



产品介绍

稳健品质 精密制造

Steady quality, exact manufacturing **Products**

产品是一个企业竞争能力的综合表现，满足客户的整体需求是我们为之奋斗的动力。

Product is general expressing of enterprise competition. To satisfy customer's satisfaction is our drive of our hardworking.

H130 (Conventional FR-4)	
Tg130°C (DSC) 自然色, 无UV Blocking / AOI; 优良的PCB加工性能;	
特性 Features	Tg130°C (DSC) Natural Color, Non-UV Blocking/ AOI compatible. Excellent PCB process ability
用途 Applications	电脑、通讯设备、仪器仪表、摄像机、电视机、电子游戏机等。 Computer, Communication equipment, Instrumentation, VCR, Television, Electronic game machine, etc.



H140 (UV Blocking)	
Tg135±5°C (DSC) UV Blocking / AOI兼容; 优良的PCB加工性能;	
特性 Features	Tg135±5°C (DSC) UV Blocking/ AOI compatible. Excellent PCB process ability
用途 Applications	电脑、仪器仪表、摄像机、通讯设备、电子游戏机、汽车、航空等。 Computer, Instrumentation, VCR, Communication equipment, Electronic game machine, Automobile, Aviation, etc.

高CTI覆铜板 High CTI	
优异的耐漏电起痕性, CTI ≥ 600 ; 优良的PCB加工性;	
特性 Features	Excellent tracking resistance ,CTI ≥ 600 ; Good PCB processability ;
用途 Applications	电源基板、电视机、电冰箱、洗衣机等。 Power base board, TV, refrigerator, washing machine, etc.



无卤素阻燃型覆铜板 Halogen-Free	
普通Tg无卤产品, UV Blocking 和 AOI兼容 不含卤素、锑、红磷等成分; 阻燃性达到UL94V-0;	
特性 Features	Normal Tg Halogen-free product, Yellow colour, UV Blocking and AOI compatible Constituents free of halogen, antimony, red phosphorous, etc. Flammability UL 94V-0 .
用途 Applications	手机、电脑、通讯设备、仪器仪表、摄像机、电视机、电子游戏机等。 Mobile phone, Computer, Communication equipment , Instrumentation, VCR, Television, Electronic game machine, etc.

H150 Lead Free (Mid.Tg)	
Tg150±5°C (DSC) UV Blocking 和 AOI兼容; 优异的耐热性, Td ≥ 325°C, T288>5min , 适合于无铅焊工艺; 从环境温度到260°C , 板材具备较低的膨胀系数	
特性 Features	Tg150±5°C (DSC) UV Blocking and AOI compatible. High thermal performance, Td ≥ 325°C , T288>5min, suitable for lead-free process.
用途 Applications	适合于多层印制线路板、广泛应用于计算机及外围设备、通讯设备、仪器仪表、办公自动设备、PCB无铅制程等。 Suitable for medium multilayer printed circuit board, Used widely in computer, communication equipment instrumentation, OA equipment, lead-free PCB process etc.



H170 Lead Free (High Tg)	
Tg170±5°C (DSC) UV Blocking 和 AOI兼容 优异的耐热性, Td ≥ 340°C, T288>15min , 适合于无铅焊工艺; 从环境温度到260°C , 板材具备较低的膨胀系数。	
特性 Features	Tg170±5°C (DSC) UV Blocking and AOI compatible; High thermal performance, Td ≥ 340°C , T288>15min, suitable for lead-free process. Lower CTE from ambient to 260°C .
用途 Applications	适合于多层印制线路板、广泛应用于计算机及外围设备、通讯设备、仪器仪表、办公自动设备、PCB无铅制程等。 Suitable for medium multilayer printed circuit board, Used widely in computer, communication equipment instrumentation, OA equipment, lead-free PCB process etc.

GENERAL PROPERTIES (H130/H140)

项目 Item	处理条件 Treatment Condition	单位 Unit	指标 Spec	典型值 Typical Value	
Tg	DSC	°C	135±5	137	
燃烧性 Flammability	E-24/125	-	UL94V-0	94V-0	
表面电阻率 Surface Resistivity	C-96/35/90	MΩ	≥10 ⁴	1.7×10 ⁷	
体积电阻率 Volume Resistivity	C-96/35/90	MΩ-cm	≥10 ⁶	4.9×10 ⁸	
耐电弧 Arc Resistance	D-48/50+D-0.5/23	S	≥60	120	
介质击穿 Dielectric Breakdown	D-48/50+D-0.5/23	Kv	≥40	60	
介电常数 Dielectric Constant (1MHz)	C-40/23/50	-	≤5.4	4.7	
介质损耗角正切 Dissipation Factor (1MHz)	C-40/23/50	-	≤0.035	0.018	
热应力 Thermal Stress	Unetched	288°C, 10s	不分层 No delamination	不分层 No delamination	不分层 No delamination
	Etched				
剥离强度 Peel Strength	1oz Cu. Foil	288°C, 10s	N/mm	≥1.05	1.4
弯曲强度 Flexural Strength	纵向 LW	A	MPa	≥415	580
	横向 CW			≥345	475
吸水性 Water Absorption	D-24/23	%	≤0.5	0.15	
尺寸稳定性 Dimensional stability	纵向 LW	E-4/105	ppm	±300	153
	横向 CW			±300	121
热分解温度 Td Decomposition Temperature	TGA (5% wt loss)	°C	-	309	
Z轴热膨胀系数 CTE Z-Axis	Alpha 1	TMA	ppm / °C	-	65
	Alpha 2		ppm / °C	-	310
	50 to 260 Degrees C		%	-	4.6
耐热性 (热分层时间) Thermal Resistance	T260	TMA	min	-	15
	T288			-	2
CTI	IEC 60112	V	175~250	175	

GENERAL PROPERTIES H150 lead free (Mid.Tg)

项目 Item	处理条件 Treatment Condition	单位 Unit	指标 Spec	典型值 Typical Value	
Tg	DSC	°C	150±5	150	
燃烧性 Flammability	E-24/125	-	UL94V-0	94V-0	
表面电阻率 Surface Resistivity	C-96/35/90	MΩ	≥10 ⁴	2.2×10 ⁷	
体积电阻率 Volume Resistivity	C-96/35/90	MΩ-cm	≥10 ⁶	5.3×10 ⁸	
耐电弧 Arc Resistance	D-48/50+D-0.5/23	S	≥60	135	
介质击穿 Dielectric Breakdown	D-48/50+D-0.5/23	Kv	≥40	63	
介电常数 Dielectric Constant (1MHz)	C-40/23/50	-	≤5.4	4.7	
介质损耗角正切 Dissipation Factor (1MHz)	C-40/23/50	-	≤0.035	0.018	
热应力 Thermal Stress	Unetched	288°C, 10s	不分层 No delamination	不分层 No delamination	不分层 No delamination
	Etched				
剥离强度 Peel Strength	1oz Cu. Foil	288°C, 10s	N/mm	≥1.05	1.2
弯曲强度 Flexural Strength	纵向 LW	A	MPa	≥415	572
	横向 CW			≥345	445
吸水性 Water Absorption	D-24/23	%	≤0.5	0.23	
尺寸稳定性 Dimensional stability	纵向 LW	E-4/105	ppm	±300	153
	横向 CW			±300	107
热分解温度 Td Decomposition Temperature	TGA (5% wt loss)	°C	325	342	
Z轴热膨胀系数 CTE Z-Axis	Alpha 1	TMA	ppm / °C	≤60	56
	Alpha 2		ppm / °C	≤300	287
	50 to 260 Degrees C		%	4.0	3.7
耐热性 (热分层时间) Thermal Resistance	T260	TMA	min	≥30	50
	T288			≥5	15
	T300			AABUS	---

备注 (Remark) : AABUS=As agreed upon between user and supplier.

GENERAL PROPERTIES H170 lead free (High Tg)

项目 Item	处理条件 Treatment Condition	单位 Unit	指标 Spec	典型值 Typical Value	
Tg	DSC	°C	170±5	170	
燃烧性 Flammability	E-24/125	-	UL94V-0	94V-0	
表面电阻率 Surface Resistivity	C-96/35/90	MΩ	≥10 ⁴	2.1×10 ⁷	
体积电阻率 Volume Resistivity	C-96/35/90	MΩ-cm	≥10 ⁶	5.6×10 ⁸	
耐电弧 Arc Resistance	D-48/50+D-0.5/23	S	≥60	139	
介质击穿 Dielectric Breakdown	D-48/50+D-0.5/23	Kv	≥40	65	
介电常数 Dielectric Constant (1MHz)	C-40/23/50	-	≤5.4	4.7	
介质损耗角正切 Dissipation Factor (1MHz)	C-40/23/50	-	≤0.035	0.018	
热应力 Thermal Stress	Unetched	288°C, 10s	不分层 No delamination	不分层 No delamination	不分层 No delamination
	Etched				
剥离强度 Peel Strength	1oz Cu. Foil	288°C, 10s	N/mm	≥1.05	1.2
弯曲强度 Flexural Strength	纵向 LW	A	MPa	≥415	570
	横向 CW			≥345	436
吸水性 Water Absorption	D-24/23	%	≤0.5	0.21	
尺寸稳定性 Dimensional stability	纵向 LW	E-4/105	ppm	±300	149
	横向 CW			±300	116
热分解温度 Td Decomposition Temperature	TGA (5% wt loss)	°C	≥340	346	
Z轴热膨胀系数 CTE Z-Axis	Alpha 1	TMA	ppm / °C	≤60	55
	Alpha 2		ppm / °C	≤300	291
	50 to 260 Degrees C		%	3.5	3.3
耐热性 (热分层时间) Thermal Resistance	T260	TMA	min	≥30	65
	T288			≥15	20
	T300			≥2	5

GENERAL PROPERTIES (CTI600)

项目 Item	处理条件 Treatment Condition	单位 Unit	指标 Spec	典型值 Typical Value	
Tg	DSC	°C	≥130	135	
燃烧性 Flammability	E-24/125	-	UL94V-0	94V-0	
表面电阻率 Surface Resistivity	C-96/35/90	MΩ	≥10 ⁴	3.6×10 ⁸	
体积电阻率 Volume Resistivity	C-96/35/90	MΩ-cm	≥10 ⁶	5.9×10 ⁸	
耐电弧 Arc Resistance	D-48/50+D-0.5/23	S	≥60	130	
介质击穿 Dielectric Breakdown	D-48/50+D-0.5/23	Kv	≥40	65	
介电常数 Dielectric Constant (1MHz)	C-40/23/50	-	≤5.4	4.6	
介质损耗角正切 Dissipation Factor (1MHz)	C-40/23/50	-	≤0.035	0.017	
热应力 Thermal Stress	Unetched	288°C, 10s	不分层 No delamination	不分层 No delamination	不分层 No delamination
	Etched				
剥离强度 Peel Strength	1oz Cu. Foil	288°C, 10s	N/mm	≥1.05	1.3
弯曲强度 Flexural Strength	纵向 LW	A	MPa	≥415	575
	横向 CW			≥345	439
吸水性 Water Absorption	D-24/23	%	≤0.5	0.16	
尺寸稳定性 Dimensional stability	纵向 LW	E-4/105	ppm	±300	123
	横向 CW			±300	101
热分解温度 Td Decomposition Temperature	TGA (5% wt loss)	°C	-	309	
Z轴热膨胀系数 CTE Z-Axis	Alpha 1	TMA	ppm / °C	-	63
	Alpha 2		ppm / °C	-	308
	50 to 260 Degrees C		%	-	4.5
耐热性 (热分层时间) Thermal Resistance	T260	TMA	min	-	15
	T288			-	2
CTI	IEC 60112	V	≥600	600	

GENERAL PROPERTIES (Halogen-Free)

项目 Item	处理条件 Treatment Condition	单位 Unit	指标 Spec	典型值 Typical Value	
Tg	DSC	°C	≥130	140	
燃烧性 Flammability	E-24/125	-	UL94V-0	94V-0	
表面电阻率 Surface Resistivity	C-96/35/90	MΩ	≥10 ⁴	6.7×10 ⁶	
体积电阻率 Volume Resistivity	C-96/35/90	MΩ-cm	≥10 ⁶	3.5×10 ⁷	
耐电弧 Arc Resistance	D-48/50+D-0.5/23	S	≥60	116	
介质击穿 Dielectric Breakdown	D-48/50+D-0.5/23	Kv	≥40	60	
介电常数 Dielectric Constant (1MHz)	C-40/23/50	-	≤5.4	4.7	
介质损耗角正切 Dissipation Factor (1MHz)	C-40/23/50	-	≤0.035	0.018	
热应力 Thermal Stress	Unetched	288°C, 10s	不分层 No delamination	不分层 No delamination	不分层 No delamination
	Etched				
剥离强度 Peel Strength	1oz Cu. Foil	288°C, 10s	N/mm	≥1.05	1.2
弯曲强度 Flexural Strength	纵向 LW	A	MPa	≥415	565
	横向 CW			≥345	432
吸水性 Water Absorption	D-24/23	%	≤0.5	0.17	
尺寸稳定性 Dimensional stability	纵向 LW	E-4/105	ppm	±300	117
	横向 CW			±300	96
热分解温度 Td Decomposition Temperature	TGA (5% wt loss)	°C	-	345	
Z轴热膨胀系数 CTE Z-Axis	Alpha 1	TMA	ppm / °C	-	54
	Alpha 2		ppm / °C	-	271
	50 to 260 Degrees C		%	-	3.7
耐热性 (热分层时间) Thermal Resistance	T260	TMA	min	-	15
	T288			-	2
CTI	IEC 60 112	V	175~250	175	

覆铜板规格表 (CCL Specifications)

厚度 Thickness	覆箔 Copper foil	标准尺寸 Standard size	尺寸公差 tolerance
0.1mm~3.2mm	T H 1 1/2 2 3 12 μm, 18 μm, 35 μm, 50 μm, 70 μm, 105 μm 单面、双面或不覆铜箔 Single, double side & unclad.	37" X49" (940X1245)	1,1703 #A# CM
		41" X49" (1040X1245)	1,29 #B# 18 ^{3mm} #A# CS
		43" X49" (1092X1245)	1,35954 #B# CV

注: 尺寸、厚度、覆箔也可根据客户要求生产
Note: Size, thickness and copper foil can be produced according to customer's requirement.

半固化片规格表 (Prepreg Specifications)

型号 (Type)	树脂含量 Resin Content(%)	凝胶化时间 Gel Time(Sec)	流动度 Resin Flow(%)	固化后厚度 Cured Thickness(um)
7628	43±3	100±20	21±3	185±20
	45±3	130±20	22±3	195±20
	48±3	160±20	23±3	210±20
2116	52±4	100±20	28±5	115±15
		130±20		
		160±20		
1080	63±5	100±20	35±5	70±15
		130±20		
		160±20		

注: 半固化片参数可根据用户要求生产
Note: Prepreg parameter can be produced according to customer's requirement.



DET NORSKE VERITAS

MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 3484-1993-AQ-RGC-RvA

This is to certify that

Zhejiang Huazheng Electronic Group Co., Ltd.

No. 1 Bao Ta Industrial Zone, Yuhang, Hangzhou 311121, P.R. China

has been found to conform to the Management System Standard:

ISO 9001:2000

This Certificate is valid for the following product or service ranges:

Manufacture of Copper Clad Laminate

Initial Certification date:
December 30th, 1993

Place and date:
Shanghai, February 17th, 2009

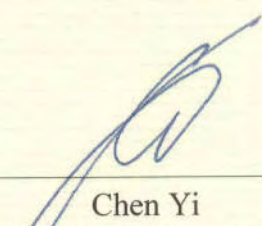
This Certificate is valid until:
December 30th, 2011

for the Accredited Unit:
DNV CERTIFICATION B.V.,
THE NETHERLANDS



The audit has been performed under the supervision of

Zhang Guang Yu
Lead Auditor


Chen Yi
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.