



东莞市国旭电子通讯有限公司

Dongguan Guoxu Electronics Communication Co.,Ltd.

规格承认书

SPECIFICATION FOR APPROVAL

日期 2015 / 3 / 13
Date _____

编号 15031301
File No _____

版本 1.0
Revision _____

客 户 成都万创

CUSTOMER: _____

客户料号

CUSTOMER NO: _____

品 名 2G/3G Antenna

PART NAME: _____

供方料号 GX042S.100002.S01

SUPPLIER NO: _____

送样日期Date: 2015.3.13

送样数量Q"TY: PCS

客户确认CUSTOMER APPROVED BY

APPROVAL	CHIEF	SUPERVISOR

供方确认 SUPPLIER SIGNATURE

	CHECK	DESIGN
	ZhangLian	QinJianyong

GX-RD-F04-B

承认书项目表

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10	N/A	N/A	N/A
11	-	-	-
12	-	-	-
13	-	-	-

产品图片

Sample Photo



RoHS
Compatible

CUSTOMER
PART NO

REV.

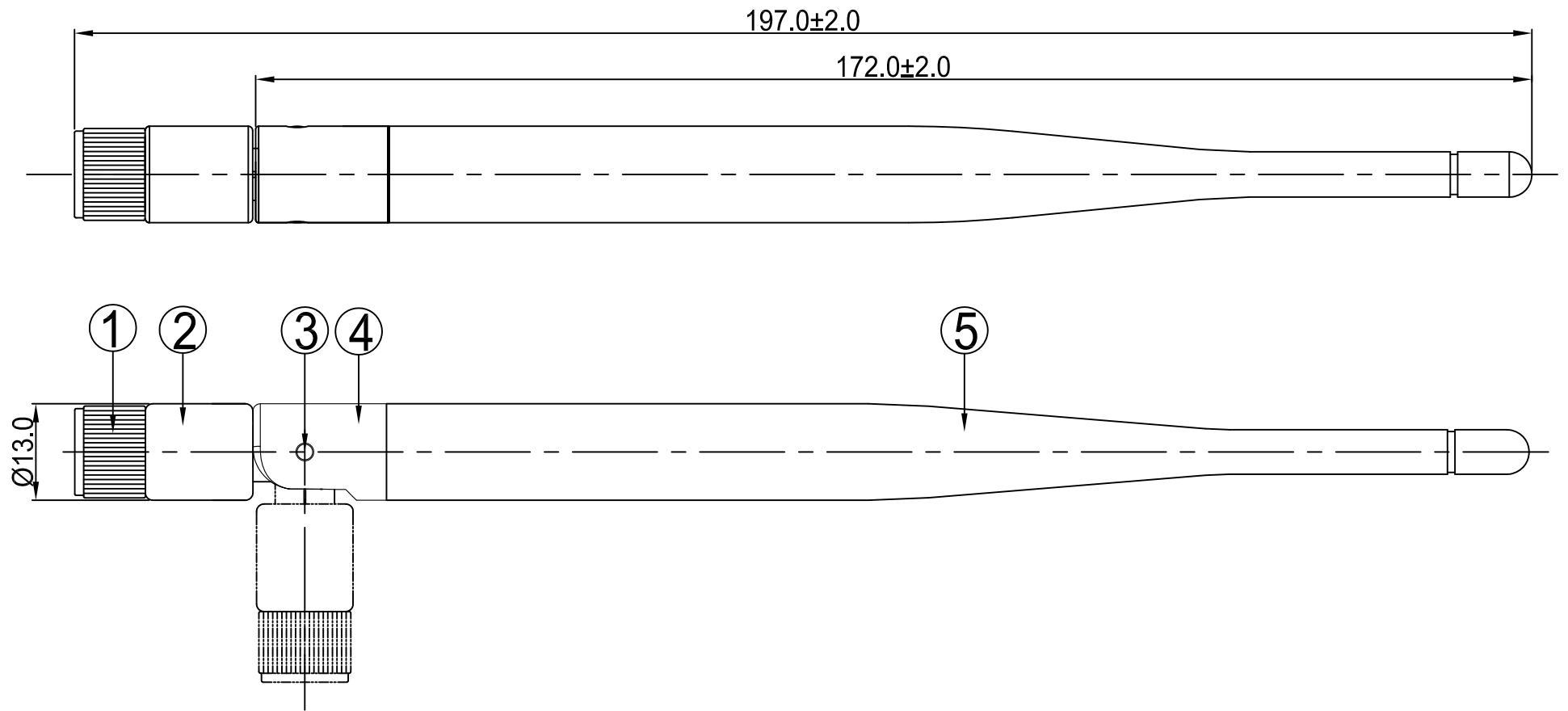
DESCRIPTION

DATE



首次发行

2015-03-13



5	Antenna Cap	TPE ,Color:Black	1
4	Upper Base	PC, Color:Black	1
3	Rivet	POM, Color:Black	2
2	Bottom Base	PC, Color:Black	1
1	SMA Male	Cu Black	1
NO	PART NAME	DESCRIPTION	Q.TY



东莞市国旭电子通讯有限公司

GUOXU

Dongguan GuoXu Electronics Communication Co.,Ltd.

Tel:0769-85535057

Fax:0769-81664308

PART NAME: 3GHz Antenna

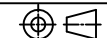
PART NO.: GX042S.100002.S01

DATE: 2015-03-13

APPROVED BY

CHECKED BY

DESIGNED BY



Tolerance

UNITS: mm

X.X ±0.50

SCALE: 1/1

X.XX±0.15

REVISION: A

X° ±3°

覃剑勇

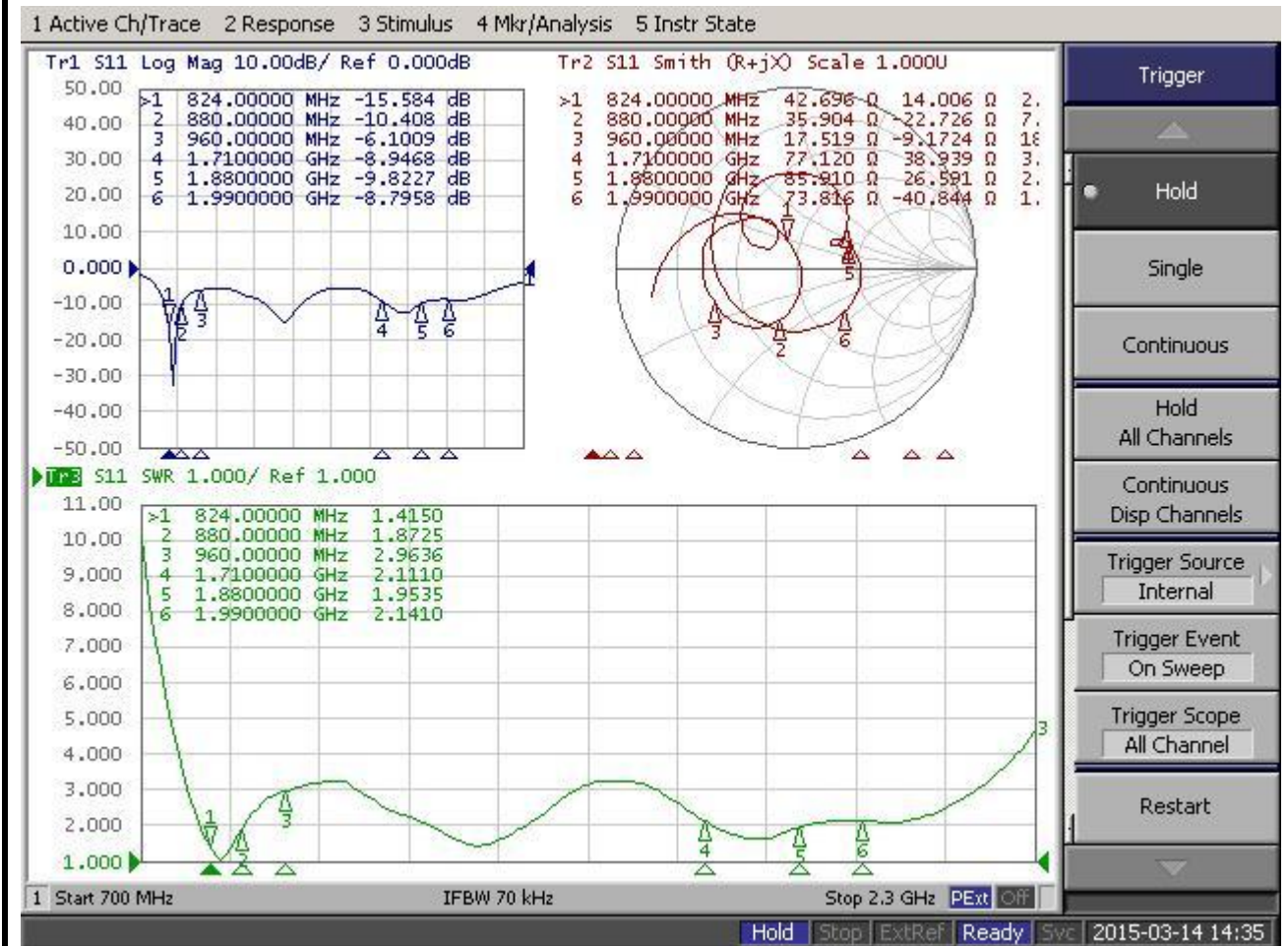
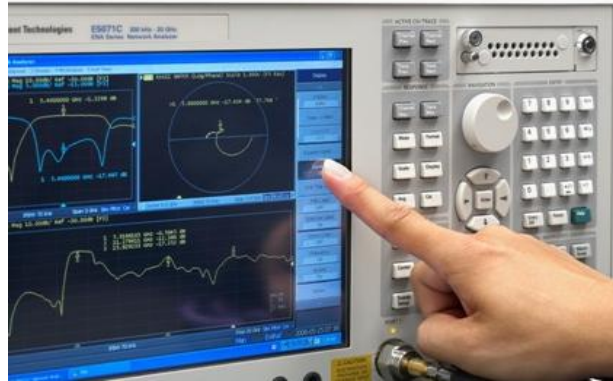
电性测试报告

Test Reports

Electrical Properties	
Frequency	824~960MHz , 1710~1990MHz
Impedance	50 Ohm Nominal
V.S.W.R	1.92 : 1 Max
Return Loss	-10 dB Max
Radiation	Omni-directional
Gain (Peak)	1 dBi
Polarization	Linear, Vertical
Admitted Power	1 W
Connector	SMA Male
Physical Properties	
Antenna Material	TPE / PC / Cu
Cable Type	RG-178
Operating Temp.	-10 ~ +60 °C
Storage Temp.	-10 ~ +70 °C
Cable Color	Brown

Antenna Performance Test

Agilent E5071B





長春人造樹脂廠股份有限公司

台北市 10477 松江路三零一號七樓

CHANG CHUN PLASTICS CO.,LTD.

NO.301 SONGKIANG ROAD, 7FL., TAIPEI, TAIWAN, R.O.C.

TEL: 886-2-25038131

FAX:886-2-25033378

材質證明

MATERIAL FORMULATION CONFIDENTIAL REPORT

材質名稱 Type of Material : TPEE(Thermoplastic Polyether-ester Elastomer)
熱塑性聚醚酯彈性體

規格 Grade : TPEE 1140, 1155, 1163, 1172

說明 Description :

TPEE 1140, 1155, 1163, 1172 熱塑性聚醚酯彈性體包含 TPEE 純樹脂及添加劑。TPEE 1140, 1155, 1163, 1172 完全符合 RoHS 指令的規定。且所有組成都包含在中國 IECSC 化學資料庫中。The raw material of TPEE 1140, 1155, 1163, 1172 contains TPEE pure resin and a few of additives. We certify that our TPEE1140, 1155, 1163, 1172 can be according with RoHS regulation. Moreover, all the components of this product is list in the China chemical inventory IECSC.

TPEE 1140, 1155, 1163, 1172 成分表

Chemical Composition of TPEE 1140, 1155, 1163, 1172

規格 Grade TPEE 1140, 1155, 1163, 1172				
組成 Chemical Composition		Molecular formula	CAS Number	含量(%) Content (%)
1	TPEE樹脂 TPEE resin	(1) Chemical formula (C ₁₀ H ₁₀ O ₄ ·C ₄ H ₁₀ O ₂ ·(C ₄ H ₈ O) _n H ₂ O) _x	9078-71-1	>99%
2	添加劑 Additives	NA	NA	0.2-1%

TPEE Grade	Component 單體組成	Ratio 組成比例
1140	DMT/BDO/PTMEG	1 : 1 : 1.3
1155	DMT/BDO/PTMEG	1 : 1 : 1.0
1163	DMT/BDO/PTMEG	1 : 1 : 0.7
1172	DMT/BDO/PTMEG	1 : 1 : 0.4

DMT: Dimethyl Terephthalat 對苯二甲酸二甲酯

BDO: 1,4-Butanediol 1,4-丁二醇

PTMEG: PolyTetramethylene-ether-Glycol 聚四氫呋喃

MATERIAL SUPPLIER

Company: CHANG CHUN PLASTICS CO., LTD KAOHSIUNG FACTORY

Signature: Ching-Neng Tseng / Chief Manager / Technical Section

Address: No.14 KUNG-YEH 1ST ROAD. JEN-WU INDUSTRIES DISTRICT

KAOHSIUNG, TAIWAN, ROC.

Date: June. 07, 2010



Panlite L-1250Z 100

Category	Unit	Test Method	Condition	L-1250Z 100
Melt volume flow rate	cm ³ /10min	ISO 1133	300deg.C load 1.2kg	8
Density	kg/m ³	ISO 1183	-	1200
Water absorption rate	%	ISO 62	in water 23deg.C 24h	0.2
Light transmission	%	ASTM D 1003	thickness 3mm	88
Refractive index	-	ASTM D 542	-	1.585
Tensile modulus	MPa	ISO 527-1 and ISO 527-2	1mm/min	2400
Tensile stress at yield	MPa		50mm/min	61
Tensile strain at yield	%		50mm/min	6
Nominal tensile strain at break	%		50mm/min	>50
Flexural modulus	MPa	ISO 178	2mm/min	2350
Flexural strength	MPa		2mm/min	93
Charpy impact strength	kJ/m ²	ISO 179	unnotched	NB
			notched	76
Heat deflection temperature	deg.C	ISO 75-1 and ISO 75-2	1.80MPa	129
			0.45MPa	142
Vicat softening temperature	deg.C	ISO 306	50deg.C/h 50N	149
Mold shrinkage	%	In-house method	parallel	0.5-0.7
			vertical	0.5-0.7
Coefficient of linear expansion	×10 ⁻⁴ /k	ISO 11359-2	parallel	0.7
			vertical	0.7
Specific inductive capacity	-	IEC 60250	100Hz	3.1
	-		1MHz	3
Dielectric loss tangent	×10 ⁻⁴	IEC 60250	100Hz	10
	×10 ⁻⁴		1MHz	90
Volume resistivity	ohm-m	IEC 60093	-	>1×10 ¹³
Surface resistivity	ohm	IEC 60093	-	>1×10 ¹⁵
Withstand voltage	MV/m	IEC 60243-1	short time test	30
Tracking resistance	-	IEC 60112	-	250
Flammability	-	UL 94	-	V-2(0.40mm) HB(1.5mm)
Temperature index	deg.C	UL 746B	electric 1.47mmt	125
			impact 1.47mmt	115
			non-impact 1.47mmt	125

* The values listed are specification values, not certified values.

产品质量证明书

客户	通用		日期	2010.08.10	
品名	规格	状态	制造方法	数量	
H65 (镀锡铜管)	1.0-25	H	拉制		
化学成分	铜(Cu)	铁(Fe)	铅(Pb)	锌(Zn)	其它杂质
	64.88%	0.012%	0.014%	35.094%	0.003%
机构性能	抗拉强度 (不少于)	延伸率 (不少于)	直径公差	壁厚公差	

审核：胡偉林

化驗員：李紅花

无锡源达电工材料有限公司

WUXI YUANDA ELECTRICAL MATERIAL CO., LTD.

中国江苏省江阴市青阳镇南陈村 邮编 214401

Nachen, Qingyang Town, Jiangyin City 214400, Jiangsu, China

1. 适用范围:

Scope

本规格书制定了 50 Ω FEP 绝缘射频电缆 YD178 系列的结构和电气特性。

This specification covers the construction and the electrical properties of YD178 series of 50 Ω FEP Insulation Coaxial Cable.

2. 结构/Construction:

单位/Unit:mm

	项目/Item	详细资料/Details
导体/Conductor	材料/Material	镀银铜线/Silver-coated Copper Wire
	构成(根/mm) Composition (No. /mm)	7/0.102
	标称直径/Nom. O. D (mm)	0.306±0.03
绝缘层 /Insulation	材料/Material	聚四氟乙烯/PTFE
	标称绝缘厚度/Nom. Thick (mm)	0.275
	标称外径/Nom. O. D (mm)	0.86±0.03
屏蔽层/Shield	材料/Material	镀银铜线/ Silver-coated annealed copper wire
	构成/Composition	0.10 单线编织/Single Braid of 0.10
护套/Jacket	材料/Material	聚全氟乙丙烯(*颜色)/FEP(*color)
	标称护套厚度/Nom. Thick (mm)	0.25
	标称外径/Nom. O. D (mm)	1.80±0.08
	颜色/Color	按与客户确认的颜色/According to corresponding have approved by the suppliers and customers

3. 电气特性(20℃时)/Electrical Properties(at 20℃)

项目/Item	单位/Unit	详细资料/Details	
导体电阻/Conductor Resistance	Ω/km	Max. 320	
绝缘电阻/Insulation Resistance	MΩ. km	Min. 500	
耐压强度/Dielectric Strength	V(AC)/min	1000	
静电容/Capacitance	pF/m	105(1kHz)	
特性阻抗 /Characteristic Impedance	Ω	50±2.0	
衰减/Attenuation	dB/m	1GHz	1.70
		2GHz	2.42
		3GHz	3.08

无锡源达电工材料有限公司

WUXI YUANDA ELECTRICAL MATERIAL CO., LTD.

中国江苏省江阴市青阳镇南陈村 邮编 214401

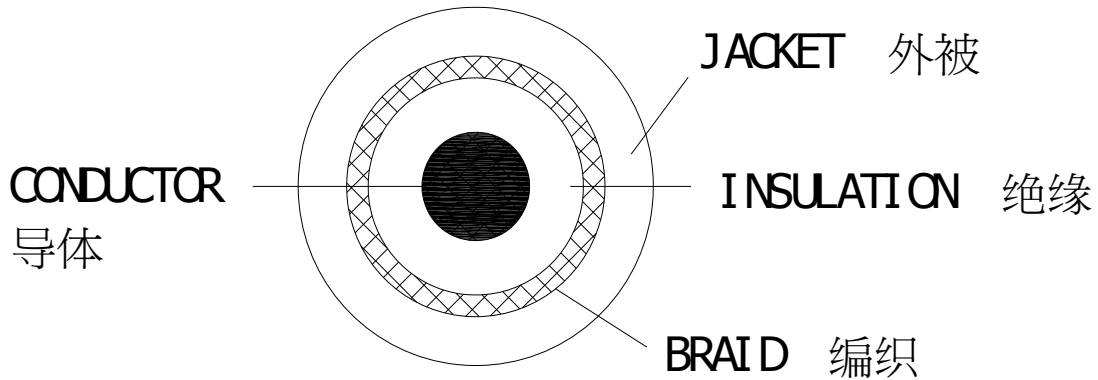
Nachen, Qingyang Town, Jiangyin City 214400, Jiangsu, China

		4GHz	3.63
		5GHz	4.15
		6GHz	4.80
驻波比/Standing wave (0-6GHz)	/	≤1.35	

4. 包装 Packing

标准单位包装长度为 500 米/盘, 每盘最多允许 3 个接头, 接头最短长度 20 米, 在搬运过程中不能损坏包装.

Standard unit length of finished cable shall be 500m on reel, frequency of joint max. 3/reel, the mini length is 20m. The finished cable shall be packed not be damaged during transportation



本产品有时不适合车载用途的情况也有,所以使用前请先和本公司业务部门进行商谈.

This product is not suitable for automobile application in some cases. Please contact with our sales department before you use this product.

规格书完

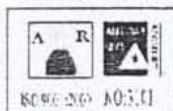
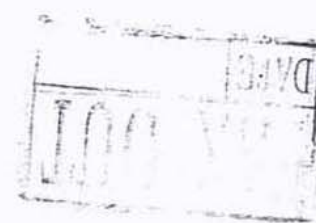
End of specification

SHIYANG (ZHONG SHAN) METAL PRODUCTS CO.,LTD

世扬金属制品有限公司

TEST CERTIFICATE

材质证明书



CLIENT 客户	天/							certificate NO. 证明书号	070127-15	
name article 品名	Brass									
LOT NO.	SIZE(MM)	OUTW GT	DESIGNATION	Cu(%)	Pb(%)	Fe(%)	Fe+Sn(%)	Cd(%)	Zn(%)	REMARK
	STANDARD	(KG)	JISC3604	57~61	1.8~3.7	≤0.5	≤1.2	≤0.0075	REM	
7916	14.5 φ		JISC3604	58.92	2.986	0.446	0.971	0.0042	REM	
兹证明本表所列产品,均依材料规格制造及试验,并符合规格之要求。 WE HEREBY CERTIFY THAT MATERIAL DESCRIBED JERE IN MAS BEEN MANUFACTURED AND TESTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENT OF THE ABOVE MATERIAL SPECIFICATION.										

MANAGER: 曾敦義

PABLE: 李玉奎

DATE:

PTFE

SHANGHAI

VALQUA FLUOROCARBON PRODUCTS CO. LTD.

PROPERTIES OF PTFE PRODUCTS

MECHANICAL PROPERTIES	項目	測試值	單位	試驗方法
Tensile Strength (Molding Direction)	拉伸強度	9.8-34	MPa	ASTM D638
Elongation at Break (Molding Direction)	伸長率	100-400	%	ASTM D638
Density	比重	2.13-2.25	—	ASTM D792
Hardness	硬度	50-55	杜羅硬度計	ASTM D2240
Flexural Modulus @0.2% offset, 23°C	彎曲強度	—	MPa	ASTM D790
Flexural Modulus @23%	彎曲模量	350-550	MPa	ASTM D790
Compressive Strength @0.2% offset, 23°C	壓縮強度	7.7-11.8	MPa	ASTM D695
ELECTRICAL PROPERTIES	項目	測試值	單位	試驗方法
Dielectric Strength @Air(Tape)@Oil(Extrusion/ Molding)	絕緣強度	19.2	KV/mm	ASTM C149
Dielectric Constant	介電常數	1.95-2.1	—	ASTM D150
Dissipation Factor @60Hz @10 ⁶ Hz	介質損耗	< 0.0002	(60Hz)	ASTM D150
		< 0.0002	(10 ⁶ Hz)	
Resisivity @Surface @Volume	表面電阻	> 10 ¹⁶	歐姆	ASTM D257
	體積電阻	> 10 ¹⁸	歐姆 cm	
THERMAL PROPERTIES	項目	測試值	單位	試驗方法
Point of Fusion DSC	熔點	327±10	°C	ASTM D792
Max. Working Temperature	耐熱溫度	260	°C	—
Thermal conductivity @Molding Direction(MD)	導熱系數	1.9	10 ⁻⁶ W/(m.k)	ASTM
WEAR PROPERTIES	項目	測試值	單位	試驗方法
Coefficient of Dynamic Friction	動磨擦系數	0.1	—	0.7MPa3M/minS TEEL