WHA YU INDUSTRIAL CO., LTD. (HEAD OFFICE)
TAI HWA ELECTRONIC CO., LTD.(CHINA)
SHANGHAI HUA YU ELECTRONIC CO., LTD.(CHINA
AEON TECH CO., LTD. (CHINA)

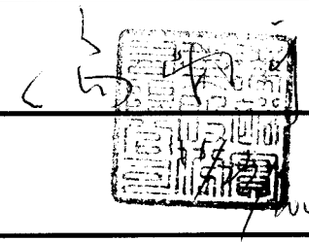
SPECIFICATION FOR APPROVAL

CUSTOMER: *友旺科技股份有限公司*

PART NAME: ***Dual band Antenna Assembly***

PART NO.: ***REVISION:***

W. Y. P/NO.: ***C068-510330-A*** ***REV.:*** ***X1***

	MANUFACTURER SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY :		
DATE :		

WHA YU GROUP

WHA YU INDUSTRIAL CO., LTD.(HEAD OFFICE)
譁裕實業股份有限公司
Address: #70 Shui Li Road, Hsin Chu City, Taiwan, R.O.C.
Tel:+886-3-5714225(REP.)
Fax:+ 886-3-5713853 · + 886-3-5723600

TAI HWA ELECTRONC CO., LTD. (CHINA)
台樺電業制品廠
Address: Pak Ho District, Hiu Street Town, Dong Guan City, Guangdong, China
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Fax: + 86-769-5599376

HUA HONG INTERNATIONAL LTD.
華弘國際有限公司
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Fax: + 86-852-23843747

SHANGHAI HUA YU ELECTRONIC CO., LTD. (CHINA)
上海譁裕電子有限公司
Address:3586,Wai Qing Song Road, Qing Pu County, Shanghai China
Tel: + 86-21-59741348 · + 86-21-59744101~4
Fax: + 86-21-59741347

SU ZHOU AEON TECH CO., LTD. (CHINA)
蘇州華廣電通有限公司
Address:Limin North Road, LiLi Town,LiLi Industrial Park,LinHu Economic Zone
Wujiang City,Jiangsu Province,China
Tel: + 86-512-63627980
Fax: + 86-512-63627981

INDEX

Dual Band RF Antenna Cable Assembly

Specification

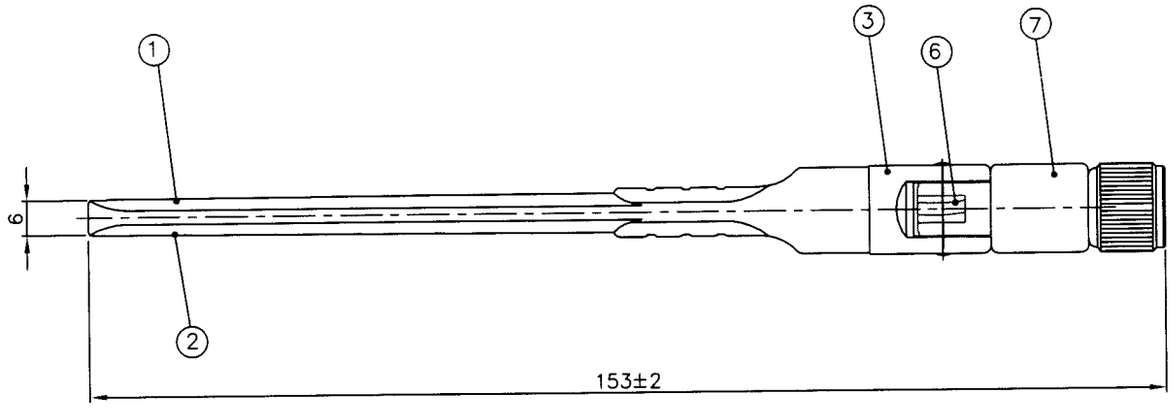
1. Electrical Properties :

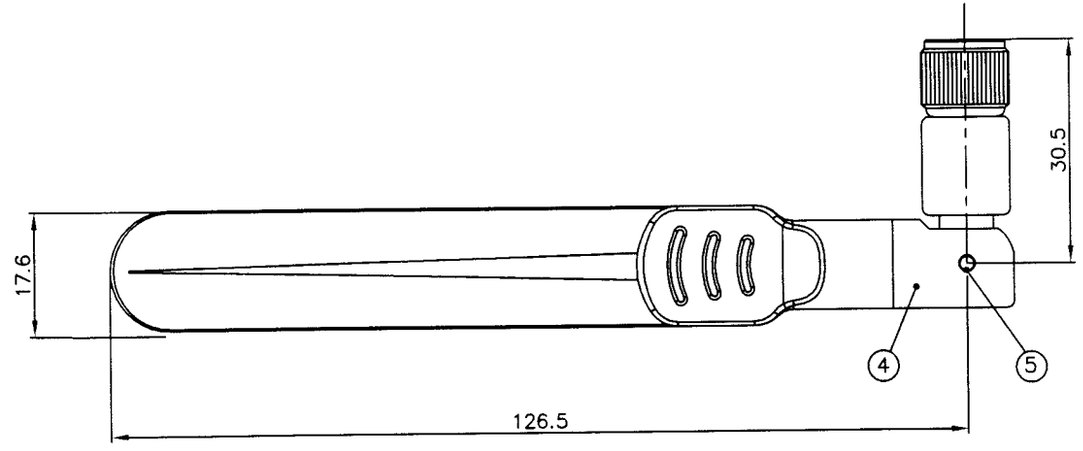
1.1 Frequency Rang.....	2.4GHz ~ 2.5GHz & 5.15GHz~5.85GHz
1.2 Impedance	50Ω Nominal
1.3 VSWR	1.92 Max.
1.4 Return Loss.....	-10 dB Maximum
1.5 Gain.....	3dBi @ 2.4GHz
	4dBi @ 5GHz
1.6 Rodiation.....	Omni-directional
1.7 Polarization.....	Linear

2. Physical Properties :

2.1 Antenna Cover.....	ABS
2.2 Antenna Base.....	PC
2.3 Antenna Base.....	PBT
2.4 Operating Temp.	-20℃ ~ +65℃
2.5 Storage Temp.	-30℃ ~ +75℃
2.6 Color	Black
2.7 Connector.....	SMA

REV	DATE	DESCRIPTION
X1	11/19/2004	New Issue





NO	DESCRIPTION		QTY	REMARK
7	Connector	SMA Plug Straight Reverse	1	
6	Cable	RG-178 Cable	1	
5	Rivet	Brass ; Cr Plated (Black)	1	
4	Antenna Base	PBT Color : Black	1	
3	Antenna Base	PC Color : Black	1	
2	Antenna Housing(S)	ABS Color : Black	1	
1	Antenna Housing(M)	ABS Color : Black	1	

CUSTOMER'S SINGATURE

XX.	±3.0
X.	±2.0
.X	±1.0
.XX	±0.5
.XXX	±0.1

APPROVED

CHECKED

DRAWING 程淑娟

CUSTOMER: 友旺科技股份有限公司

PART NO :

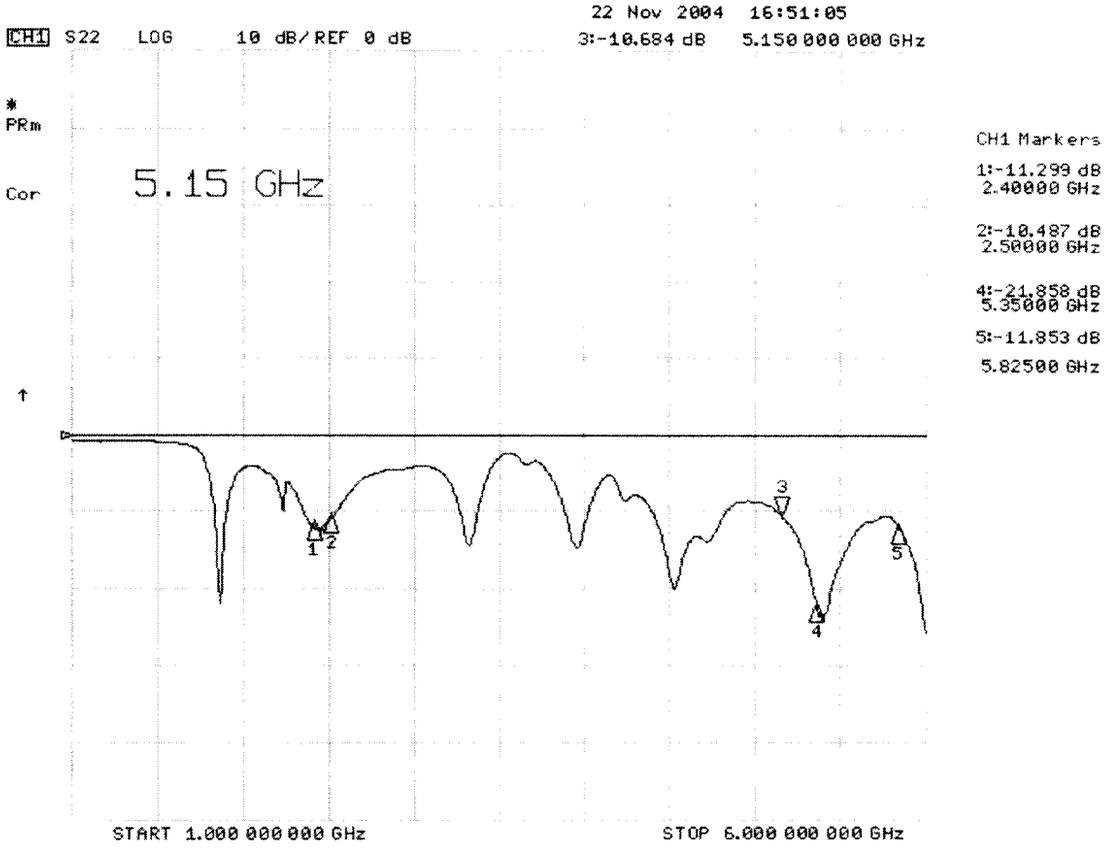
PARTNAME: Dual band Antenna Assembly

W.Y P/NO : C068-510330-A

REV	UNIT	FILE :
X1	m/m	SHEET : 1/1

Wha Yu
INDUSTRIAL CO.,LTD.
譁裕實業股份有限公司

譁裕實業股份有限公司
WHA YU INDUSTRIAL CO., LTD

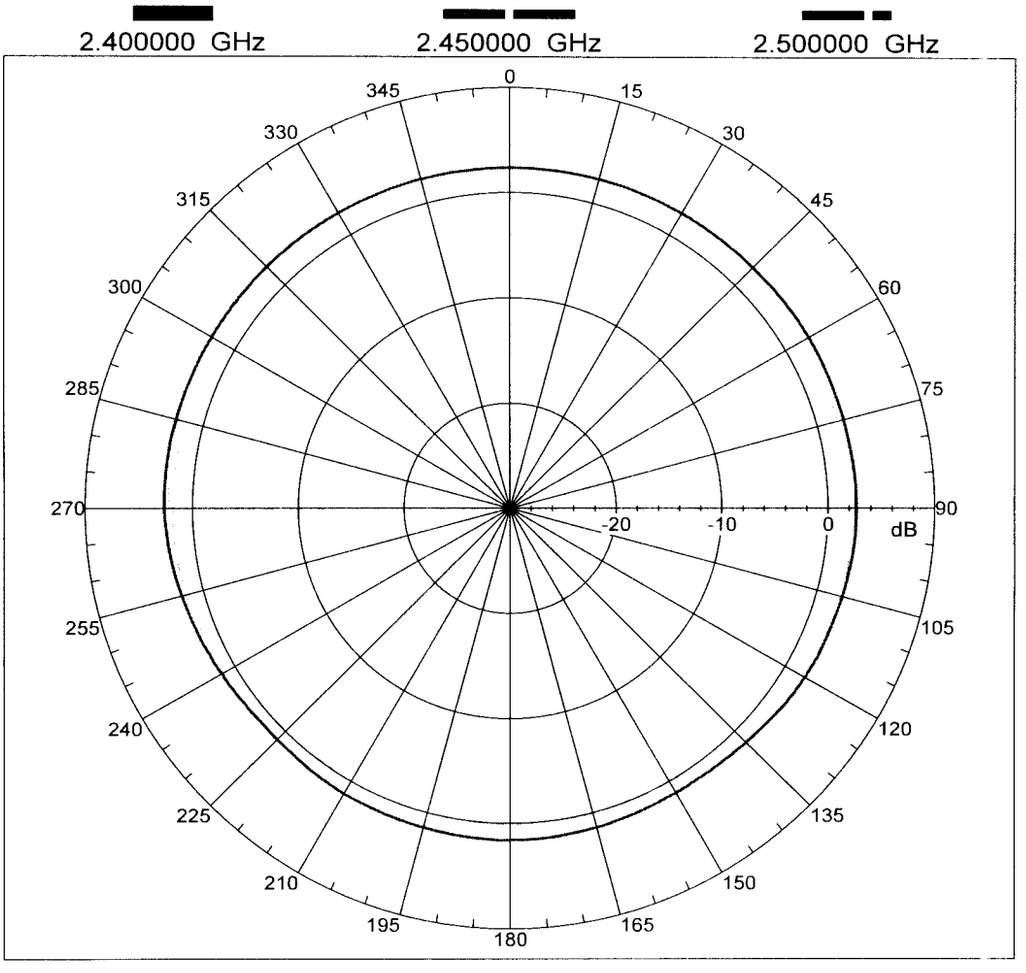


譁裕實業股份有限公司
WHA YU INDUSTRIAL CO., LTD

C068-510330-A

vertical polar

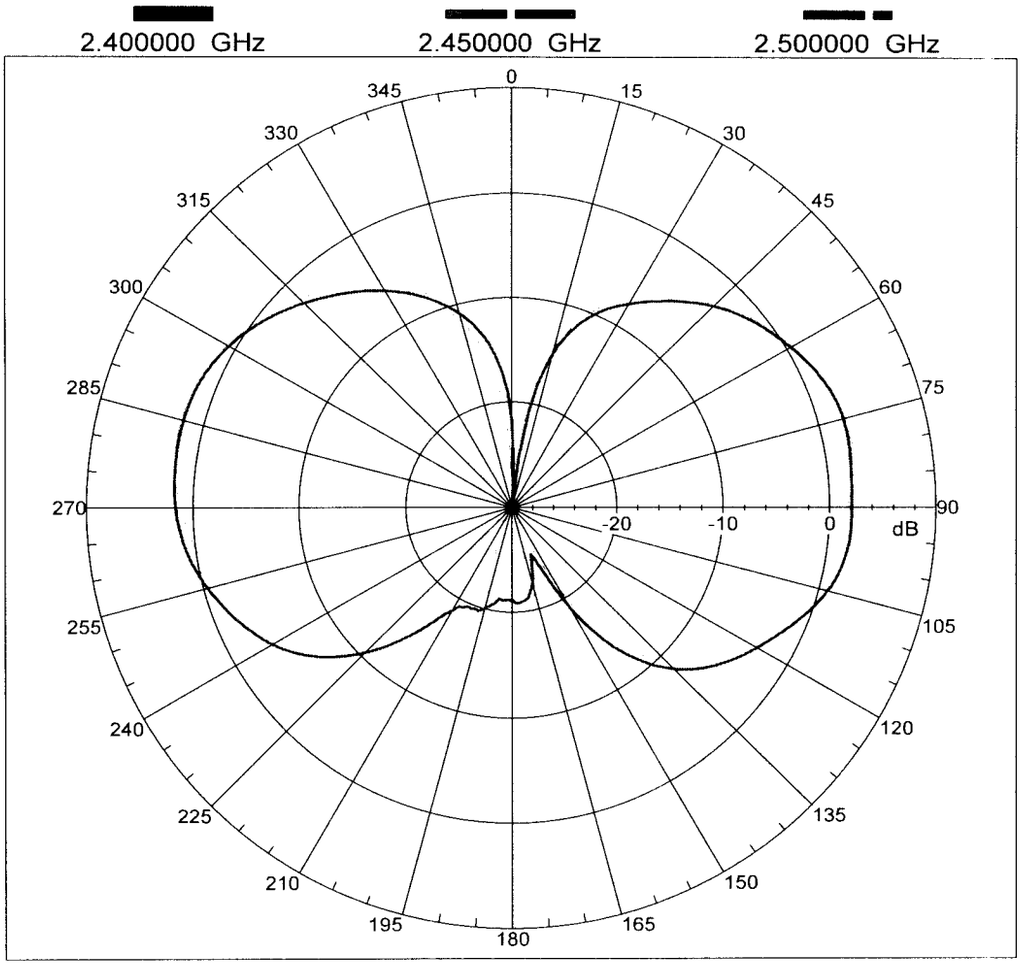
Far-field amplitude of C068-510330-A-V.nsi



譁裕實業股份有限公司
WHA YU INDUSTRIAL CO., LTD

Horizontal polar

Far-field amplitude of C068-510330-A-H.nsi

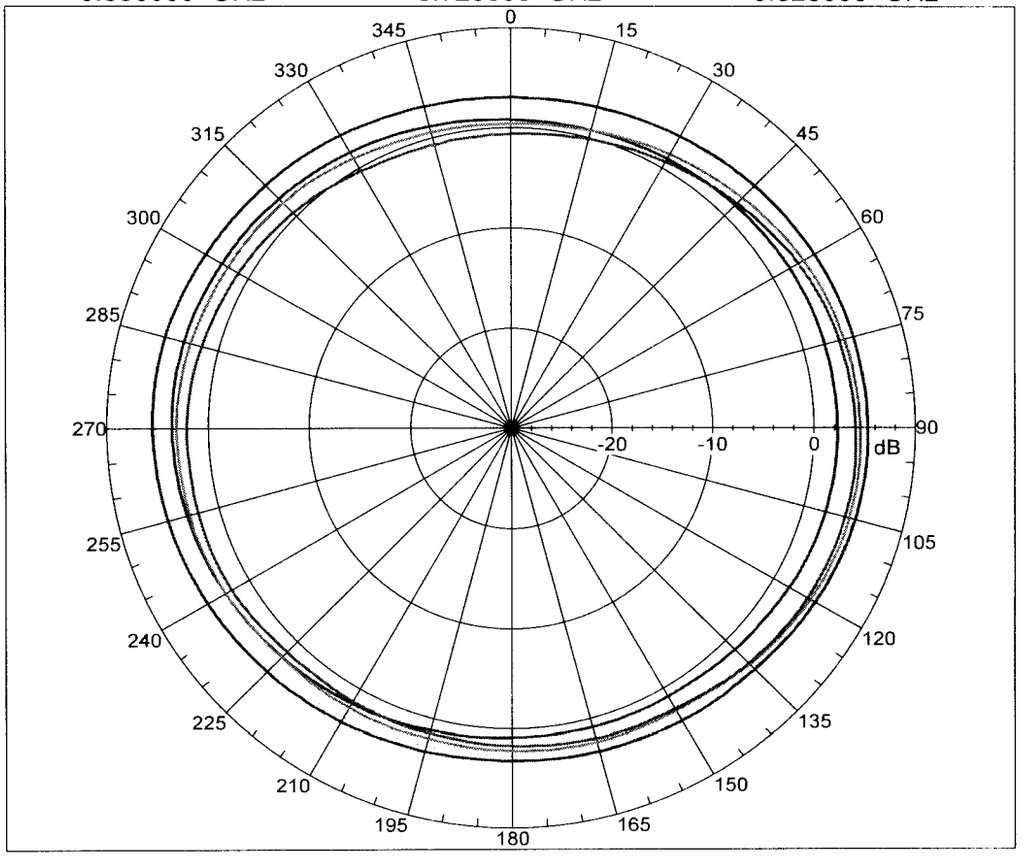


譁裕實業股份有限公司
WHA YU INDUSTRIAL CO., LTD

vertical polar

Far-field amplitude of C068-510330-A-V.nsi

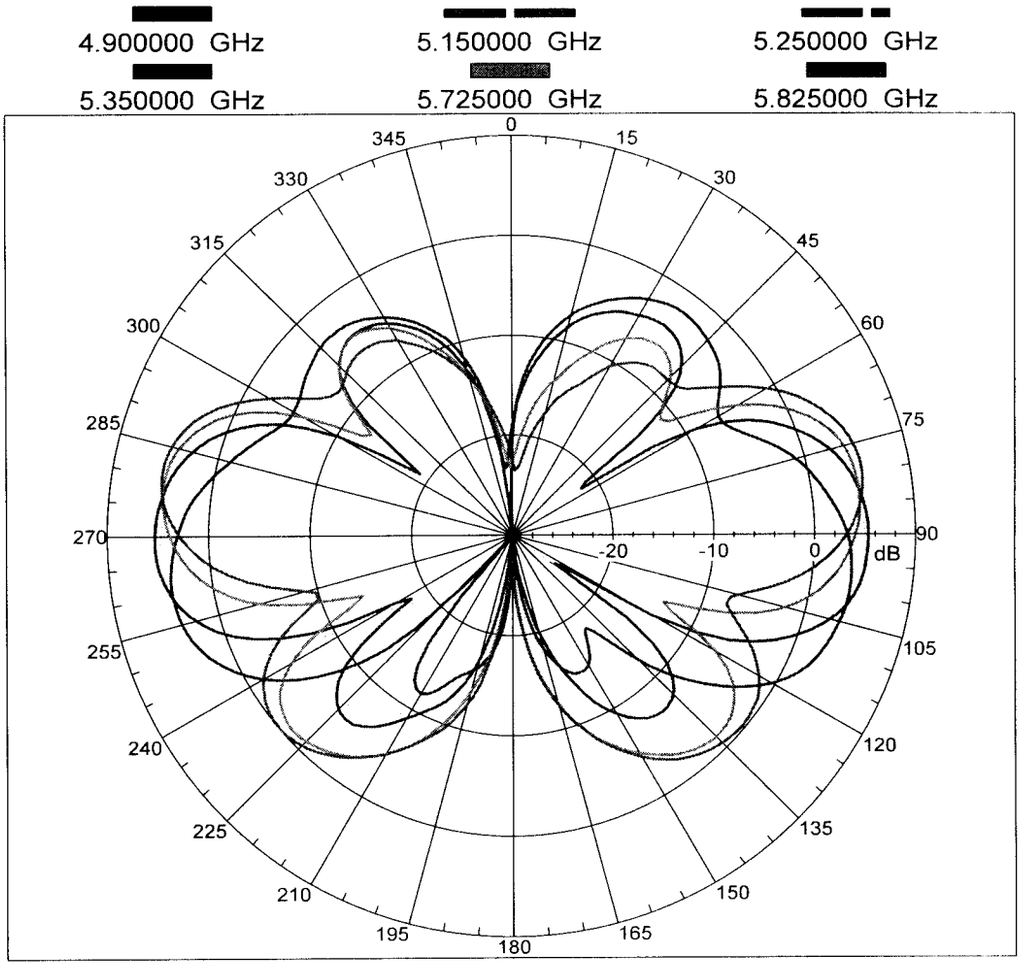
4.900000 GHz 5.150000 GHz 5.250000 GHz
5.350000 GHz 5.725000 GHz 5.825000 GHz



譁裕實業股份有限公司
WHA YU INDUSTRIAL CO., LTD

Horizontal polar

Far-field amplitude of C068-510330-A-H.nsi



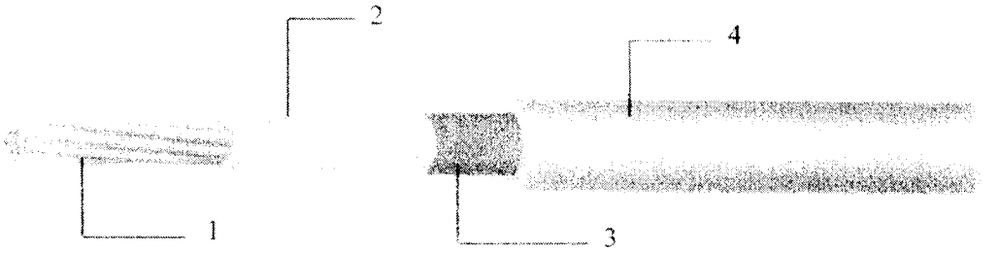
Nizing Electric Co., Ltd. 11-15 Santai Rd., Hsinchuang, Taipei Hsien, 242, Taiwan, R.O.C.
Tel: 02-29016164 Fax: 29050644 E-mail: shenbinnizing@yahoo.com.tw

RG 178 B/U	FEP INSULATED HIGH-FREQUENCY COAXIAL CABLE	PAGE	1 / 2
PRODUCT STANDARD		ISSUED	21. Oct. 2003
		REVISED	

I - Scope

This specification presents a FEP insulated high-frequency coaxial cable AWG 30, 1.8 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	—	CP-AG
	Composition	No./mm	AWG 30 or 7 × 0.1
	Dia. (approx.)	mm	0.305
2. Dielectric	Material	—	Extruded FEP
	Nom. O.D.	mm	0.84 ± 0.05
	Color	—	Natural
3 Outer Conductor	Material	—	Silver coated copper
	Composition	—	Braided (16 / 3 / 0.1)
	Dia. (approx)	mm	1.29 ± 0.07
4 Jacket	Material	—	Extruded FEP
	Dia.	mm	1.80 ± 0.08
	Color	—	Standard color is Light Orange

Note

MADE BY	
APPROVALS	Shen Bin Chao

Nizing Electric Co., Ltd.
11-15 Santai Rd., Hsinchuang, Taipei Hsien, 242, Taiwan, R.O.C
Tel: 02-29016164 Fax: 29050644 E-mail: shenbinnizing@yahoo.com.tw

III – Characteristics

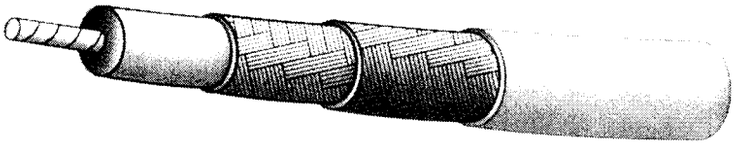
Item	Unit	Specified Value	Note
Temperature Rating	℃	-55 ~ +200	
Voltage Lasting	V	1000	
Dielectric strength	—	Dielectric core: No breakdown at AC 3 kv for 0.2 sec.	Spark test
		Jacket: No breakdown at AC 3 kv for 0.2 sec.	Spark test
Characteristic Impedance	Ω	50 ± 2	TDR method
Capacitance	pF / ft	29.4	
Attenuation. (Max.)	dB/100ft	16.0	100.0 MHz
		33.0	400.0 MHz
		52.0	1.0 GHz
		94.0	3.0 GHz
Approx. Weight	g / m	7.68	

Note		MADE BY APPROVALS	Shen Bin Liao

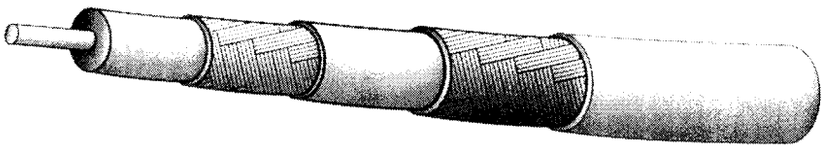
Mil-C-17 Coaxial Cable QPL Approved

Single braid

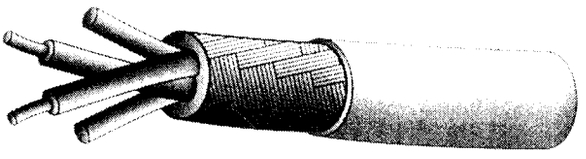
Double braid



Triax



Twinax



Harbour supplies a complete line of high temperature, high performance QPL approved MIL-C-17 coax cables for the military, commercial and industrial applications. The specific M17 constructions referenced are manufactured in accordance with the most recent revision of the MIL-C-17 specification. The MIL-C-17 specification defines complete physical and electrical characteristics for each M17 part number, including dimensional parameters, dielectric materials, shield construction, maximum attenuation, and VSWR levels.

VSWR Sweep Testing

When selecting a 50 ohm coaxial cable, constructions with VSWR requirements are recommended. Manufacturing and sweep testing cables with concern for VSWR ensures a quality cable free of spikes over the referenced frequency range. (Note the test frequencies specified in the electrical characteristics section.)

Precision PTFE Dielectrics

All of the high temperature, high performance coax cables listed have PTFE dielectrics with high dielectric strength and low capacitance in proportion to the dielectric constant. All PTFE dielectrics are manufactured with tolerances tighter than the MIL-C-17 specification to ensure uniformity of electrical characteristics, especially impedance, attenuation and VSWR.

Tape wrapped PTFE Constructions

Harbour also manufactures PTFE tape wrapped cables to a previous revision of the MIL-C-17 specification. These constructions can withstand operating temperatures up to 250° C. versus 200° C. for FEP jacketed cables. Also, PTFE tape wrapped cables are generally more flexible than their FEP jacketed counterparts.

UL Approvals

All of Harbour's M17 part numbers manufactured to the MIL-C-17 specification may be ordered with UL and CSA approvals.

Mil-C-17 Coaxial Cables

Physical Characteristics:

M17 Number	Center Conductor	PTFE Dielectric Diameter	Shield	Jacket	Overall Diameter	Minimum Recommended Bend Radius	Operating Temp. (°C)	Weight (lbs./MFT)	Comments
M17/60-RG142	.037" SCCS	.116"	SPC(2)	FEP	.195"	1.0"	-55 +200	43.0	
M17/93-RG178	.0120"(7/.004")SCCS	.033"	SPC	FEP	.071"	0.4"	-55 +200	6.3	
M17/93-00001	.0120"(7/.004")SCCS	.033"	SPC	PFA	.071"	0.4"	-55 +230	6.3	M17/93-RG178 w/extended temp. r
M17/94-RG179	.0120"(7/.004")SCCS	.063"	SPC	FEP	.100"	0.4"	-55 +200	10.8	
M17/95-RG180	.0120"(7/.004")SCCS	.102"	SPC	FEP	.141"	0.7"	-55 +200	19.8	
M17/110-RG302	.0253"SCCS	.146"	SPC	FEP	.202"	1.0"	-55 +200	40.0	
M17/111-RG303	.037"SCCS	.116"	SPC	FEP	.170"	0.9"	-55 +200	31.0	
M17/112-RG304	.059" SCCS	.185"	SPC(2)	FEP	.280"	1.4"	-55 +200	94.0	
M17/113-RG316	.0201"(7/.0067")SCCS	.060"	SPC	FEP	.098"	0.5"	-55 +200	12.2	
M17/127-RG393	.094"(7/.0312")SC	.285"	SPC(2)	FEP	.390"	2.0"	-55 +200	165.0	
M17/128-RG400	.0384"(19/.008")SC	.116"	SPC(2)	FEP	.195"	1.0"	-55 +200	50.0	
M17/131-RG403	.0120"(7/.004")SCCS	.033"	SPC(2)	FEP(2)	.116"	0.6"	-55 +200	15.0	Triaxial M17/93-RG
M17/152-00001	.0201"(7/.0067")SCCS	.060"	SPC(2)	FEP	.114"	0.6"	-55 +200	18.5	Double shielded M17/113-RG316
M17/158-00001	.037"SCCS	.116"	SPC(2)	FEP	.195"	1.0"	-55 +200	56.0	Unswept M17/60-RG
M17/169-00001	.0120"(7/.004")SCCS	.033"	SPC	FEP	.071"	0.4"	-55 +200	6.3	Unswept M17/93-RG
M17/170-00001	.037"(SCCS	.116"	SPC	FEP	.170"	0.9"	-55 +200	39.0	Unswept M17/111-RG
M17/172-00001	.0201"(7/.0067")SCCS	.060"	SPC	FEP	.098"	0.5"	-55 +200	11.5	Unswept M17/113-RG
M17/174-00001	.094"(7/.0312")SCCS	.285"	SPC(2)	FEP	.390"	2.0"	-55 +200	175.0	Unswept M17/127-RG
M17/175-00001	.0384"(19/.008")SC	.116"	SPC(2)	FEP	.390"	1.0"	-55 +200	50.0	Unswept M17/128-RG
M17/176-00002	.0235(19/.005")SPA(2)	.042"	SPA	PFA	.129"	0.6"	-55 +230	18.0	Controlled impedan twinax
PTFE Tape Wrap Jacketed RG Cables									
RG 187 A/U	.0120"(7/.004)SCCS	.063	SPC	PTFE	.100"	0.5"	-55 +250	10.0	Flexible, 250 °C rat
RG 188 A/U	.0201"(7/.0067)SCCS	.060	SPC	PTFE	.100"	0.5"	-55 +250	11.0	Flexible, 250 °C rat
RG 195 A/U	.0120"(7/.004)SCCS	.102	SPC	PTFE	.141"	0.7"	-55 +250	18.0	Flexible, 250 °C rat
RG 196 A/U	.0120"(7/.004)SCCS	.034	SPC	PTFE	.067"	0.4"	-55 +250	6.0	Flexible, 250 °C rat

Electrical Characteristics:

M17 Number	Impedence (ohms)	Capacitance (pF/ft)	Max. Operating Voltage (RMS)	Maximum attenuation (dB/100ft) @ 100 MHz	400 MHz	1 GHz	3 GHz	5 GHz	10 GHz	Max Frequenc (GHz)
M17/60-RG142	50 +/- 2	29.4	1900	5.5	11.7	19.0	35.0	48.0	-	17.4
M17/93-RG178	50 +/- 2	29.4	1000	16.0	33.0	52.0	94.0	-	-	3.0
M17/93-00001	50 +/- 2	29.4	1000	16.0	33.0	52.0	94.0	-	-	3.0
M17/94-RG179	75 +/- 3	19.4	1200	-	21.0	-	-	-	-	-
M17/95-RG180	95 +/- 5	16.4	1500	-	17.0	-	-	-	-	-
M17/110-RG302	75 +/- 3	19.4	2300	-	8.0	-	26.0	-	-	-
M17/111-RG303	50 +/- 2	29.4	1900	3.9	8.0	15.0	28.0	-	-	-
M17/112-RG304	50 +/- 3	29.4	3000	2.7	6.4	11.1	22.0	30.0	-	8.0
M17/113-RG316	50 +/- 2	29.4	1200	11.0	21.0	38.0	58.0	-	-	3.0
M17/127-RG393	50 +/- 2	29.4	2500	2.4	5.0	8.8	18.0	24.6	37.0	11.0
M17/128-RG400	50 +/- 2	29.4	1900	4.8	10.5	17.0	38.0	50.0	78.0	12.4
M17/131-RG403	50 +/- 2	29.4	1000	-	37.0	-	-	-	-	10.0
M17/152-00001	50 +/- 2	29.4	1200	11.5	24.0	40.0	75.0	110.0	170.0	12.4
M17/158-00001	50 +/- 2	29.4	1900	-	9.5	-	-	-	-	-
M17/169-00001	50 +/- 2	29.4	1000	-	29.0	-	-	-	-	-
M17/170-00001	50 +/- 2	29.4	1900	-	8.6	-	-	-	-	-
M17/172-00001	50 +/- 2	29.4	1200	-	21.0	-	-	-	-	-
M17/174-00001	50 +/- 2	29.4	2500	-	5.0	-	-	-	-	-
M17/175-00001	50 +/- 2	29.4	1900	-	10.5	-	-	-	-	-
M17/176-00001	77 +/- 7	19.0	1000	-	-	-	-	-	-	-
PTFE Tape Wrap Jacketed RG Cables										
RG 187 A/U	75 +/- 3	19.4	1200	-	21.0	-	-	-	-	-
RG 188 A/U	50 +/- 2	29.4	1200	11.0	21.0	38.0	58.0	-	-	-
RG 195 A/U	95 +/- 5	15.4	1500	-	17.0	-	-	-	-	-
RG 196 A/U	50 +/- 2	29.4	1000	-	29.0	-	-	-	-	-

"Maximum frequencies" are those as referenced on individual slant sheets of the MIL-C-17 specification. No values are given for unswept constructions in the specification recommends these cables should not be used above 400 MHz. All figures referenced above are nominal unless otherwise specified.

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℃ 1/8",23℃	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℃ , 5Kg	g/10min	1.8
硬度 Hardness	ASTM D785	1/2"	R Scale	116
比重 Specific Gravity	ASTM D792	23℃	-	1.05
軟化點 Vicat Softening Temp	ASTM D1525	1/8",50℃/hr	℃(℉)	105(221)
熱變形溫度 H.D.T Annealed(85℃ , 8hr) Unannealed	ASTM D648	1/4",120℃/hr	℃(℉)	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

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 GWFI
ALL	1.5	HB	4	0	85	80	85	-	-
	3	HB	3	0	85	80	85	-	-

CTI: 0 HVTR: 1 D495: 1 IEC BP: -

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

Product Information

Dow Plastics

CALIBRE 700 series

Ignition Resistant Resins

These CALIBRE* resins are formulated and produced to supply both clarity and enhanced ignition resistance. They do so while maintaining excellent physical properties and processability. Grades are available with additives for improved mould release and/or UV stablisation.

CALIBRE 700: No mould release, no UV stabilisation. CALIBRE 701: Only mould release. CALIBRE 702: Only UV stabilisation. CALIBRE 703: Mould release and UV stabilisation.

Applications

- Industrial switches
- Circuit breakers
- Plugs, sockets and switches
- Street lights
- Safety lights
- Reflectors

Properties	Test method	Value	Value
Products, Units		**700-10**	**700-15**
Physical			
Melt Flow Rate (300°C, 1.2 kg), g/10 min.	ISO 1133	10	15
Density, kg/m³	ISO 1183	1200	1200
Mould Shrinkage, %	ASTM D-955	0.5–0.7	0.5-0.7
Optical			
Light Transmittance, %	ASTM D1003	84-88	84-88
Thermal			
HDT 0.45 MPa, annealed, °C	ISO 75	144	142
HDT 1.82 MPa, annealed, °C	ISO 75	140	139
HDT 1.82 MPa, unannealed, °C	ISO 75	123	122
Vicat Softening Point (B/50), °C	ISO 306B	149	147
Mechanical			
Tensile Strength at Yield, MPa	ISO 527	60	60
Tensile Strength at Rupture, MPa	ISO 527	66	66
Elongation at Yield, %	ISO 527	6	6
Elongation at Rupture, %	ISO 527	120	120
Tensile Modulus, MPa	ISO 527	2300	2300
Flexural Strength, MPa	ISO 178	100	100
Flexural Modulus, MPa	ISO 178	2400	2400
Izod Notched (23°C), J/m	ISO 180	900	850
Izod Unnotched (23°C), J/m	ISO 180	no break	no break
Charpy Notched (23°C), kJ/m²	ISO 179	30	20
Flammability Rating (1)			
1.6 mm	UL-94	V2	V2
3.2 mm	UL-94	V0	V0
Electrical			
GWT 2.0 mm, 5 sec., °C	IEC 695-2-1	960	960
Ball Indentation Temperature, °C	IEC 598-1 (2)	> 125	> 125
Comp. Tracking Index (2.0 mm), V	IEC 112	250	250

(1) These numerical flame spread ratings are small scale test values and are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

(2) Ball Indentation Temperature is described in IEC 598-1.

*Trademark of The Dow Chemical Company

See "Safety and Handling Considerations" and "Medical Application Policy"

VALOX® 310SE0 Americas: COMMERCIAL

Unreinforced. UL94V-0/5VA rated. For electrical industry; bobbins, keyboard switches and switch components, and appliance housings.

Property

TYPICAL PROPERTIES (1)			
MECHANICAL	Value	Unit	Method
Tensile Stress, yld, Type I, 50 mm/min	59	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	59	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	80	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	101	MPa	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	101	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2620	MPa	ASTM D 790
Hardness, Rockwell R	120	-	ASTM D 785
IMPACT	Value	Unit	Method
Izod Impact, unnotched, 23°C	1602	J/m	ASTM D 4812
Izod Impact, notched, 23°C	37	J/m	ASTM D 256
Gardner, 23°C	34	J	ASTM D 3029
Modified Gardner, 23°C	34	J	ASTM D 3029
THERMAL	Value	Unit	Method
HDT, 0.45 MPa, 6.4 mm, unannealed	163	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	71	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.92E-05	1/°C	ASTM E 831
CTE, 60°C to 138°C, flow	1.31E-04	1/°C	ASTM E 831
Relative Temp Index, Elec	120	°C	UL 746B
Relative Temp Index, Mech w/impact	120	°C	UL 746B
Relative Temp Index, Mech w/o impact	140	°C	UL 746B
PHYSICAL	Value	Unit	Method
Specific Gravity	1.39	-	ASTM D 792
Specific Volume	0.72	cm^3/g	ASTM D 792
Water Absorption, 24 hours	0.08	%	ASTM D 570
Mold Shrinkage, flow, 0.75-2.3 mm	0.9 - 1.6	%	GE Method
Mold Shrinkage, flow, 2.3-4.6 mm	1.5 - 2.3	%	GE Method
Mold Shrinkage, xflow, 0.75-2.3 mm	1 - 1.7	%	GE Method
Mold Shrinkage, xflow, 2.3-4.6 mm	1.6 - 2.4	%	GE Method
ELECTRICAL	Value	Unit	Method
Volume Resistivity	>1.6E+16	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	18.4	kV/mm	ASTM D 149

Dielectric Strength, in oil, 1.6 mm	22	kV/mm	ASTM D 149
Relative Permittivity, 100 Hz	3.1	-	ASTM D 150
Relative Permittivity, 1 MHz	3.1	-	ASTM D 150
Dissipation Factor, 100 Hz	0.002	-	ASTM D 150
Dissipation Factor, 1 MHz	0.02	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
FLAME CHARACTERISTICS	Value	Unit	Method
UL Recognized, 94V-0 Flame Class Rating (3)	0.7	mm	UL 94
UL Recognized, 94-5VA Rating (3)	3	mm	UL 94
CSA (See File for complete listing)	LS88480	File No.	CSA LISTED

Source GMD, last updated:04/14/2003

Processing

Parameter		
Injection Molding	Value	Unit
Drying Temperature	120	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	12	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	245 - 260	°C
Nozzle Temperature	240 - 255	°C
Front - Zone 3 Temperature	245 - 260	°C
Middle - Zone 2 Temperature	240 - 255	°C
Rear - Zone 1 Temperature	230 - 250	°C
Mold Temperature	50 - 75	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	50 - 100	rpm
Shot to Cylinder Size	40 - 80	%
Vent Depth	0.013 - 0.025	mm

Source GMD, last updated:04/14/2003

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR (LOCAL SALES OFFICE) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.
(2) Only typical data for selection purposes. Not to be used for part or tool design.

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(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
(4) Internal measurements according to UL standards.