size of the tubing
 - (6) Maximum recovered inside diameter
 - (7) Type designnation
- (Example)



8.PACKING

This standard length given in the Construction table. Other length are available upon special need not to be damaged during transporting and storage.

YDPU2

December 11, 2002

Tubing, Extruded Insulating - Component

LONGWELL CO

E56118

10TH FL GLORY BLDG 36 CHANG AN EAST RD, SEC 1, TAIPEI

104 TAIWAN

Cat. No.	Max V	Max Temp C	Col Recognized	Max Temp Rated Oil Resistance *,°C	VW-1 Rated #
Polyvinyl chloride (PVC).					
LIT-300	300	105	All	—	Yes
LIT-600	600	105	All	—	Yes
Flexible heat shrinkable polyolefin.					
LHS-105FR	600	105	All@	—	Yes
LHS-125FR	600	125	All@	—	Yes
LHS-125FR-3	300	125	All@	—	Yes
LHS-125FR-4	150	125	All@	—	Yes

@ - All colors except clear.

*Tubing is considered to comply with the optional oil resistant requirements only if it is so marked.

1/21/2003

Underwriters Laboratories Inc.

Card 1 of 2

YDPU2

December 11, 2002

Tubing, Extruded Insulating - Component

LONGWELL CO

E56118

#Tubing is considered to comply with the optional VW-1 flammability requirements only if it is so marked.

Marking: Company name or "E56118" and temperature rating on tags attached to both ends of the tubing, on the shipping spool label or on the smallest unit container. Catalog number shall be on the tubing, shipping carton, spool or tag attached to the tubing.

See General Information Preceding These Recognitions

For use only in equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

1/21/2003

Underwriters Laboratories Inc.

Card 2 of 2



Certification Record

CUSTOMER	CLASS	FILE
Longwell Company 10/F 36 Chang An E Rd Sec 1 Taipei 10404 Taiwan	<u>9032-01</u> INSULATING DEVICES AND MATERIALS-Insulating Tubing and Sleeving	038712_0_000
Refer to Class Description for program details		

TO THE REQUIREMENTS OF CSA STANDARD C22.2 NO. 198.1-99:

Cat No	Voltage Rating (V)	Temp Rating (C)	Size (AWG-in)	Inside Dia (mm)	Optional Flame (VW-1)	Notes
--------	--------------------------	--------------------	------------------	--------------------	-----------------------------	-------

- Flexible heat-shrinkable cross-linked Polyolefin tubing

LHS-125FR	600	125	3/64-1	0.58-12.7	No	1
LHS-125FR-4	150	125	1/8 - 1 in	1.57-12.7	Yes	1

- Flexible, not heat-shrinkable PVC tubing

-	300	105	30-1/0 AWG	0.30-8.38	Yes	2
-	600	105	30-1/0 AWG 5/16-4 in	0.30-8.38 7.94-102.0	Yes	2

Note:

1. In all colours, except or clear.
2. In all colours, including clear.

/mek



PT. NEW CROWN METAL WORKS

JL. INDUSTRI 52 (MASUK JL. SUKID CIRACAS - JAKARTA TIMUR (13750) - INDONESIA
 TELP. : 8400374 (HUNTING), 8401589 - 8402531 - 8403604
 FAX : (62-21) 8400895 - 87791167

Report of goods analyzed Internal

2006_002

customer : SHIN TAY LONG FIVE Metal Product Co., Ltd

date : 16 September 2002.

kind of goods : BRASS TUBE
 size : 25 mm x 1.5 mm
 product standard : JIS H3300 - C2700 T-O
 net weight : 20,000 Kgs.

Chemical composition	Standard (%)	Tested (%)
<i>62</i> <i>0.01</i> <i>0.02</i> <i>2%</i> Cu	63.0 - 67.0	65.18
Fo	0.05	0.01
Pb	0.05	0.02
Zn	residual	residual
Tensile strength	295	388
Outer diameter	25 mm	25.06 mm
Wall thickness	1.5 mm	1.55 mm