承　　認　　書

APPROVAL SHEET

CUSTOMER:亞旭電腦股份有限公司

FILE NO . F5D7130 / F5D7330

DESCRIPTION : 2.4Ghz Dipole Antenna

經理 Manager	品保 Q C	工 程 師 Engieer

ANTENNIQUES P/N : MCF003A-103-05

CUSTOMER P/N :

DATE : 中華民國　92 年　06 月 27 日

Customer Approval

欣格科技股份有限公司 Antenniques Co.,Ltd

台北縣樹林市柑園街二段 122 巷 6 號 5 樓

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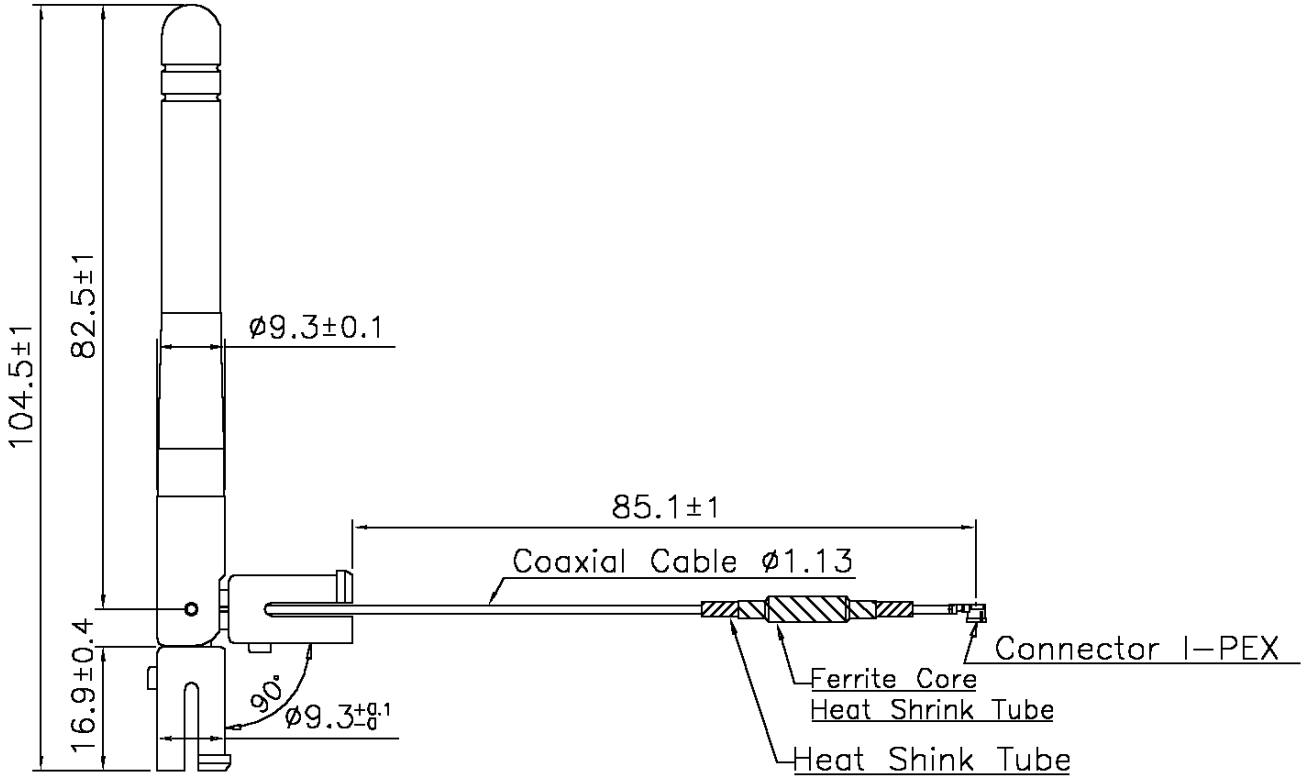
REVISIONS			
REV	BY	DESCRIPTION	DATE
1			



ITEM NO.	QTY REQD	PART NUMBER	DESCRIPTION
1			

PARTS LIST

TOLERANCE UNLESS OTHERWISE SPECIFIED (±)							
CLASS	A	B	C	D	E	F	G
< 6mm	0.05	0.1	0.1	0.2	0.2	0.4	0.4
6 ~ 25mm	0.08	0.15	0.15	0.3	0.3	0.6	0.6
25 ~ 80mm	0.12	0.2	0.25	0.4	0.5	0.8	1.0
80 ~ 250mm	0.25	0.3	0.4	0.6	0.8	1.2	1.5
250 ~ 800mm	0.5	0.6	0.8	1.0	1.5	2.0	3.0
> 800mm	1.0	1.0	1.5	1.7	3.0	4.0	6.0
ANGLE	0.5						

METRIC

THIRD ANGLE PROJECTION

MATERIAL 1 | FINISH 2

DO NOT SCALE DRAWING

DRAWN		DATE
CHECK		DATE
DESIGN		DATE
REV	A0	SIZE A4
SHEET	1 OF 1	SCALE 1/1

Antenniques Corp. Ltd.

TITLE: MCF003 成品圖

PART NO. MCF003A-103-05

DRAWING NO. WR-R-AD0437-A1

1 :1

TECHNICAL DATA

● Electrical Properties

Frequency Range ：2.4　2.5GHz

Impedance ：50 Ohm nominal

VSWR ：≦2.0

Gain ：3dBi

Radiation ：Omni

Polarization ：Vertical

Electrical Wave ：λ/4 Dipole

Connector ：I-PEX

● Mechanical Properties

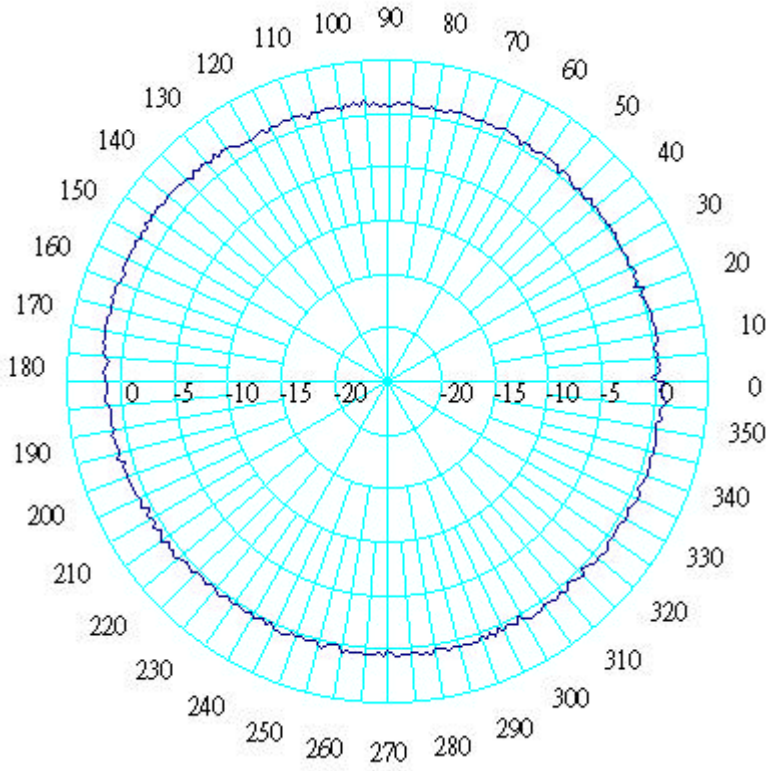
Antenna Cover ：PU

Color ：BLACK

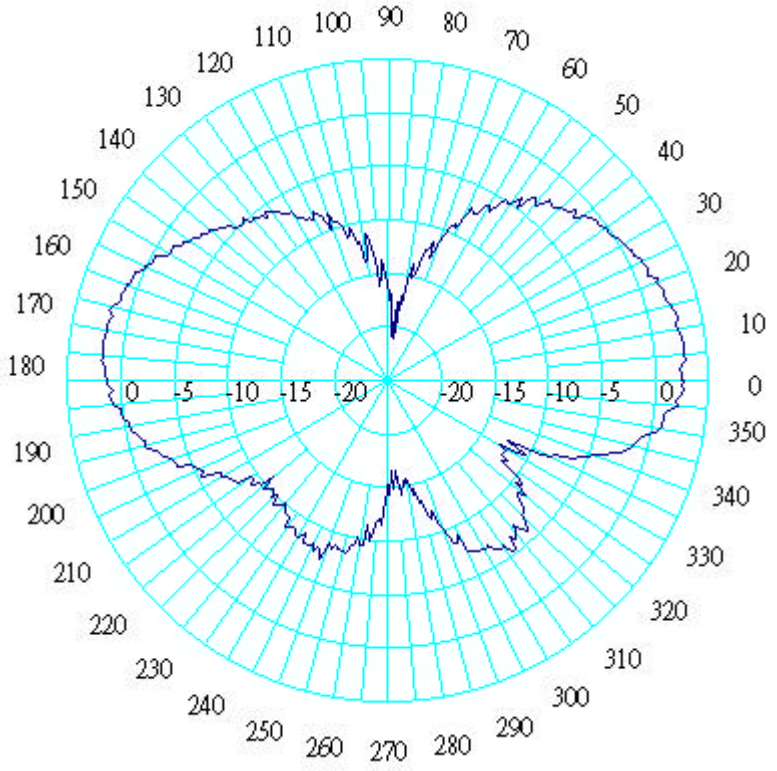
Operation Temperature：－20℃　＋60℃

Storage Temperature ：-30℃　＋75℃

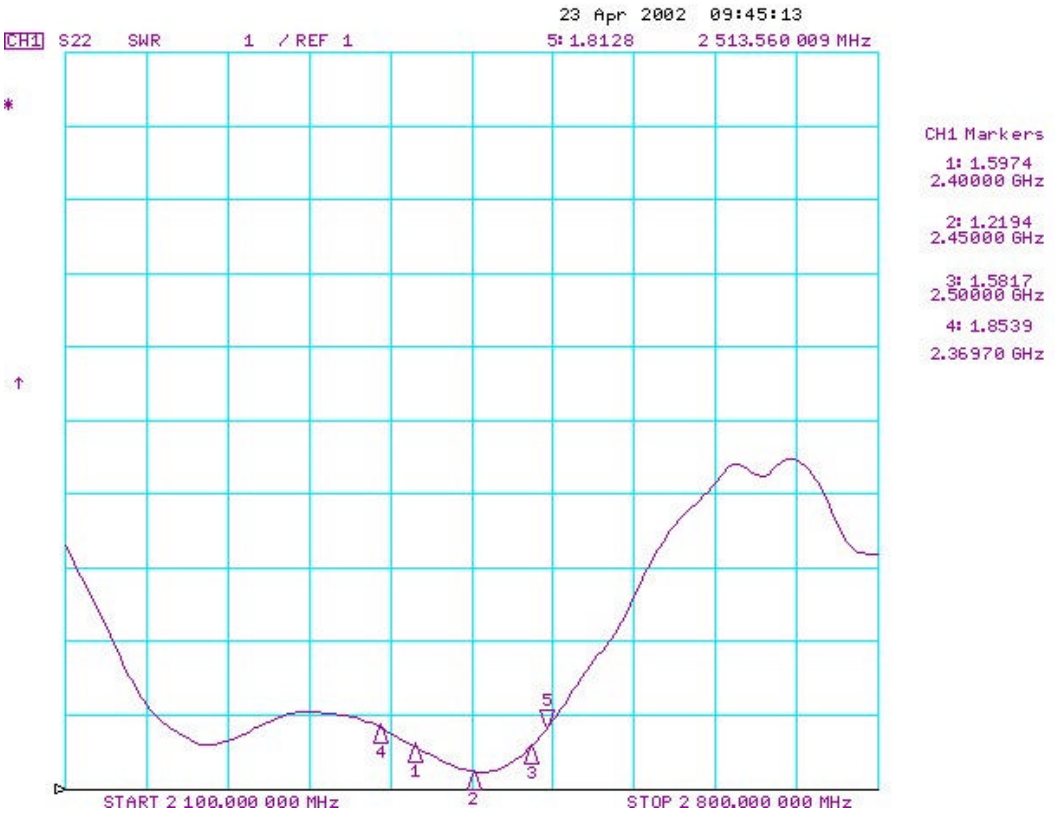
H-Plane



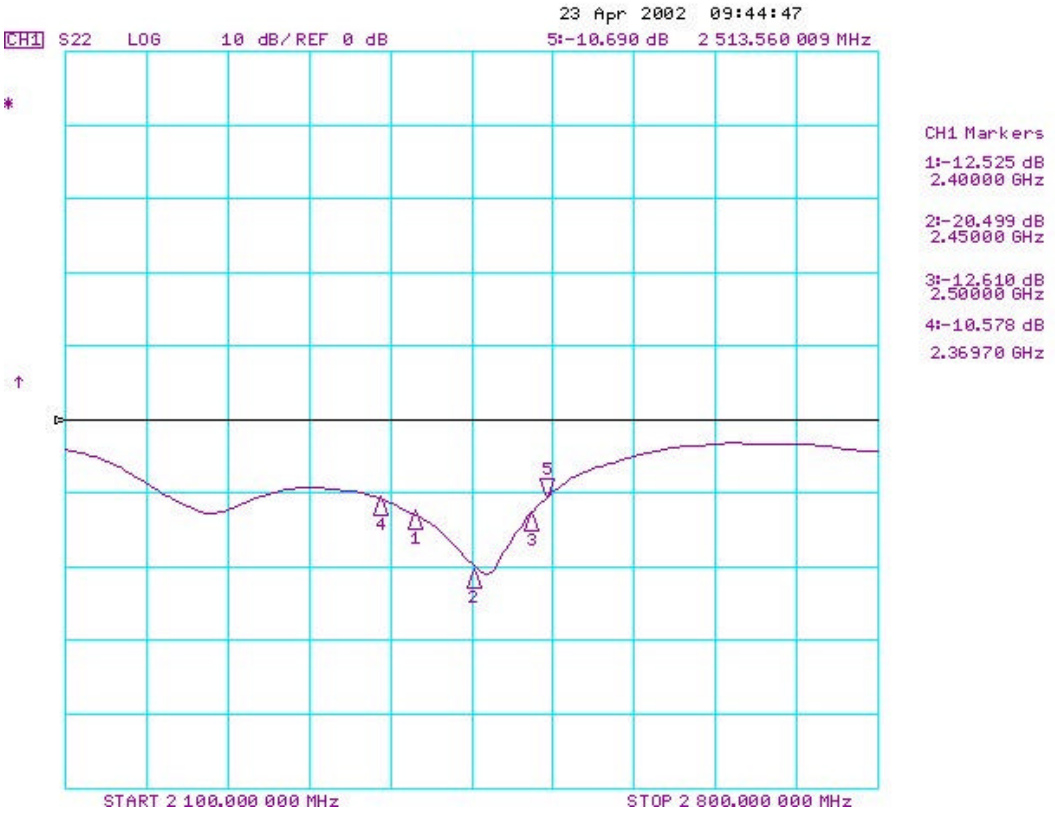
E-Plane



VSWR



Return Loss



QUALIFICATION TEST REPORT

Document No. TR-1037

MHF series micro coaxial connector

Product Specification No. PRS-1180

					Prepared by	Reviewed by	Approved by
2	T2020	K.O	MAY/17/'02	K.K	K.Ohbayashi Nov/16/'01	E.Kawabe Nov/20/'01	K.Katabuchi Nov/21/'01
1	T1040	K.O	Dec/25/'01	K.K			
0	T1036	K.O	Nov/16/'01				
REV.	ECN	BY	DATE	APP.			
REVISION RECORD							

DOCUMENT CLASSIFICATION	TITLE	DOCUMENT No.
Qualification Test Report	MHF series micro coaxial connector	TR-1037

1.Purpose

Testing was performed on the MHF series micro coaxial connector to determine meets the requirement of I-PEX specfication,PRS-1180

2.Conclusion

All the specimen met the requirements of PRS-1180.

3.Sample

(1) Connector Plug : part No.20278-111R-13
Receptacle : part No.20279-001E-01

(2) Cable AWG#32 coaxial cable (jacket diameter 1.13mm)

3.Method

Refer to product specfication,PRS-1180

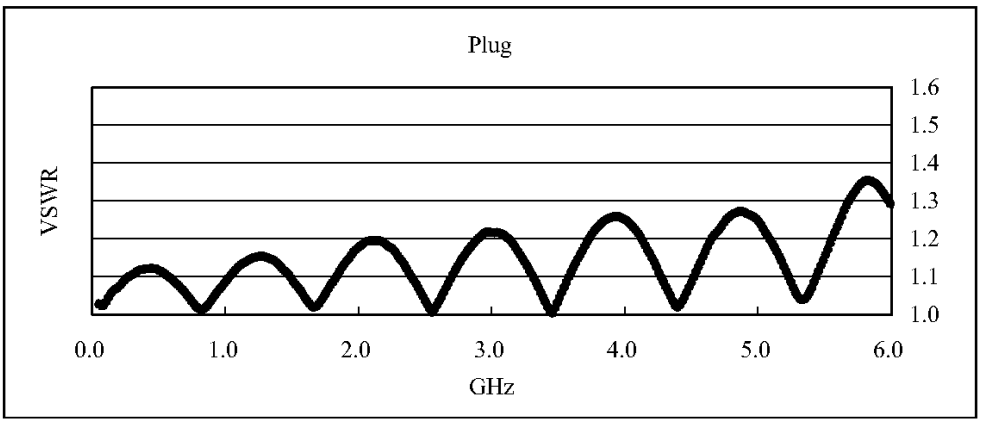
4. Results

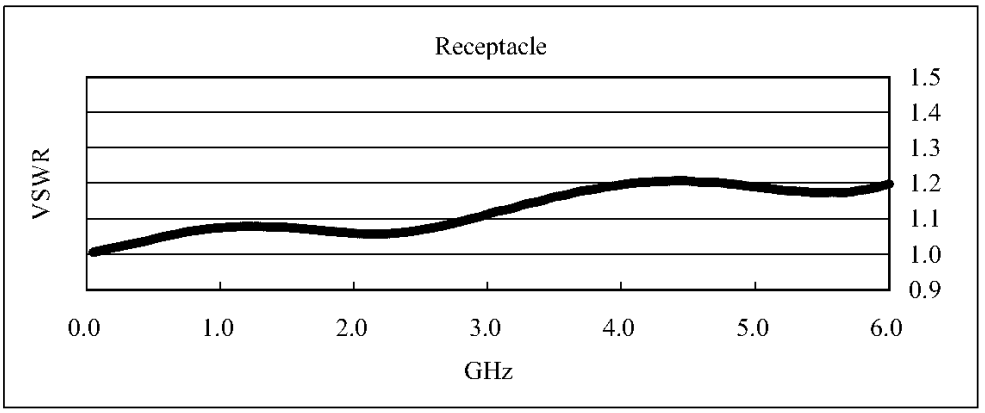
(1) Dielectric withstanding voltage

Results	No abnormality
Sample quantity	10pcs.
Judge	OK

(2) VSWR

	Plug		Receptacle	
	0.1~3GHz	3~6GHz	0.1~3GHz	3~6GHz
AVE.	1.240	1.370	1.120	1.216
MAX.	1.25	1.39	1.13	1.24
MIN.	1.23	1.35	1.11	1.20
Specification	1.3 MAX.	1.5 MAX.	1.3 MAX.	1.4 MAX.
Sample quantity	5pcs.	5pcs.	5pcs.	5pcs.
Judge	OK	OK	OK	OK

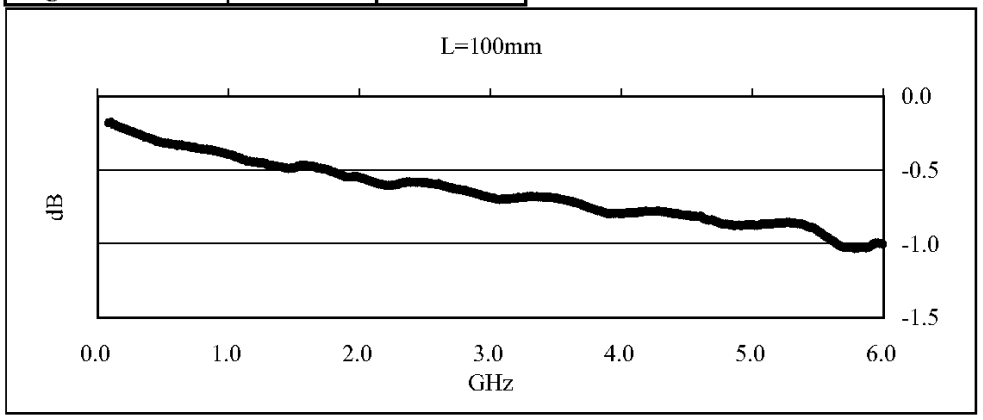




DOCUMENT CLASSIFICATION	TITLE	DOCUMENT No.
Qualification Test Report	MHF series micro coaxial connector	TR-1037

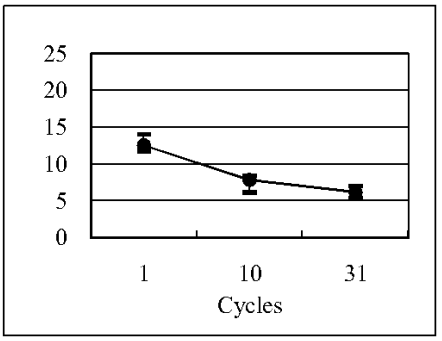
(3) Insertion loss

	Plug cable length 100mm	
	0.1~3GHz	3~6GHz
AVE.	-0.682	-0.990
MAX.	-0.66	-0.96
MIN.	-0.71	-1.02
Specification	-1.0 MIN.	-1.6 MIN.
Sample quantity	5pcs.	5pcs.
Judge	OK	OK

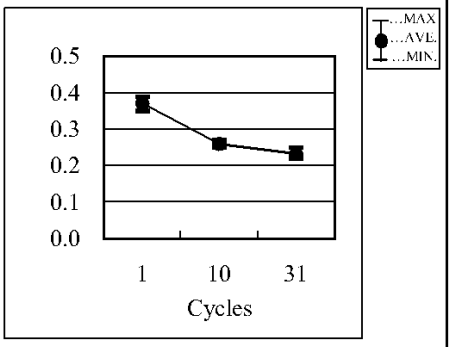


(3) Unmating force(抜去力)

Total unmating force (総合抜去力)	Initial (初期)	After 30cycles (30回後)
AVE.	12.6	6.2
MAX.	14	7
MIN.	12	5
S	0.8	0.6
Specification(規格)	5 MIN.	3 MIN.
Units(単位)	N	N
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK



Unmating force of inner contact (中心導体抜去力)	Initial (初期)	After 30cycles (30回後)
AVE.	0.372	0.233
MAX.	0.39	0.25
MIN.	0.35	0.22
S	0.015	0.012
Specification(規格)	0.15 MIN.	0.1 MIN.
Units(単位)	N	N
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK

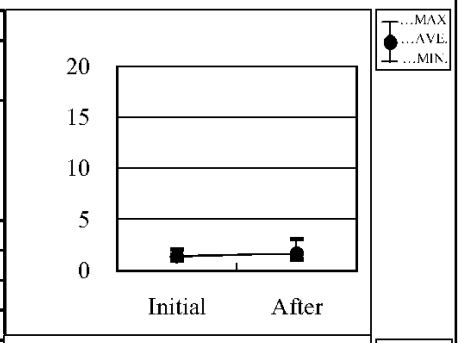


DOCUMENT CLASSIFICATION	TITLE	No.
Qualification Test Report テストレポート	MHF series micro coaxial connector	TR-1037

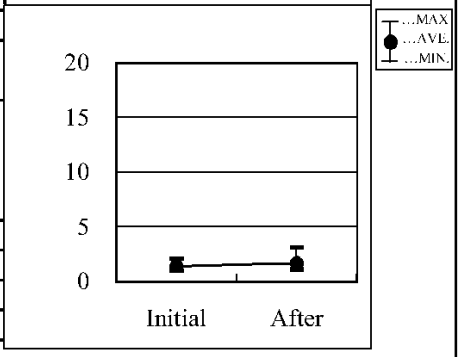
(4) Durability(耐久性)

Appearance(外観) : No abnormality(異常無し)

Contact resistance of inner contact (中心導体接触抵抗)	Initial (初期)	After testing (試験後)
AVE.	1.41	1.70
MAX.	2.1	3.1
MIN.	1.0	1.1
S	0.37	0.58
Specification(規格)	20 MAX.	25 MAX.
Units(単位)	mille-ohm	mille-ohm
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK



Contact resistance of ground contact (外部導体接触抵抗)	Initial (初期)	After testing (試験後)
AVE.	1.49	2.51
MAX.	1.8	3.0
MIN.	0.9	1.3
S	0.30	0.59
Specification(規格)	10 MAX.	15 MAX.
Units(単位)	mille-ohm	mille-ohm
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK

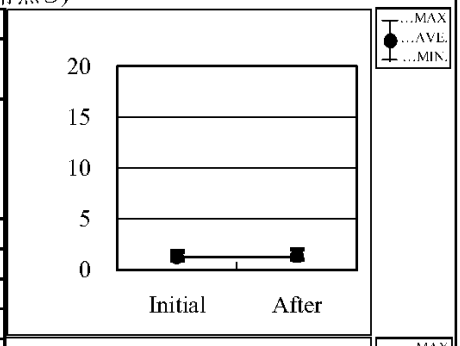


(5) Cable retention force(ｹｰﾌﾞﾙ保持力)

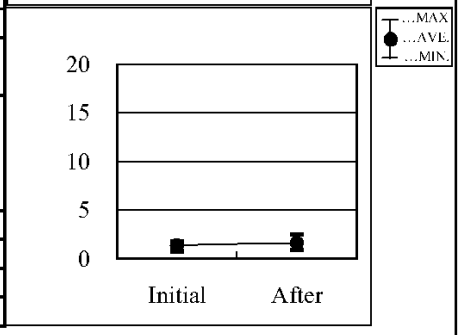
Appearance(外観) : No abnormality(異常無し)

Electrical discontinuity(電気瞬断) : No abnormality(異常無し)

Contact resistance of inner contact (中心導体接触抵抗)	Initial (初期)	After testing (試験後)
AVE.	1.23	1.35
MAX.	1.8	2.0
MIN.	0.9	1.0
S	0.35	0.37
Specification(規格)	20 MAX.	25 MAX.
Units(単位)	mille-ohm	mille-ohm
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK



Contact resistance of ground contact (外部導体接触抵抗)	Initial (初期)	After testing (試験後)
AVE.	1.41	1.69
MAX.	1.8	2.5
MIN.	0.8	0.9
S	0.35	0.46
Specification(規格)	10 MAX.	15 MAX.
Units(単位)	mille-ohm	mille-ohm
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK



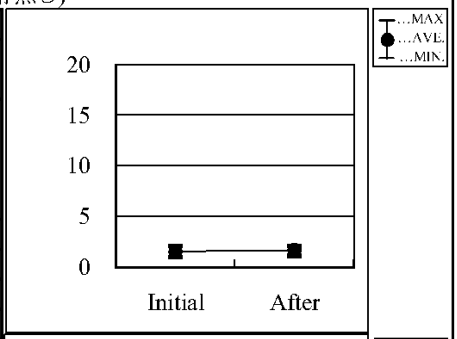
DOCUMENT CLASSIFICATION Qualification Test Report テストレポート	TITLE MHF series micro coaxial connector	No. TR-1037

(6) Vibration(振動)

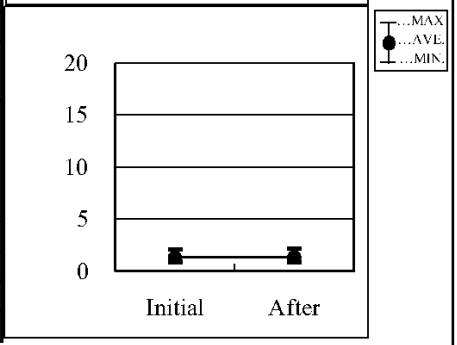
Appearance(外観) : No abnormality(異常無し)

Electrical discontinuity(電気瞬断) : No abnormality(異常無し)

Contact resistance of inner contact (中心導体接触抵抗)	Initial (初期)	After testing (試験後)
AVE.	1.55	1.72
MAX.	2.1	2.1
MIN.	1.0	1.1
S	0.44	0.46
Specification(規格)	20 MAX.	25 MAX.
Units(単位)	mille-ohm	mille-ohm
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK



Contact resistance of ground contact (外部導体接触抵抗)	Initial (初期)	After testing (試験後)
AVE.	1.35	1.39
MAX.	2.1	2.2
MIN.	0.9	0.9
S	0.41	0.46
Specification(規格)	10 MAX.	15 MAX.
Units(単位)	mille-ohm	mille-ohm
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK

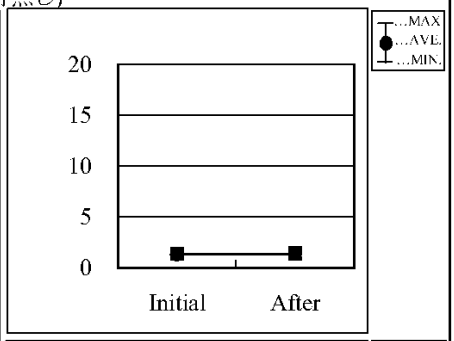


(7) Shock(衝撃)

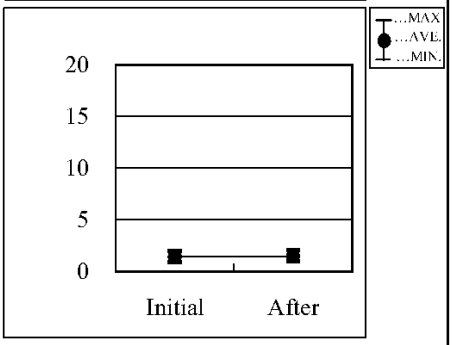
Appearance(外観) : No abnormality(異常無し)

Electrical discontinuity(電気瞬断) : No abnormality(異常無し)

Contact resistance of inner contact (中心導体接触抵抗)	Initial (初期)	After testing (試験後)
AVE.	1.32	1.45
MAX.	1.8	1.9
MIN.	0.9	0.9
S	0.30	0.35
Specification(規格)	20 MAX.	25 MAX.
Units(単位)	mille-ohm	mille-ohm
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK



Contact resistance of ground contact (外部導体接触抵抗)	Initial (初期)	After testing (試験後)
AVE.	1.45	1.53
MAX.	2.0	2.1
MIN.	0.9	1.0
S	0.34	0.37
Specification(規格)	10 MAX.	15 MAX.
Units(単位)	mille-ohm	mille-ohm
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK

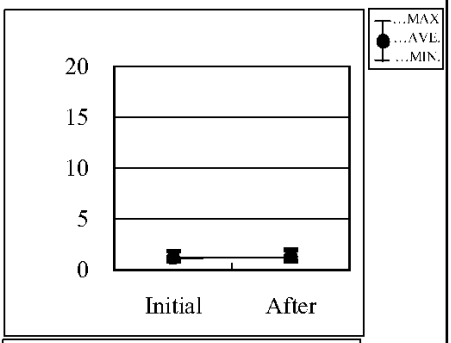


DOCUMENT CLASSIFICATION	TITLE	No.
Qualification Test Report テストレポート	MHF series micro coaxial connector	TR-1037

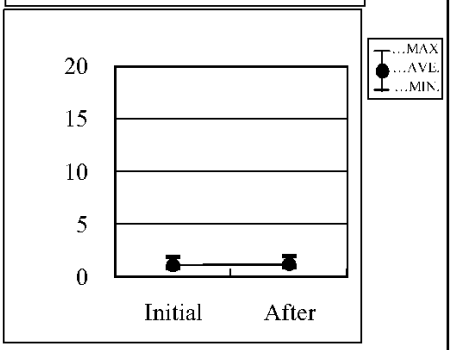
(8) Thermal shock(熱衝撃)

Appearance(外観) : No abnormality(異常無し)

Contact resistance of inner contact (中心導体接触抵抗)	Initial (初期)	After testing (試験後)
AVE.	1.23	1.34
MAX.	1.9	2.0
MIN.	0.9	0.9
S	0.25	0.32
Specification(規格)	20 MAX.	25 MAX.
Units(単位)	mille-ohm	mille-ohm
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK



Contact resistance of ground contact (外部導体接触抵抗)	Initial (初期)	After testing (試験後)
AVE.	1.13	1.24
MAX.	1.9	2.0
MIN.	0.9	0.9
S	0.37	0.38
Specification(規格)	10 MAX.	15 MAX.
Units(単位)	mille-ohm	mille-ohm
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK



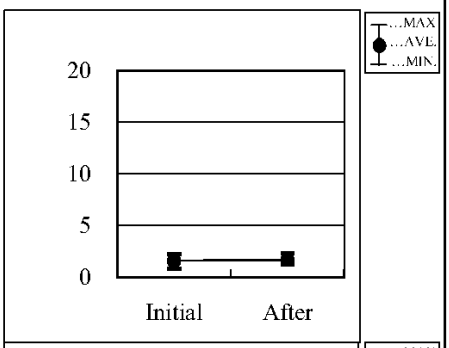
Insulation resistance (絶縁抵抗)	Initial (初期)	After testing (試験後)
Results(結果) MIN. value	10,000	10,000
Specification(規格)	500 MIN.	100 MIN.
Units(単位)	mega-ohm	mega-ohm
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK

DOCUMENT CLASSIFICATION	TITLE	No.
Qualification Test Report テストレポート	MHF series micro coaxial connector	TR-1037

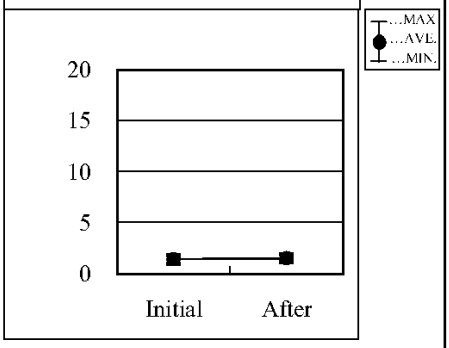
(9) Humidity(湿度)

Appearance(外観) : No abnormality(異常無し)

Contact resistance of inner contact (中心導体接触抵抗)	Initial (初期)	After testing (試験後)
AVE.	1.58	1.72
MAX.	2.2	2.3
MIN.	0.8	1.2
S	0.45	0.51
Specification(規格)	20 MAX.	25 MAX.
Units(単位)	mille-ohm	mille-ohm
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK



Contact resistance of ground contact (外部導体接触抵抗)	Initial (初期)	After testing (試験後)
AVE.	1.44	1.55
MAX.	1.8	1.9
MIN.	1.0	1.2
S	0.25	0.25
Specification(規格)	10 MAX.	15 MAX.
Units(単位)	mille-ohm	mille-ohm
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK



Insulation resistance (絶縁抵抗)	Initial (初期)	After testing (試験後)
Results(結果) MIN. value	10,000	10,000
Specification(規格)	500 MIN.	100 MIN.
Units(単位)	mega-ohm	mega-ohm
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK

(10) Salt water spray (塩水噴霧)

	Initial(初期)	After testing(試験後)
Results(結果)	No abnormality(異常無し)	No abnormality(異常無し)
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK

(11) Solderability , reflow solderimg resistance(半田付け性 , 半田耐熱性)

	Solderability(半田付け性)	Reflow solderimg resistance(半田耐熱性)
Results(結果)	No abnormality(異常無し)	No abnormality(異常無し)
Sample quantity(試料数)	10pcs.	10pcs.
Judge(判定)	OK	OK

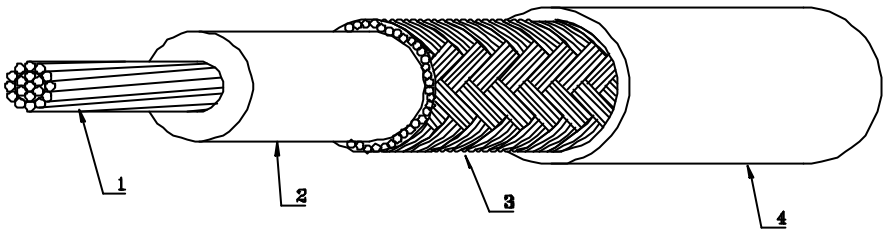
SPECIFICATION OF **COAX 50 Ohms AWG32** **CORE PTFE D=1.13 mm**	**AXON' CABLE S.A.S.** *CABLE & INTERCONNECT* ROUTE DE CHALONS-SUR-MARNE 51210 MONTMIRAIL-FRANCE Tel : (33) 03 26 81 70 00 Fax : (33) 03 26 81 28 83 e-mail : sales@axon-cable.fr	**N° P530738A** Page 1/1

Index	Date	Designed by	Approval	Description of the Modifications
A	02/04/02	PV	SW	CREATION

I – Scope

This specification presents a PTFE jacketed COAXIAL cable AWG32, 1.13 mm O.D.for internal wiring of electronic equipment, such as Computer / Notebook with wireless communication systems.

II – Construction



Item		Unit	Details
1-Inner Conductor	Material	-	Silver Plated Copper
	Composition	No./mm	AWG32 or 7 x 0.079
	Nom. O.D.	mm	0.237
2-Dielectric	Material	-	Extruded PTFE
	Nom. O.D.	mm	0.68
	Color	-	Natural
3-Outer Conductor	Material	-	Tin Plated Copper
	Composition	-	Braided Shield AWG44
	Approx. O.D.	mm	0.90
5-Outer Jacket	Material	-	Extruded FEP
	O.D. (mm)	mm	1.13±0.05
	Color	-	P530738A^ : Light Grey P530738A^V1 : Black P530738A^V2 : Dark Grey

III – Characteristics

Item	Unit	Nom. Value
Inner Conductor resistance @20° C	Ω/km	525 max.
Characteristic Impedance	Ω	50 ± 2
Capacitance	PF/m	98
Nom. Attenuation (dB/m)	@ 1.0 GHz	1.8
	@ 1.5 GHz	2.3
	@ 2.0 GHz	2.6
	@ 2.45 GHz	3.0
	@ 5.2 GHz	4.6
	@ 5.8 GHz	5.0
Temperature Rating	°C	150
Approx. Weight	g/m	3.5

线

线是种类最多的铍铜产品，没有任何产品在应用上有线这样广泛。

圆线之使用包括:

- 长行程螺旋弹簧
- 小型机电插座
- 冷锻钉头紧固件
- 弹簧负载测试探针
- 轻量耐疲劳线缆
- BANDOLIERED 连接器接点
- 编织屏蔽布
- 防腐及防生物恶臭海上线及筛网结构
- 眼镜框

线拉直切成一定长度称为杆（ROD）。

线之断面也可以不是圆形，“异形”线在特殊的应用中担任了重要的角色，如扁线用于可收缩天线及电报电缆。扁线也可用于代替窄带，虽然有宽度对厚度的比，如果超过此比就不可行，但在许多情形下可达到节约。扁线可减少剪裁毛边。

方线用于电子接点，特别是线的包封需要尖锐的角时，可以达到可靠的接触。偶尔，方形及长方形的线，需要斜角以定向。这些需求及其他较不普遍的形状的铍铜线均可以达到。

本公司所供应之线直径自12.7mm至1.3mm，其公差如表所示。较细的线可以向本公司定单或从本公司之许多再拉制商获得。

线可以退火态（A）或四分之一硬（1/4H）、半硬（1/2H）或全硬（H）供应。但在特别情况下也供应预硬化（亦称“预处理”）线，本产品适用于各种强度与耐久性的产品，可达到柔软而严格的成型要求。

技术规格

BRUSH 合金	UNS 编号	线材
25	C17200	ASTM B 197 QQ-C-530 AMS 4725 SAE J 461, SAE J 463 JIS H3270
M25	C17300	ASTM B 197 QQ-C-530
3	C17510	*
10	C17500	*

ASTM	美国材料试验学会
QQ	联邦规格
SAE	自动车辆工程师学会
AMS	太空材料规格（SAE 刊载）
JIS	日本工业规格
DIN	德国工业规格

注: 除另有规定外，材料均依 ASTM 标准制造。
* 可获得此产品，技术规格在制定中。

公差
（毫米）

线直径 以上		以下	BRUSH WELLMAN 标准公差（+或-） 冷拉	退火
1.27	–	2	0.008	0.025
2	–	3	0.01	0.05
3	–	6	0.015	0.05
6	–	8	0.02	0.05
8	–	10	0.025	0.05
10	–	12	0.025	0.05

注: 非圆形之公差为直径公差的一半。

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Beryllium Copper

铍铜线之机械及电学性质

合金 Alloy	状态 (*)	热处理	线直径 mm	抗拉强度 kg/mm²	屈服强度 kg/mm²	伸长百分比	导电百分比 IACS
25 C17200 和 M25 C17300	A (TB00)	–	1.3-12.7	42-55	14-22	30-60	15-19
	1/4H (TD01)	–	1.3-12.7	63-81	52-74	3-25	15-19
	1/2H (TD02)	–	1.3-12.7	77-95	63-88	2-15	15-19
	3/4H (TD03)	–	1.3-2.0	91-109	80-106	2-8	15-19
	H (TD04)	–	1.3-2.0	98-117	91-113	1-6	15-19
	AT (TF00)	3hr 315-330°C	1.3-12.7	112-141	101-127	3 以上	22-28
	1/4HT (TH01)	2hr 315-330°C	1.3-12.7	123-148	116-141	2 以上	22-28
	1/2HT (TH02)	1.5hr 315-330°C	1.3-12.7	130-152	119-148	2 以上	22-28
	3/4HT (TH03)	1hr 315-330°C	1.3-2.0	133-162	123-155	2 以上	22-28
	HT (TH04)	1hr 315-330°C	1.3-2.0	137-162	126-155	1 以上	22-28
3 C17510 和 10 C17500	A (TB00)	–	1.3-12.7	24-39	7-22	20-60	20-30
	H (TD04)	–	1.3-12.7	45-57	38-53	2-20	20-30
	AT (TF00)	3hr 480-495°C	1.3-12.7	70-92	56-78	10 以上	45-60
	HT (TH04)	3hr 480-495°C	1.3-12.7	77-99	66-88	10 以上	48-60

* ASTM之字母及数码表示的产品状态.

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APPENDIX

LEO ME PTFE rod is manufactured with virgin PTFE powder by ram extrusion or compression molding and is conformed to meet the requirement of ASTM 1710 (Standard Specification for TFE FLUOROCARBON ROD) described in following table and JIS K 6889 (JAPANESE INDUSTRIAL STANDARD POLYTETRAFLUOROETHYLENE RODS).

TABLE 1 Detail Specification for PTFE Rod

ITEM	PROPERTY	ASTM TEST METHOD	VALUE
1	Specific gravity	D792	2.15-2.2
2	Tensile strength	D638	280-350 kg/cm^2
3	Elongation	D638	200-400%
4	Dielectric strength	D149	30KV/mm
5	Deformation under load. 6.9Mpa,50C, %	D621	3.5 - 6
6	Dissipetion factor 1 KHz	D150	Less than 0.0005
7	Dielectric constant 1 KHz	D150	2.0 - 2.1
8	Volume resistivity	D257	> 10^16
9	Surface resistivity	D257	10^17
10	Flexural modulus	D790	430-500Mpa
11	Compressibility	D1147	16-20%
12	Hardness, durometer	D2240	D53 - D60
13	Impact strength	D256	16kg-cm/cm
14	Coefficient of linear thermal expansion, per C. 30C to 80C, 10^-5C	D696	12.3 to 11.6

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PTFE PROPERTY

Item	UNIT wt%	TEST METHOD (ASTM)	PTFE (NATURE)
Apparent density	g/lit	D-1457	260
Specific Gravity	g/cm²	D-792	2.18
Tensile Strength	kg/cm²	D-638	315
Elongation	%	D-638	400
Deformation (Total) MD	%	D-621 (23℃ 140 kg/m²)	—
60min. CD			—
24Hrs. CD			14.3 16.7
Permanent Deformation MD CD			7.9 8.4
Deformation MD 60min. CD		150℃ 200 kg/cm²	51.8 —
Flexural Strength (0.2% offset) CD	kg/cm²	D-790	57
Flexural Modulus CD			3,500 ~ 6,300
Compressive Strength (0.2% offset) MD CD	kg/cm²	D-695	77 —
Compressive Modulus MD CD			4,200 —
Hardness	Durometer "D"	D-2240	55
Impact Strength	kg-cm/cm	D-256	15.8
Confficient of Thermal Conductivity	Kcal/m.hr.℃	Cenco Fitch	0.21
Confficient of Linear Thermal Expansio			
25~90℃ MD	0.01m/℃	D-696	—
CD			12.2
25~150℃ MD			—
CD			12.6
25~200℃ MD			—
CD			13.7
25~260℃ MD			—
CD			16.4
Water Adsorpuon	%	D-570	0
Confficient of Friction(Dynamic)		P=7 kg/cm² V=0.5 m/sec	—
Confficient of Friction(Static)		P=35 kg/cm²	0.05~0.08

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PTFE QUALITY CONTROL REPORT

We hereby state that the following material is in accordance with our specifications.

Date : November 6, 2001
Product : ICI PTFE G201
Lot No : FPIHRI 9001

Contents : 25kg * 35
Ref No :

Inspection Item	Unit	Data	Test Method
Bulk density	g/L	465	ASTM D 4895
Standard specific gravity		2.174	ASTM D 4895
Particle size(Avg.)	μm	500	ASTM D 4895
Melting point	℃	329	ASTM D 4895
Extrusion pressure	MPa	69.7	Asahi method
Water content	mas %	0.001	ASTM D 4895

ASAHI GLASS FLUOROPOLYMERS CO., LTD.

Tetsuya Higuchi

Production Engineering Group
Polymer Production Department
Chemical Division

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Antenna Cover Polyurethane

Elastogran GmbH
Geschäftsbereich TPU-Elastomere

Elastogran

Elastogran GmbH · Postfach 1140 · 49440 Lemförde · Germany
WGJ COMPANY LTD.

P.O. BOX 36 - 431
RC TAOYUAN HSIEN

BASF Gruppe

Date 18.07.2001
No. 62046

Inspection Certificate
EN 10 204-3.1 B (DIN 50049)

Product : ES 95 A 50 000 S No.: 15002939
Batch : 207672

Basic-Batch 207673

Property	Test method	Unit	Value
Dichte	DIN 53479	g/cm3	1,24
Shore-Haerte D	DIN 53505	-	50
Zugfestigkeit	DIN 53504	MPa	53
Reissdehnung	DIN 53504	%	550
Abrieb	DIN 53516	mm3	22

Dichte = Density/Densité, Shore Härte = Shore hardness/Shore Dureté, Zugfestigkeit = Tensile strength/Resistance traction, Reißdehnung = Elongation at break/Allongement rupture, Weiterreißwiderstand = Tear strength, Abrieb = Abrasion loss/Abrasion

The stated values are measured from a representative batch (basic-batch) of every product campaign.

Test platens are injection moulded from dry granulate with less than 0,05 % water content. Test plattens tempered 20 hrs. at 100 °C, then cooled to 23 °C / 50 % RH before testing. Test specimen cut from test plattens.

We hereby certify, that the material described above complies with the terms of the order contract

Hübner Schoote

Works Inspector

The above information is derived from our quality checks. It does not relieve the purchaser from examining the product upon delivery and gives no assurance of suitability of the product for any particular purpose.

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Antenna Cover Polyurethane

Elastollan S規格系列

聚酯類Polyester，有良好機械特性，優異的耐磨性，高彈性，抗拉及撕裂強度用於運動鞋底、溜冰鞋及機械零件等，射出及押出成形

物　　性	單位	DIN	S80A	S85A	S88A	S90A	S95A	S98A	S60D	S64D	S74D
用於射出▲ 押出■ 吹出●			▲■	▲■	▲	▲■	▲	▲	▲	▲	▲
硬度 蕭氏A Hardness	Shore A	53505	81	85	88	93	96				
硬度 蕭氏D Hardness	Shore D	53505			36	41	48	55	60	64	75
密度Density	g/cm³	53479	1.22	1.23	1.23	1.24	1.24	1.25	1.25	1.26	1.26
抗拉強度Tensile strength *	N/mm²	53504-S2	50	55	55	55	50	45	45	45	40
斷裂延伸率Elongation at break *	%	53504-S2	750	650	650	600	550	500	500	450	300
20% 抗拉模數 Tensile modulus *	N/mm²	53504-S2	2	2	3	6	8	13	15	22	25
100% 抗拉模數Tensile modulus *	N/mm²	53504-S2	4	5	6	9	11	16	18	23	30
300% 抗拉模數 Tensile modulus *	N/mm²	53504-S2	8	8	9	13	20	23	34	38	40
彈性模數－張力測試（測試樣品3mm）Modulus of elasticity	N/mm²	53457-1						200	250	410	800
撕裂強度 Tear strength	N/mm	53515	60	70	75	95	120	150	170	200	240
摩擦損耗 Abrasion loss	mm³	53516	40	35	30	30	30	25	25	25	25
室溫壓縮變形率 Compression set	%	53517	25	25	25	25	25	30	40	45	55
70℃壓縮變形率 Compression set	%	53517	35	35	35	45	45	45	50	55	60
凹口衝擊強度 +23℃	kJ/m²	53453	不破裂	不破裂	不破裂	不破裂	不破裂	不破裂	不破裂	不破裂	不破裂
Notched impact strength (Charpy) -30℃			不破裂	不破裂	不破裂	不破裂	5	6	6	4	3

*S2試片在100mm/min的應變速度下測量

- 厚度2或6mm射出試片，在100℃回火20小時後測驗
- 上列測驗值僅供參考，常因客戶製品設計而變
- 換算單位：1MPA=10.2kg/cm²=145PSI=1N/mm²
  1kJ/m²=1.02kg.cm/cm²

加工條件

－射出成形溫度175~240℃

－模溫20~70℃

－押出成形溫度175~230℃

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Antenna Base Polycarbonate

TEIJIN CHEMICALS LTD.

TEIJIN CHEMICALS LTD.
2-2, UCHISAIWAICHO 1-CHOME,
CHIYODA-KU, TOKYO, JAPAN

TELEPHONE: TOKYO (3506) 4780
FACSIMILE: TOKYO (3506) 4760

TO WHOM IT MAY CONCERN

CERTIFICATE OF QUALITY

ITEM	UNIT	TEST METHOD	TEIJIN CHEMICALS QUALITY STANDARD	TEST RESULT
IMPACT STRENGTH (IZOD NOTCHED 3.2mm thick)	kgfcm/cm	ASTM D256	≧80	PASS
FLEXURAL MODULUS	kgf/cm^2	ASTM D790	23,600±1,600	PASS
TENSILE STRENGTH (AT BREAK)	kgf/cm^2	ASTM D638	820±140	PASS

NOTE : ALL FIGURES ENTERED IN THIS TABLE ARE FOR THIS SPECIFIC LOT AND, THEREFORE, NO GUARANTEE.

TEIJIN CHEMICALS LTD.

M. Nishiura

for Y. KIKUCHI
MANAGER
SALES ADMINISTRATION DEPT.

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Antenna Base Polycarbonate

QMFZ2
Component - Plastics

TEIJIN CHEMICALS LTD

E50075 (M)
(C – cont. from E010 card)

L-1225LM(d), L-1225ZL(d)	All	0.40	94V-2	80	80	80	4	3	2	—	—
		0.75	94V-2	80	80	80	3	1	2	—	—
		1.5	94V-2	125	115	125	3	1	3	—	—
		2.1	94HB	125	115	125	3	1	3	—	—
		3.0	94HB	125	115	125	2	1	3	5	2
		6.0	94HB	125	115	125	1	1	4	—	—
L-1225LL(d)	All	0.4	94V-2	80	80	80	4	3	2	—	—
		0.75	94V-2	80	80	80	3	1	2	—	—
		1.5	94V-2	125	115	125	3	1	3	—	—
		3.0	94V-2	125	115	125	3	1	3	5	2
		3.3	94HB	125	115	125	2	1	3	—	—
		6.0	94HB	125	115	125	1	1	4	—	—
L-1250#(f2)(d), L-1250U#(d), L-1250V#(d), L-1250Z#(d)	All	0.40	94V-2	80	80	80	4	3	2	—	—
		0.84	94V-2	80	80	80	4	—	4	—	—
		1.5	94HB	125	115	125	4	0	3	—	—
		3.0	94HB	125	115	125	2	0	3	5	2
		6.0	94HB	125	115	125	1	0	4	—	—

Reports: February 10, 1989; February 10, 1989; September 24, 1990.

Replaces E50075C dated November 1, 1994.

(Cont. on C005 card)

699748006 N7047 **Underwriters Laboratories Inc.®** D1I/0032918

QMFZ8 July 28, 1997
Component - Plastics Certified For Canada

TEIJIN CHEMICALS LTD

E50075 (M)
(C – cont. from B card)

(cc) 10 thru 30 incl.
(i) A two digit number (10-15) denoting carbon filler content.
(j) A two digit number (10-40) denoting the total content of carbon fiber and glass fiber.
ww = A two digit number 10 thru 20 denoting content of carbon filler.
# Any one or two letters may be suffixed to the grade.
Marking: Company name and material designation, generic polymer identification, color number where appropriate, and batch or lot number or date of manufacture on container, wrapper or molded on finished part.

See General Information Preceding These Recognitions.
Small-scale test data does not pertain to building materials, furnishings and related contents. Small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

699748006 **Underwriters Laboratories Inc.®** D1I/0251459

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Properties of Panlite

Items		Unit	Test Method	Condition	Weather Resistant Grade (SAE approved) L-1225ZL	L-1225Z	L-1250Z
Specific gravity		—	ASTM D792	—	1.20	1.20	1.20
Water absorption		%	ASTM D570	24hr in 23°C water	0.20	0.20	0.20
Light transmission		%	ASTM D1003	3mm thick	88	88	88
Refractive index		—	ASTM D542	—	1.585	1.585	1.585
Tensile strength	Yield	MPa (kgf/cm²)	ASTM D638	—	65 (660)	63 (640)	62 (630)
	Break	MPa (kgf/cm²)	ASTM D638	—	64 (655)	77 (790)	80 (820)
Tensile modulus		MPa (kgf/cm²)	ASTM D638	—	2,190 (22,300)	2,130 (21,700)	2,120 (21,600)
Tensile elongation	Yield	%	ASTM D638	—	6	6	6
	Break	%	ASTM D638	—	130	140	140
Flexural strength		MPa (kgf/cm²)	ASTM D790	—	96 (980)	93 (950)	92 (940)
Flexural modulus		MPa (kgf/cm²)	ASTM D790	—	2,330 (23,800)	2,260 (23,000)	2,230 (22,700)
Compressive strength		MPa (kgf/cm²)	ASTM D695	—	77 (790)	76 (780)	76 (770)
Impact strength		J/m (kgf•cm/cm)	ASTM D256	Izod notched 3.2mm thick	100 (10)	830 (85)	880 (90)
		J/m (kgf•cm/cm)	ASTM D256	Izod notched 6.4mm thick	50 (5)	130 (13)	140 (14)
Rockwell hardness		—	ASTM D785	M scale	77	77	77
Mold shrinkage		%	ASTM D955	Flow direction	0.5～0.7	0.5～0.7	0.5～0.7
				Traverse direction	0.5～0.7	0.5～0.7	0.5～0.7
Heat distortion temperature		°C	ASTM D648	Load 0.451MPa (4.6kgf/cm²)	138	141	142
				Load 1.813MPa (18.6kgf/cm²)	128	131	132
Coefficient of linear expansion		$\times 10^{-5}$ cm/cm/°C	ASTM D696	Flow direction	7	7	7
				Traverse direction	7	7	7
Dielectric breakdown strength		kV/mm	ASTM D149	Quick voltage rise method 1.6mm thick	30	30	30
Volume resistivity		$\times 10^{16}\Omega$•cm	ASTM D257	—	3	3	3
Dielectric constant		—	ASTM D150	60Hz	2.95	2.95	2.95
				10^6Hz	2.9	2.9	2.9
Dielectric loss tangent		—	ASTM D150	60Hz	0.0004	0.0004	0.0004
				10^6Hz	0.009	0.009	0.009
Arc resistance		sec	ASTM D495	—	100	100	100
Anti-tracking (CTI)		V	IEC 112	—	300	300	300
Flame resistance		—	UL 94	1.47mm thick	94V-2	94V-2	94V-2
				3.05mm thick	94V-2	94V-2	94V-2
Temperature index		°C	UL 746B	Electric 1.47mm thick	125	125	125
				Impact 1.47mm thick	115	115	115
				Non-impact 1.47mm thick	125	125	125

All figures entered in this table are the typical figures and, therefore, no gua

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Grades of Panlite

Grades	Viscosity	Characteristics	Main molding methods	Principal applications
K-1300	High	Standard	Extruding/blow molding/ injection molding	• Sheet, film, pipe and other extruded products. • Bottles and other direct blow molded products.
K-1300Y	"	Mold release/ice color	Extruding/blow molding/ injection molding	
K-1300Z	"	Weather resistance/ ice color	Extruding/blow molding/ injection molding	
K-1300W	"	Powder	Extruding/rotational molding	• Large tanks and other rotational molded products.
K-1285	"	Standard	Extruding/blow molding/ injection molding	
L-1250	Medium	Standard	Injection molding	• Machine parts, electric and electronics appliance parts, medical apparatuses, protective equipment parts, industrial parts in general. • Lighting fixture parts requiring transparency and heat resistance. • Table wares and mechanical parts requiring cold and heat resistance.
L-1250R	"	Mold release	Injection molding	
L-1250Y	"	Mold release/ice color	Injection molding	
L-1250Z	"	Weather resistance/ ice color	Injection molding	
L-1250J	"	Boiling water resistance	Injection molding	
L-1250T	"	Boiling water resistance/mold release/ice color	Injection molding	
L-1250W	"	Powder	Injection molding/ rotational molding	• Large tanks and other rotational molded products.
L-1225	Low	Standard	Injection molding	• Thin-wall products requiring high flowability, electric & electronics appliance parts, machine parts, protective equipment parts, medical apparatuses, lighting fixtures, lamp shade, table wares and containers. • Suitable for injection blow molding uses.
L-1225R	"	Mold release	Injection molding/ Injection blow molding	
L-1225Y	"	Mold release/ice color	Injection molding/ Injection blow molding	
L-1225Z	"	Weather resistance/ ice color	Injection molding	
L-1225J	"	Boiling water resistance	Injection molding	
L-1225T	"	Boiling water resistance/mold release/ice color	Injection molding/injection blow molding	
L-1225W	"	Powder	Injection molding/ rotational molding	
L-1225L	Ultra low	Mold release/ice color	Injection molding	• Ultra-thin wall parts of electric & electronics appliances.
L-1225ZL 100	"	Mold release/ weather resistance/ ice color	Injection molding	• Ultra-thin lamp lenses.
AD-5503	"	Optical properties/ low contamination	Injection molding	• Compact disks, CD-ROM, optical lenses.

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Heat Shrink Tube Sumitube F32

1. SCOPE
THIS SPECIFICATION COVERS NEW SUMITUBE F32 .

2. FEATURE
NEW SUMITUBE F32 IS AN IRRADIATED CROSSLINKED , THERMALLY-STABILIZED , FLAME-RETARDANT FLEXIBLE POLYOLEFIN HEAT SHRINKABLE TUBING .
UNLIKE OTHER TYPICAL FLAME-RETARDANT TUBING , NEW SUMITUBE F32 IS FREE OF POLYBROMINATED BIPHENYL OXIDES (PBBOs) , POLYBROMINATED BIPHENYL ETHERS (PBBEs) , POLYBROMINATED BIPHENYLS (PBBs) AS FLAME-RETARDED CHEMICALS .

3. RECOGNITION
NEW SUMITUBE F32 IS UL-RECOGNIZED AND CSA-CERTIFIED AT 125 DEG. C , 600 V WITH UL VW-1 AND CSA OFT FLAME-RETARDANCY RATING .

	UL 224	CSA
VALTAGE RATING	600V	600V
TEMPERATURE RATING	125 DEG. C	125 DEG. C
CATALO NO.	SUMITUBE F32	SUMITUBE F32
FILE NO.	E-48762	LR84766

4. COLOR
STANDARDS COLORS ; BLACK , WHITE , BROWN , RED , ORANGE , BLUE , GREEN , YELLOW , VIOLET , GRAY .

5. MARKING
FOLLOWING LETTERS SHOULD BE PRINTED ON THE SURFACE OF THE PRODUCTS
.SU VW-1 SUMI-PAC CSA HS X PO TUBING SUMITUBE F32 125 C OFT -F- (Size)

6. STANDARD SIZES
STANDARD SIZES SHALL BE SPECIFIED IN TABLE

7. PROPERTIES.
PROPERTIES SHALL BE AS SPECIFIED WITH TABLE

8. METOD OF MEASURING SIZES AND TESTING PROPERTIES
1.) INSIDE DIAMETER
INSIDE DIAMETER SHALL BE MEASURED BY A METAL GAGE ROD OR A METAL TAPE GAGE WHICH HAS INTERVAL OR GRADUATION .

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Heat Shrink Tube Sumitube F32

IN CASE OF USING A GAGE ROD : READ THE VALUE OF THE MAXIMUM GAGE ROD WHICH SHALL PASS FREELY INTO THE TUBING WITHOUT EXPANDING THE TUBING .

IN CASE OF USING A TAPER GAGE : READ THE VALUE ON THE GAGE WHEN THE TUBING ISN'T EXPANDED BY INSERTION AND THERE IS NO VISIBLE SPACE BETWEEN THE TUBING AND THE TAPER GAGE .

2.) WALL THICKNESS
WALL THICKNESS SHALL BE MEASURED BY A PIN-DIAL GAGE OR A MICROMETER AT SEVERAL POINTS .

3.) SHRINKABLE CONDITION AND LONGITUDINAL CHANGE
SHRINKABLE CONDITION : UNRESTRICTED SHRINKAGE SHALL BE PLACED AT 150 DEG. C IN A CICULATING AIR OVEN FOR 5 MINUTES .

LONGITUDINAL SHRINKAGE : THE TUBING SHALL BE CUT IN ABOUT 100 MM AND MEASURED THE LENGTH . AFTER UNRESTRICTED SHRINKAGE (AFTER RECOVERED) , THE LENGTH IS TO BE RE-MEASURED AND THE LONGITUDINAL SHRINKAGE SHALL BE CALCULATED FROM THE FOLLOWING FORMULA .

$$\text{LONGITUDINAL CHANGE} = \frac{\text{LENGTH AS SUPPLIED} - \text{LENGTH AFTER RECOVERED}}{\text{LENGTH AS SUPPLIED}} * 100\ \%$$

4.) PROPERTIES SHALL BE TESTED IN ACCORDANCE WITH UL224 & CSA 22.2 NO. 198 TEST METHOD

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Heat Shrink Tube Sumitube F32

Canadian Standard's Association
Association canadienne de normalisation

CERTIFICATION RECORD

The company named below has been authorized by Canadian Standards Association to represent the products listed in this record as "CSA Certified" and to affix the CSA Mark · Ⓒ · to these products according to the terms and conditions of the CSA Service Agreement.

NUMBER 084766X0000 March 26, 1994(Replaces:July 10, 1990)

CLASS 9032 01 (Re-examination Service)

SUMI-PAC ELECTRO-CHEMICAL CORP.
4th Fl., Pacific Commercial Bldg.
265, Chung Hsiao E. Rd., Sec 4
Taipei, Taiwan
FACTORY
No 15, Industrial 5th Rd.
Hsin-Chu, Enlarged Industrial Park
6th Lin, Feng-Shan Chun
Hukao Hsiang, Hsin-Chu Hsin
Taiwan

INSULATING DEVICES AND MATERIALS - Insulating Tubing and Sleeving

- Max temperature rating: 125C
- Max voltage rating: 600V
- "SUMITUBE F2" and "SUMITUBE F32", flexible heat-shrinkable irradiated cross-linked polyolefin tubing (Class I), in trade sizes 3/64 in to 1 in and 1.0mm to 26mm, OFT.
- Max temperature rating: 125C.
- Max voltage rating: 150V.
- "SUMITUBE F4", flexible heat-shrinkable irradiated cross-linked polyolefin tubing (Class I), in trade sizes 3/64 in to 1 in and 1.0mm to 26mm, OFT.

Note: Above tubing approved in all colours except clear and transparent.

* * * * * * * * * *

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Heat Shrink Tube Sumitube F32

YDPU2 November 4, 1994
Component – Extruded Tubing, Electrical

SUMITOMO ELECTRIC INDUSTRIES LTD
IRRADIATED PRODUCTS DIV

E48762 (S)
(C-cont. from B card)

Irradiated flexible heat shrinkable polyolefin.

⇨ Sumitube F32	600	125	I	+	—	Yes
826 or Sumitube B2	600	125	I	+	—	Yes
Sumitube F5	600	125	I	+	—	Yes
939 or Sumitube F(Z)	600	105	I or II@	+	—	Yes
940 or Sumitube F2(Z)	600	125	I	+	—	Yes
942 or Sumitube F4(Z)	300	125	I	+	—	Yes
958 or SM12	600	125	I	+	—	Yes
963 or SM23	600	125	I	+	—	Yes
938 or Sumitube F(TZ)	600	105	II	+	—	Yes

Report: February 16, 1973.

Replaces E48762C dated July 20, 1994.

(Cont. on D card)

390139001 N3228 **Underwriters Laboratories Inc.®**

011/0010143

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Heat Shrink Tube　Sumitube F32

ABS Characteristics

POLYLAC®

特性 Typical Properties	試驗法 ASTM Test		單位 Units	一般級 (General Purpose) PA-707	PA-757	PA-717C	PA-727	PA-747	PA-709
引張強度 Tensile Strength	D-638		kg/cm² (lb/in²)	500 (7,090)	480 (6,800)	450 (6,380)	485 (6,870)	385 (5,470)	400 (5,670)
延伸率 Tensile Elongation	D-638		%	15	20	25	20	30	40
彎曲彈性率 Flexural Modulus	D-790		10³kg/cm² (10³lb/in²)	2.9 (4.1)	2.7 (3.8)	2.5 (3.5)	2.7 (3.8)	2.2 (3.1)	2.3 (3.2)
彎曲強度 Flexural Strength	D-790		kg/cm² (lb/in²)	860 (12,200)	790 (11,200)	720 (10,200)	780 (11,000)	620 (8,800)	640 (9,070)
洛氏硬度 Rockwell Hardness	D-785			R-116	R-116	R-115	R-110	R-108	R-102
IZOD 衝擊強度 IZOD Impact Strength (Notched)	D-256	1/8"	kg-cm/cm (ft-lb/in)	14 (2.6)	20 (3.7)	28 (5.2)	26 (4.8)	41 (7.5)	45 (8.4)
		1/4"	kg-cm/cm (ft-lb/in)	14 (2.6)	18 (3.3)	25 (4.6)	23 (4.2)	36 (6.6)	40 (7.4)
軟化點 Vicat Softening Temp.	D-1525		°C (°F)	105 (221)	105 (221)	104 (219)	105 (221)	103 (217)	105 (221)
熱變形溫度 Heat Distortion Temp.	D-648 (annealed)		°C (°F)	99(210)	99(210)	98(208)	99(210)	99(207)	99(208)
	(unannealed)			88(190)	88(190)	87(189)	87(190)	86(187)	88(190)
比重 Specific Gravity	D-792	23/23 °C		1.06	1.05	1.04	1.04	1.03	1.03
流動係數 Melt Flow Index	D-1238	200 °C × 5kg g/10min(Cond.G)		1.9	1.8	1.4	1.8	1.2	0.5
	ISO-1133*	220 °C × 10kg g/10min		20	22	14	19	13	5
燃燒率 Flammability	File No. E56070 UL & C-UL			1/16"HB	1/16"HB	1/16"HB	1/16"HB	1/16"HB	1/16"HB
產品特性				高光澤性 高剛性	高剛性 高光澤性	一般射出成型用	電鍍級	超高強度 射出成型用	超高衝擊強度 押管用
Product Description				High Gloss High Rigid	High Gloss Medium Impact	Medium Impact	Electro-Plating	High Impact	Super Impact

以上數值係依照ASTM試驗方法所測得，僅供參考用。*ISO 試驗方法

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Heat Shrink Tube Sumitube F32

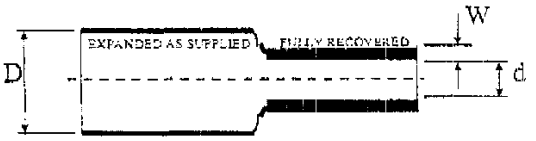

TABLE 1. STANDARD SIZE

TRADE SIZE (METRIC)	AS SUPPLIED (MM)		AFTER RECOVERED (MM)		STANDARDS LENGTH	
	INSIDE DIAMETER D	NOM. WALL THICKNESS	INSIDE DIAMETER d (MAX)	WALL THICKNESS W (MIN)	CUT(M)	SPOOL(M)
1*0.2	1.30±0.30	0.2	0.50	0.33	1	200
1.5*0.2	2.00±0.30	0.2	0.75	0.36	1	200
2*0.2	2.50±0.30	0.2	1.00	0.44	1	200
2.5*0.25	3.00±0.30	0.25	1.25	0.44	1	200
3*0.25	3.50±0.30	0.25	1.50	0.44	1	200
3.5*0.25	4.00±0.30	0.25	1.75	0.44	1	200
4*0.25	4.50±0.30	0.25	2.00	0.44	1	200
5*0.25	5.40±0.30	0.25	2.50	0.56	1	100
6*0.25	6.40±0.40	0.25	3.00	0.56	1	100
7*0.25	7.40±0.40	0.25	3.50	0.56	1	50
8*0.25	8.40±0.40	0.25	4.00	0.56	1	50
9*0.25	9.40±0.40	0.25	4.50	0.56	1	50
10*0.25	10.4±0.40	0.25	5.00	0.56	1	50
11*0.25	11.4±0.40	0.25	5.50	0.56	1	50
12*0.25	12.4±0.40	0.25	6.00	0.56	1	50
13*0.30	13.4±0.40	0.30	6.50	0.69	1	50
14*0.30	14.5±0.40	0.30	7.00	0.69	1	50
15*0.30	15.5±0.40	0.30	7.50	0.69	1	50
16*0.30	16.8±0.50	0.30	8.00	0.69	1	50
18*0.35	18.7±0.50	0.35	9.00	0.77	1	50
20*0.35	21.2±0.60	0.35	10.00	0.77	1	50
22*0.40	23.2±0.60	0.40	11.00	0.77	1	50
25*0.40	26.1±0.80	0.40	12.50	0.87	1	50
28*0.50	29.0±1.00	0.50	14.00	0.87	1	50
30*0.50	32.0±1.00	0.50	15.00	0.87	1	50

*LONGITUDINAL CHANGE :(5±5)%

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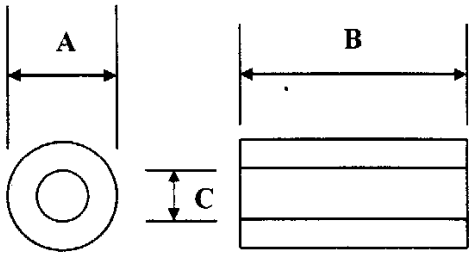
SPECIFICATION

CUSTOMER: 欣 格	ITEM:B15 RH 4x10x1.5	DWG.NO:

(1)MECHANICAL ASSEMBLY



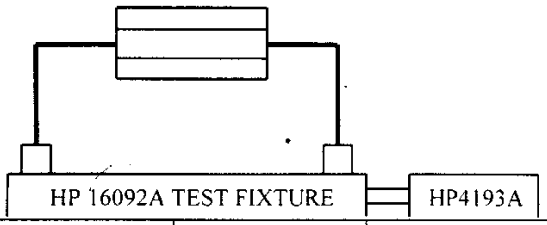
A	4.00	±0.20m/m
B	10.00	±0.40m/m
C	1.50	±0.20m/m
D		m/m
E		m/m
F		m/m
G		m/m
H		m/m
I		m/m

FIRST COLOR:	SECOND COLOR:	THIRD COLOR:	FORTH COLOR:

(2)ELECTRICAL REQUIREMENT

IMPEDANCE	MIN 60 OHMS	TEST FREQUENCY	25 MHz	#TEST INSTRUMENTS HP-4193A IMPEDANCE METER
IMPEDANCE	MIN 120 OHMS	TEST FREQUENCY	100 MHz	

(3)TEST EQUIPMENT HP-4193A IMPEDANCE METER



WIRE : AWG#22x12cm

AT 1 TURN

MATERIAL:B15 NICKEL/ZINC

Uiac 1500 ±25%

BMS 3000 GAUSS@15 Oersteds

APPROVAL BY	CHECKER BY	REPORTED BY	MODEL NO:	DWG.NO:ISSUED:
B.F. 91.7.23	B.F. 91.7.23	B.F. 91.7.23	RH 4x10x1.5	

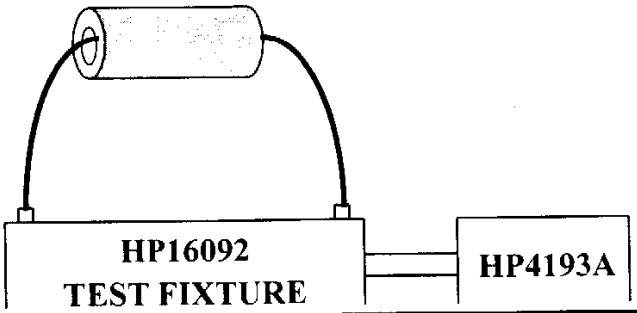
B & F ELECTRONICS CO., LTD.

B.F. TEL:22672030

INSPECTION DATA

CUSTOMER	欣　格			QUANTITY	5 pcs
ITEM	B15 RH 4x10x1.5			PART NO	
COIL SPEC	AWG#22x12cm　AT 1 Turn			COIL DATA	Qo=　Co=
TEST EQUIPMENT	HP4193A			TEST FREQUENCY	fo=　ft=25MHz.100MHz
TEMPERATURE	25°C	HUMIDITY	70%		QSTD=　CSTD=

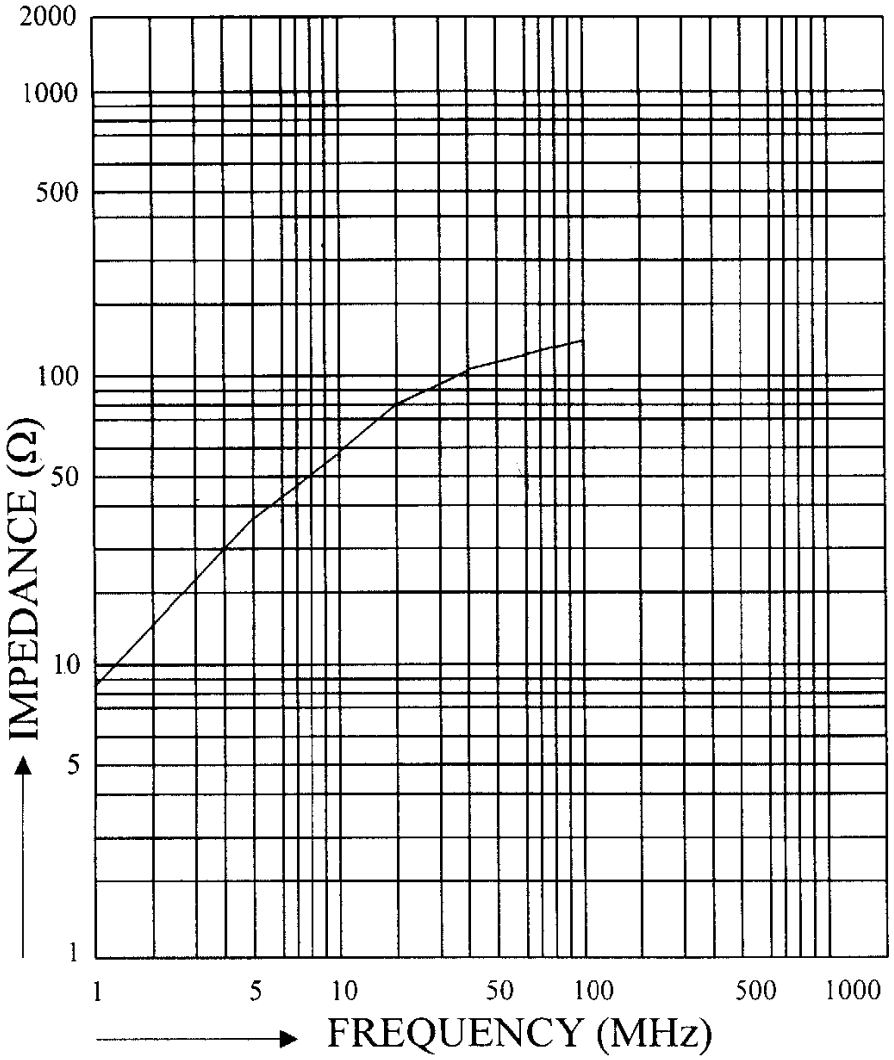
Z	IMPEDANCE		DIMENSION (UNIT : mm)						STRENGTH	
FREQ	25MHz	100MHz		A OD		B HT		C ID		
SPEC	MIN 60Ω	MIN 120Ω		±0.20 4.00		±0.40 10.00		±0.20 1.50		
1	88.4	149.4		4.00		10.16		1.45		
2	86.7	148.0		4.01		10.15		1.47		
3	87.5	148.7		4.03		10.21		1.46		
4	88.7	148.8		4.01		10.19		1.44		
5	88.3	147.9		3.99		10.18		1.46		
6										
7										
8										
9										
10										
$\bar{X}$										
R										



B & F ELECTRONICS CO., LTD.

昌盛電子股份有限公司
B . F .
TEL:22672030
上海市中央路3段240巷3號

ITEM:B15 RH 4x10x1.5



COIL:AWG#22x12cm (THROUGH) THE CORE AT 1 TURN
METER:HP-4193A

APPROVED	CHECKED	DESINGED	FILE NO	DATE	REF	PAGE
B.F. 91.7.23	B.F. 91.7.23	B.F. 91.7.23				

B & F ELECTRONICS CO., LTD.

昌盛電子股份有限公司 B.F. TEL:22672030 台北市中山路3段240巷3號