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www.rainsun.com

2014

BEST SOLUTION LEADER



Product Catalog

Special Dual Rubber

Pyramidals Absorber

Conduction Dual Alloy

Conductive Fabric Sponge

Electricit Gasket

NFC & WPC Solutions

Ferrite Sheet

Thermal Flexible Graphite

Thermal Pads

CHIP Antenna

FPC&PCB Antenna



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SDR 薄型軟性吸收體 Special Dual Rubber



● 建議使用方式

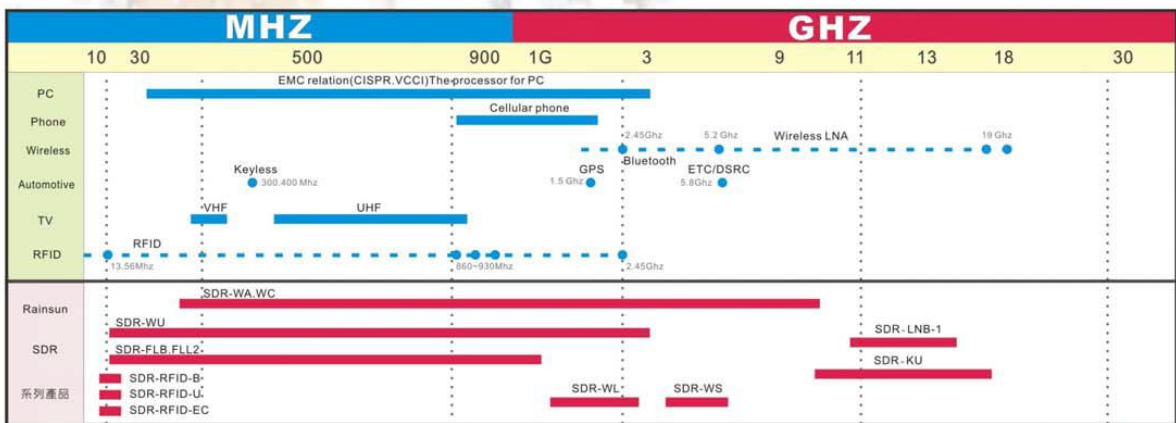
<p>電波幅射抑制 貼附於 IC 貼附於基板</p> <p>適用於基板 IC 幅射應用</p>	<p>BOX 抑制反射吸收 殼內貼使用</p> <p>適用於測試治具吸收應用</p>	<p>防止外洩吸收 金屬機殼表面電流 開口</p> <p>適用於筐體幅射應用</p>	<p>防止增幅回路的幅射 LNB</p> <p>適用於機體回路幅射應用</p>	<p>防止線路的幅射 上下貼覆於線材 包覆於線材</p> <p>適用於傳輸線路電流應用</p>
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● 主要應用產品

<p>RF interference Antenna for SAR RFID news dispatch LCD.SSD to interference</p>		<p>ESD static elect USB 3.0 dispatch HDD interference RFID news dispatch LTE&RF interference Hard discs interference LCD.SSD to interference</p>	
<p>RF interference ESD static elect USB 3.0 dispatch</p>		<p>LCD.SSD to interference USB 3.0 dispatch LTE&RF to interference ESD static elect RFID news dispatch</p>	
<p>ESD static elect USB 3.0 dispatch LCD.SSD to interference</p>			

Application		
IC Card	PC Peripherals	Digital Camera
Microwave	Shielding Box	ITS
Cellular Phone	PDA	Micro-motors
FPC	Communication Equipment	Fiber Optical
DVD.VCD	Bluetooth Products	LNB
BOX	Telecommunication	Wi-Fi Products(802.11a/b/g)

● 推薦各類使用頻率



[Http://www.RainSun.com](http://www.RainSun.com)



SDR Special Dual Rubber

Wide Band Absorber 10MHz ~ 10GHz

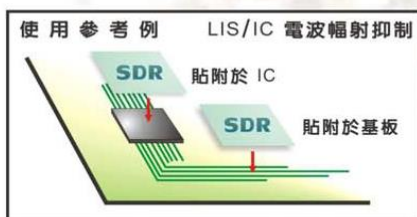
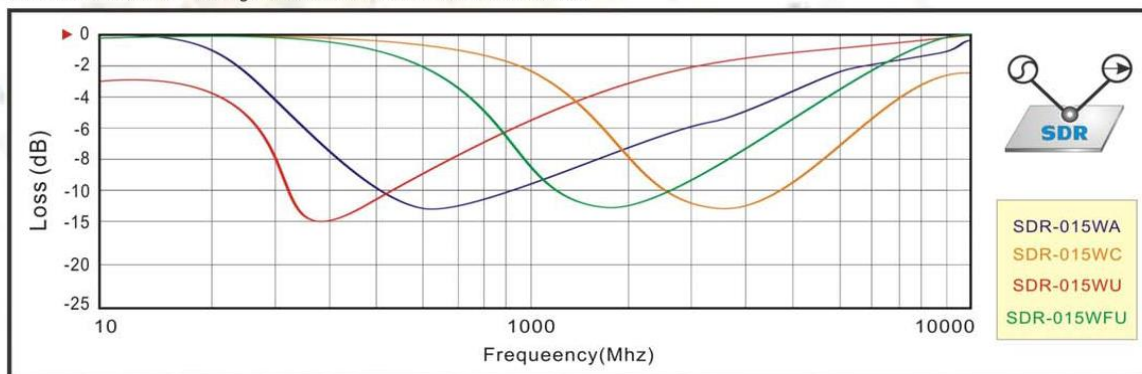


Product Feature

1. Can reduce RF noise and internal interference.
2. Suitable for mobile communication and digital electronic products.
3. High performance absorbing noise interference.
4. Diversified composite materials can be used on any product.
5. Customized dimension and shape.
6. RoHS and UL94-V0 compliance.

Type	SDR - WA	SDR - WC	SDR - WU	SDR - WUF
推薦頻率範圍 Applicable Frequency	100MHz~10GHz	900MHz~10GHz	10MHz~3GHz	900MHz~5GHz
標準厚度(mm) Standard Product Thickness	0.15 · 0.2 · 0.5 · 0.7 · 1.0	0.15 · 0.2 · 0.5 · 0.7	0.1 · 0.15 · 0.2 · 0.5 · 0.7	0.1 · 0.15 · 0.2 · 0.5 · 0.7
吸收衰減 (-dB)	- 3 dB ~ - 20 dB	- 3 dB ~ - 20 dB	- 3 dB ~ - 20 dB	- 3 dB ~ - 20 dB
表面阻抗 (Ω) Surface Resistance	10 ⁴	10 ⁵	10 ⁴	10 ⁴
標準規格 Product size	210mm*290mm (板材) 210mm*20M (捲材)	210mm*290mm (板材) 210mm*20M (捲材)	210mm*290mm (板材) 210mm*20M (捲材)	210mm*290mm (板材) 210mm*20M (捲材)
熱傳導率 Heat Conductivity	0.055 W/M.K	0.056 W/M.K	0.052 W/M.K	0.1 W/M.K
建議工作溫度 Temperature	80 °C	80 °C	80 °C	80 °C
工作溫度範圍 Maximum using Temperature	-30°C ~ 130°C	-30°C ~ 130°C	-30°C ~ 130°C	-30°C ~ 130°C
燃燒性認證 Flammability	符合 UL94-V0	符合 UL94-V0	符合 UL94-V0	符合 UL94-V0

*Without adhesives *The figures shown below are reference values.



品名稱呼法 Product Name

SDR- 002 WA M

產品類別名稱 _____

產品厚度 (mm) _____

材質樣式 _____

其他加工 _____

[Http://www.RainSun.com](http://www.RainSun.com)



SDR Special Dual Rubber

HF ~ VHF Absorber 10MHz ~ 1GHz

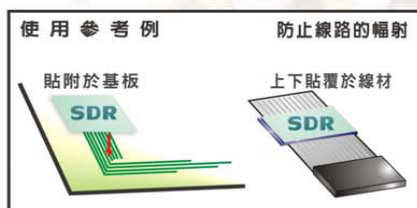
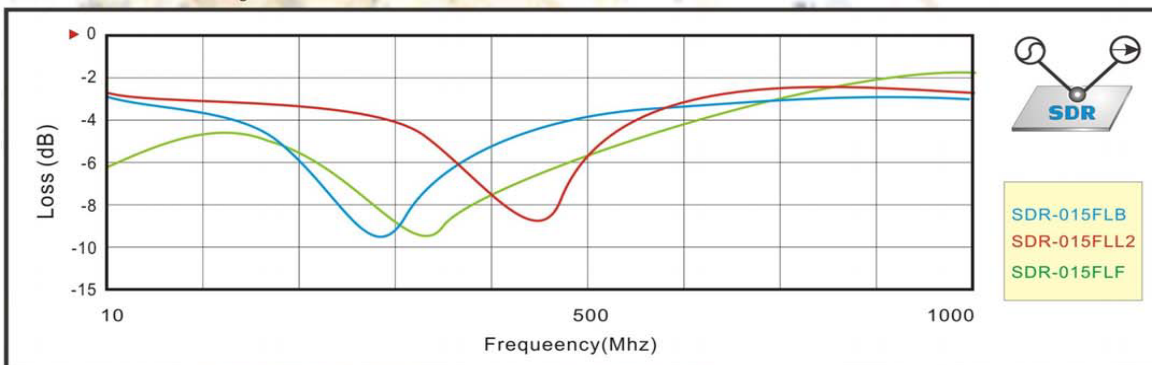


Product Feature

1. Can reduce signal current interference.
2. Suitable for NB and small electronic products.
3. High performance absorbing interference at 10MHz - 1GHz.
4. Good shielding effect at low frequency.
5. Customized dimension and shape.
6. RoHS and UL94-V0 compliance.

Type	SDR - FLB	SDR - FLL2	SDR - FLF	SDR - AL
推薦頻率範圍 Applicable Frequency	10MHz~1GHz	100MHz~1GHz	10MHz~1GHz	
標準厚度(mm) Standard Product Thickness	0.2、0.5、0.7、1.0	0.2、0.5、0.7、1.0	0.2、0.5、0.7、1.0	
吸收衰減 (-dB) Surface Resistance	-3 dB ~ -10 dB	-3 dB ~ -10 dB	-3 dB ~ -10 dB	導電
表面阻抗 (Ω)	10 ⁴	10 ⁵	10 ⁶	
標準規格 Product size	210mm*290mm (板材) 210mm*20M (捲材)	210mm*290mm (板材) 210mm*20M (捲材)	210mm*290mm (板材) 210mm*20M (捲材)	210mm*290mm (板材) 210mm*20M (捲材)
熱傳導率 Heat Conductivity	0.05 W/M.K	0.065 W/M.K	0.06 W/M.K	230 W/M.K
建議工作溫度 Temperature	80 °C	80 °C	80 °C	80 °C
工作溫度範圍 Maximum using Temperature	-30°C ~ 130°C	-30°C ~ 130°C	-30°C ~ 130°C	-30°C ~ 130°C
燃燒性認證 Flammability	符合 UL94-V0	符合 UL94-V0	符合 UL94-V0	符合 UL94-V0

*Without adhesives *The figures shown below are reference values.



品名稱呼法 Product Name

SDR- 002 FLB M

產品類別名稱

產品厚度 (mm)

材質樣式

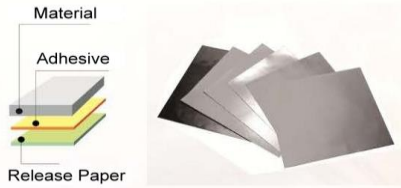
其他加工

[Http://www.RainSun.com](http://www.RainSun.com)



SDR Special Dual Rubber

UHF Absorber 1GHz ~ 18GHz

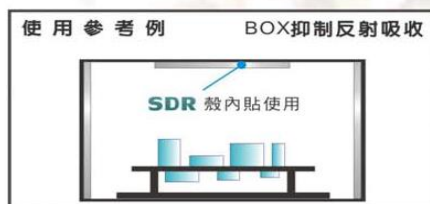
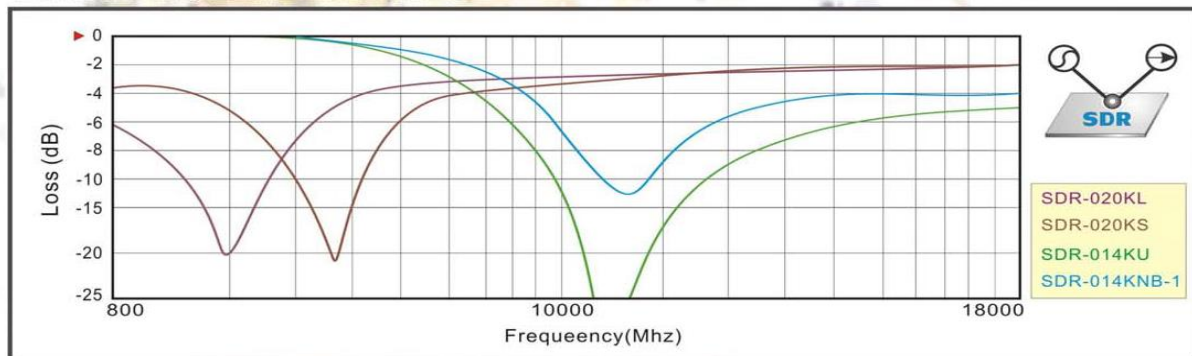


Product Feature

1. With microwave band absorbing properties.
2. Suitable for shielding box, LNB and microwave products.
3. High performance absorbing at 1 GHz - 18 GHz.
4. Diversified composite materials can be used on any product.
5. Customized dimension and shape.
6. RoHS and UL94-V0 compliance.

Type	SDR - KL	SDR - KS	SDR - KU	SDR - KNB-1
推薦頻率範圍 Applicable Frequency	900MHz~2GHz	2GHz~5GHz	9GHz~18GHz	9GHz~14GHz
標準厚度(mm) Standard Product Thickness	1.0、1.5、2.0、2.5、3.0	0.5、1.0、1.5、2.0、2.5、3.0	1.0、1.2、1.4、1.6	1.0、1.2、1.4、1.6
表面阻抗 (Ω) Surface Resistance	10 ⁶	10 ⁶	10 ⁶	10 ⁶
標準規格 Product size	210mm*290mm (板材)	210mm*290mm (板材)	210mm*290mm (板材)	210mm*290mm (板材)
熱傳導率 Heat Conductivity	0.06 W/M.K	0.06 W/M.K	0.06 W/M.K	0.06 W/M.K
建議工作溫度 Temperature	80 °C	80 °C	80 °C	80 °C
工作溫度範圍 Maximum using Temperature	-30°C ~ 130°C	-30°C ~ 130°C	-30°C ~ 130°C	-30°C ~ 130°C
燃燒性認證 Flammability	符合 UL94-V0	符合 UL94-V0	符合 UL94-V0	符合 UL94-V0

*Without adhesives *The figures shown below are reference values.



品名稱呼法 Product Name

SDR- 020 KL M

產品類別名稱 _____

產品厚度 (mm) _____

材質樣式 _____

其他加工 _____

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SDR Special Dual Rubber

NFC/RFID Absorber

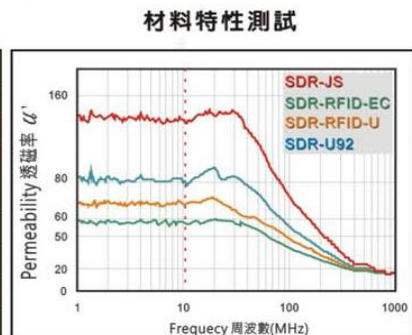


Product Feature

1. Effectively prevent metal interference antenna radiation.
2. Suitable for use with a 13.56MHz antenna.
3. High magnetic permeability, excellent inhibitory effect.
4. RoHS and UL94-V0 compliance.
5. Customized dimension and shape.
6. Effectively isolated from the environment, and increased sensing distance.

Type	SDR - U92	SDR - RFID-U	SDR - RFID-EC	SDR - JS
推薦頻率範圍 Applicable Frequency	13.56 MHz	13.56 MHz	13.56 MHz	13.56 MHz
標準厚度(mm) Standard Product Thickness	0.1、0.15、0.2、0.3、0.5	0.1、0.15、0.2、0.25、0.3	0.16、0.2、0.25、0.3	0.05、0.1、0.2
μ Typ	80	70	60	150
表面阻抗 (Ω) Surface Resistance	10^4	10^4	10^5	10^6
標準規格 Product size	210mm*290mm (板材) 210mm*20M (捲材)	210mm*290mm (板材) 210mm*20M (捲材)	210mm*290mm (板材) 210mm*20M (捲材)	220mm*300mm (板材)
熱傳導率 Heat Conductivity	0.056 W/M.K	0.066 W/M.K	0.066 W/M.K	0.065 W/M.K
建議工作溫度 Temperature	80 °C	80 °C	80 °C	80 °C
工作溫度範圍 Maximum using Temperature	-30°C ~ 130°C	-30°C ~ 130°C	-30°C ~ 130°C	-30°C ~ 130°C
燃燒性認證 Flammability	符合 UL94-V0	符合 UL94-V0	符合 UL94-V0	符合 UL94-V0

*Without adhesives *The figures shown below are reference values.



品名稱呼法 Product Name **SDR- 002 RFID-U M**

產品類別名稱 _____

產品厚度 (mm) _____

材質樣式 _____

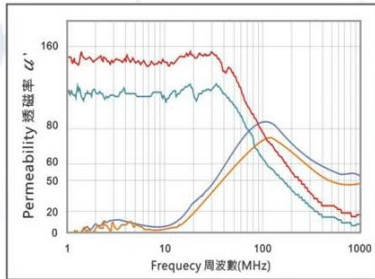
其他加工 _____

[Http://www.RainSun.com](http://www.RainSun.com)



Ferrite Sheet

RFID/NFC Ferrite Sheets 13.56MHz

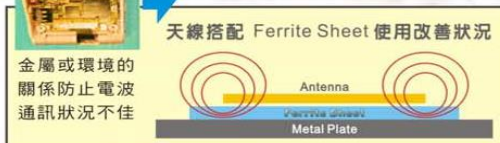
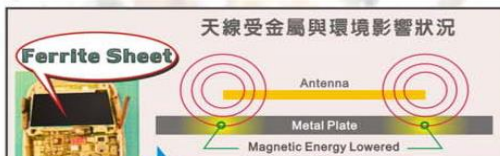
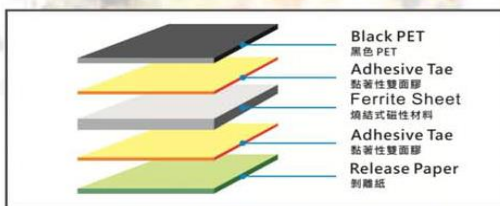


Product Feature

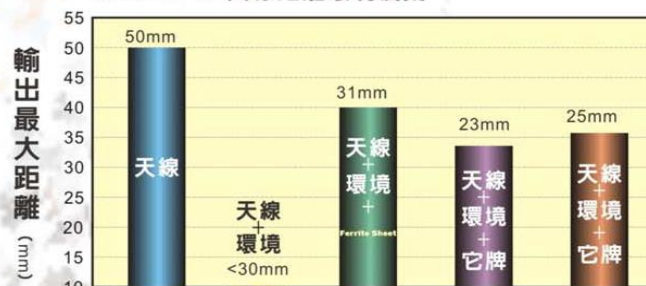
1. High magnetic permeability.
2. Increasing the magnetic strength of the antenna.
3. Customized dimension and shape.
4. Diversified composite materials can be used on any product.
5. Suitable for RFID & NFC wireless communications.
6. Effectively isolated from the environment, and increased sensing distance.
7. RoHS and UL94-V0 compliance.

Type	FS-001-2S	FS-0015-2S	FS-001-2DC	FS-0015-2DC
推薦頻率範圍 Applicable Frequency	13.56 MHz	13.56 MHz	13.56 MHz	13.56 MHz
標準厚度(mm) Standard Product Thickness	0.1 mm	0.15 mm	0.1 mm	0.15 mm
透磁率 μ' Permeability	150	150	120	120
透磁率 μ'' Permeability	3	3	5	5
表面阻抗 (Ω) Surface Resistance	10^6	10^6	10^6	10^6
標準規格 Product size	100mm * 100mm	100mm * 100mm	125mm * 125mm	125mm * 125mm
建議工作溫度 Temperature	80 °C	80 °C	80 °C	80 °C

*Without adhesives *The figures shown below are reference values.



RFID / NFC 天線距離環境模擬



SPA Sponge Pyramidal Absorber

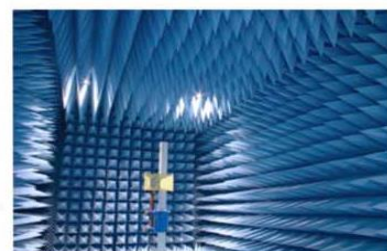
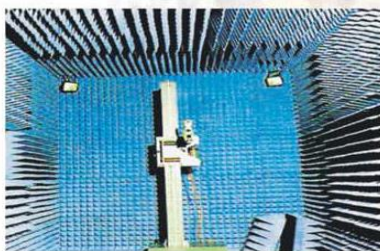
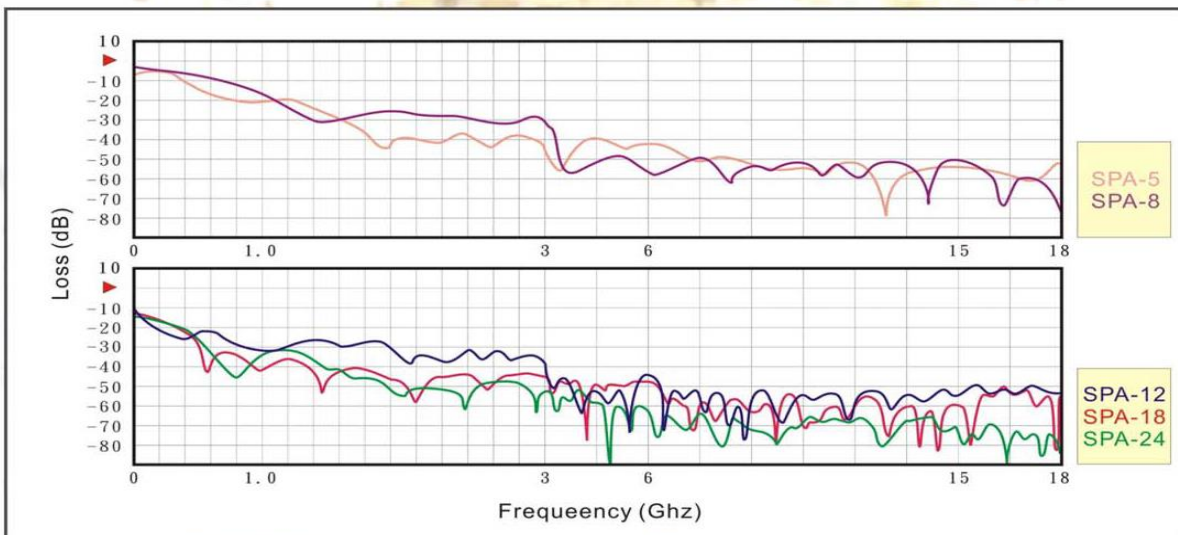
Microwave Chamber Absorber 300M ~ 18GHz



Product Feature

1. Ultra-wideband absorber.
2. High performance absorbing at microwave frequency.
3. Available sizes for different spaces and rooms.
4. Materials with high flame resistance and less impact on human body.
5. Suitable for a chamber of testing antennas and mobile phones.

Type	Dimension(mm)	Pyramids	Absorption at normal incidence							Power	
			300MHZ	500MHZ	1GHZ	3GHZ	6GHZ	10GHZ	15GHZ		18GHZ
SPA-3	600mm × 600mm × 76.2mm	400			5 dB	10 dB	20 dB	30 dB	35 dB	40 dB	1W/in ²
SPA-5	600mm × 600mm × 127mm	144			10 dB	15 dB	20 dB	30 dB	35 dB	40 dB	1W/in ²
SPA-8	600mm × 600mm × 203mm	81			10 dB	15 dB	25 dB	30 dB	35 dB	40 dB	1W/in ²
SPA-12	600mm × 600mm × 305mm	36		5 dB	10 dB	20 dB	25 dB	30 dB	35 dB	45 dB	1W/in ²
SPA-18	600mm × 600mm × 457mm	16		10 dB	20 dB	28 dB	35 dB	40 dB	45 dB	50 dB	1W/in ²
SPA-24	600mm × 600mm × 600mm	9	10 dB	15 dB	25 dB	30 dB	35 dB	40 dB	45 dB	50 dB	1W/in ²

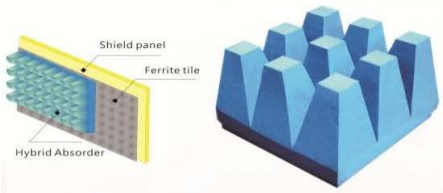


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SPA Sponge Hybrid Absorber

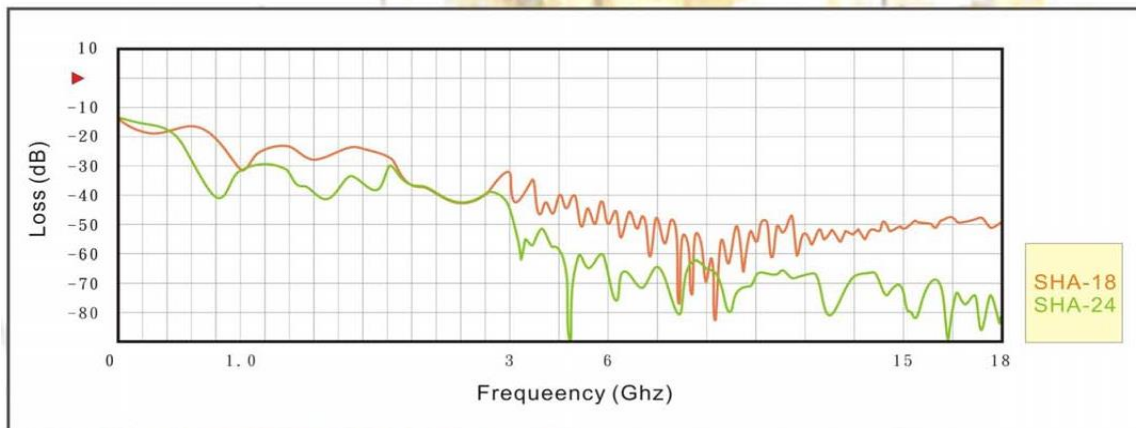
EMC Chamber Absorber 300MHz ~ 18GHz



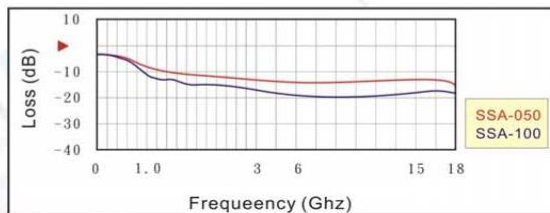
Product Feature

1. Ultra-wideband absorber.
2. High performance absorbing at frequency 300MHz ~ 18GHz.
3. Flat panels (sold separately) make space bright.
4. Materials with high flame resistance and less impact on human body.
5. Suitable for 3M anechoic chamber and special anechoic chamber.

Type	Dimension(mm)	Pyramids	Absorption at normal Incidence							Power	
			300MHZ	500MHZ	1GHZ	3GHZ	6GHZ	10GHZ	15GHZ		18GHZ
SHA-18	600mm × 600mm × 355mm	16			10 dB	15 dB	20 dB	25 dB	30 dB	30 dB	1W/in ²
SHA-24	600mm × 600mm × 507mm	9			20 dB	20 dB	25 dB	30 dB	30 dB	35 dB	1W/in ²



SSA 海綿平板吸收體 Sponge Smooth Absorber 配合機構電波吸收體 1GHZ-18GHZ



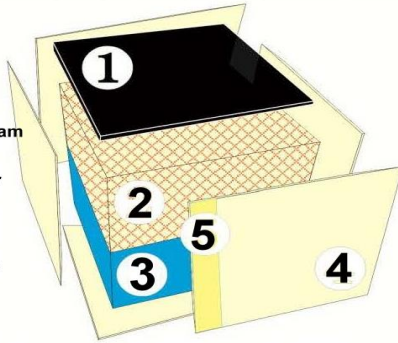
- 具寬帶電波吸收體
- 適用於EMC及微波實驗室小型材料
- 可配合搭配各類型吸波產品

Type	Dimension(mm)	Absorption at normal Incidence							
		300MHZ	500MHZ	1GHZ	3GHZ	6GHZ	10GHZ	15GHZ	18GHZ
SSA-050	600mm × 600mm × 50mm			5 dB	8 dB	10 dB	10 dB	15 dB	15 dB
SSA-100	600mm × 600mm × 100mm			10 dB	10 dB	10 dB	15 dB	15 dB	15 dB

WWA Walk Way Absorber

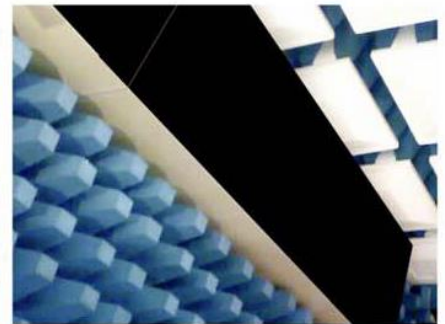
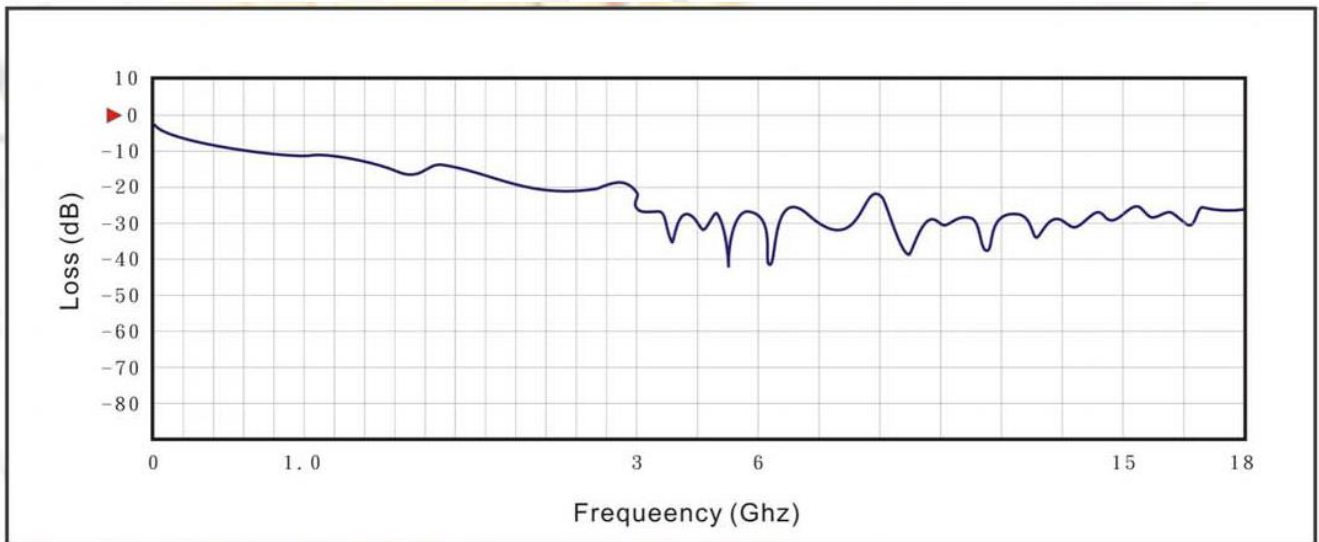
Chamber Absorber 1G ~ 18GHz

- ① Black mat
- ② High density foam
- ③ Foam absorber
- ④ Foam
- ⑤ Antistatic Tape



Model No	RS-WWA 60
Size	600*600*600mm
Frequency range	1GHZ - 18GHZ

Model No	RS-WWA 30
Size	600*600*300mm
Frequency range	1GHZ - 18GHZ

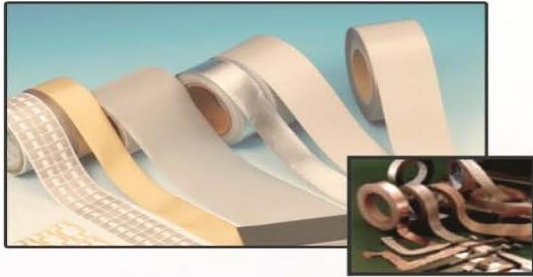


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GT Conductive material/tape

Conductive nonwoven / tape / copper / Foil



Product Feature

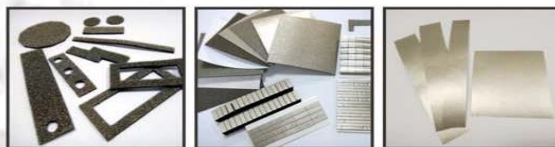
1. Stable performance, resistant to bending, ultra-thin thickness.
2. Excellent conductivity.
3. No rough edge, no peeling.
4. Can match application constructions.
5. Customized dimension and shape.
6. RoHS compliance.

Type	GT-02-S	GT-05 (S)	GT-08 (S)	GT-12	GT-03-P-2	GT-05-P-2
產品品名 manufactures	超薄導電布	導電不織布	導電不織布	導電布	導電雙面膠	導電雙面膠
標準厚度(mm) Standard Thickness	0.02 mm (含膠)	0.05mm (含膠)	0.08 mm (含膠)	0.12 mm (含膠)	0.03 mm (含膠)	0.05mm (含膠)
黏著力 Peel Adhesion	≥ 600gf	≥ 800gf	≥ 800gf	≥ 1200gf	≥ 600gf	≥ 800gf
表面阻抗 Surface Resistance	< 0.03	< 0.05	< 0.05	< 0.08	< 0.03	< 0.03
電磁波遮蔽率 Electromagnetism camouflagage	> 60	> 60	> 60	> 65	> 60	> 60
抗張力 Tensile Strength	> 15	> 20	> 20	> 25	> 15	> 20
伸長率 Elongation	8 ± 5	5 ± 5	8 ± 5	8 ± 5	8 ± 5	8 ± 5
建議工作溫度 Temp Range	- 10 ~ 105 °C	- 10 ~ 105 °C	- 10 ~ 105 °C	- 10 ~ 105 °C	- 10 ~ 105 °C	- 10 ~ 105 °C
環境認證 authentication	ROHS/GP	ROHS/GP	ROHS/GP	ROHS/GP	ROHS/GP	ROHS/GP

*Without adhesives *The figures shown below are reference values.

用途

行動電話、PDA 手機	PDA
數位相機(DSC)	液晶電視(LCD TV)
數位機上盒(STB)	微型顯示器(MD TV)
無線產品	數位投影機
筆記本電腦(NB)	微型電腦(EPC)
導電接觸機構	CHASSIC 間隙填縫



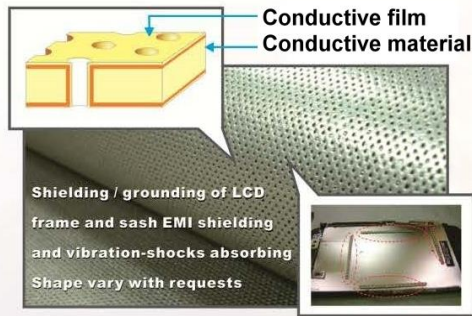
品名稱呼法 Product Name

GT - 02-S

產品類別名稱

產品厚度 (mm)

CDA.HET.799GT Conductive foam



Product Feature

1. Stable performance, higher than 30% compression.
2. Excellent conductivity.
3. Customized dimension and shape.
4. RoHS compliance.
5. Application: Mobile phones, digital cameras, notebooks, EPC, MD TV, wireless products.

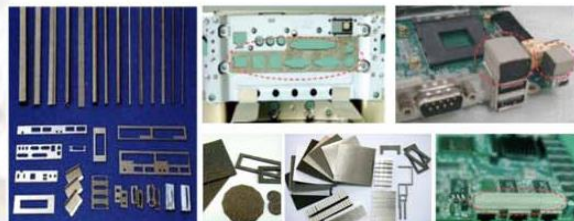
Type	CDA-RP	CDA-RP-B	HET	799GT	單位
標準厚度 (mm) Standard Thickness	0.3 mm~0.5mm	0.3mm ~ 0.5 mm	0.5 mm~3.0mm	0.5mm~30 mm	mm
產品品名 manufactures	導電襯墊	導電襯墊(黑)	全方位導電泡綿	導電泡綿	
壓縮量 Compression	35 - 40 ± 5	20 - 40 ± 5	35 - 70 ± 5	10 - 40 ± 5	%
黏著力 Peel Adhesion	≥ 800gf	≥ 800gf	≥ 800gf	≥ 800gf	g f / 25mm*20min
表面阻抗 Surface Resistance	< 0.1 Ω	< 0.1 Ω	< 0.1 Ω	< 0.1 Ω	Ω / inch
電磁波遮蔽率 Electromagnetism camouflage	> 60	> 65	> 60	> 60	dB / 500 MHz
抗張力 Tensile Strength	> 35	> 35	> 35	> 40	Kg / 25 mm
建議工作溫度 Temp Range	- 10 ~ 105 ℃	- 10 ~ 105 ℃	- 10 ~ 105 ℃	- 10 ~ 105 ℃	℃
環境認證 authentication	ROHS/GP	ROHS/GP	ROHS/GP	ROHS/GP	/

*Without adhesives *The figures shown below are reference values.

● 導電泡綿 使用方式



行動電話、PDA	無線產品
數位相機(DSC)	導電接觸機構
CHASSIC 間隙填縫	微型顯示器(MD TV)
筆記本電腦(NB)	微型電腦(EPC)



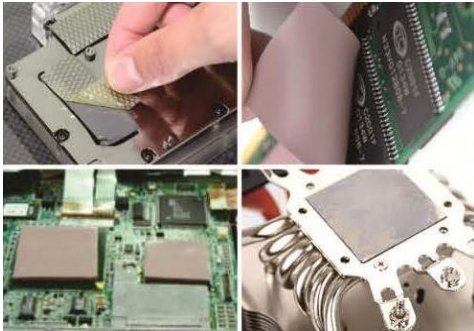
品名稱呼法 Product Name

CDA - RP30

產品類別名稱

產品厚度 (mm)

CTG Thermal Materials

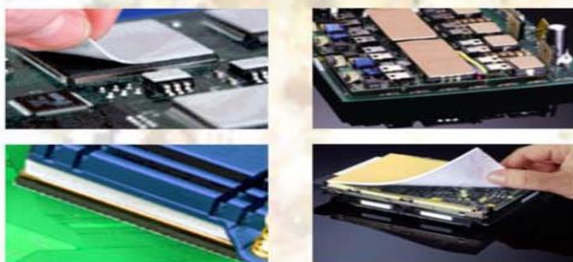


Product Feature

1. Good thermal conductivity.
2. High compression ratio and good softness.
3. Self-adhesive products, low oil.
4. Thickness range 0.5mm - 3.0mm according to application designs.
5. Customized dimension and shape.
6. RoHS and UL94-V0 compliance.

Type	CTG - 10	CTG - 20	CTG - 30	CTG - 50	單位	測試規範
厚度 Thickness	0.3 - 5.0	0.3 - 5.0	0.3 - 5.0	0.3 - 5.0	mm	ASTMD 374
導熱系數 Thermal conductivity	1.5	2.5	3.5	5.0	W/mK	ASTMD 5470
耐電壓 Withstand voltage	8 ~ 10	8 ~ 10	8 ~ 10	8 ~ 10	KV/mm	ASTMD 149
硬度 Hardness	10 ~ 30	10 ~ 30	10 ~ 30	10 ~ 30	Shore C	ASTMD 2240
工作溫度 Operating temperature range	-40~+200	-40~+200	-40~+200	-40~+200	°C	-
環境認證 Authentication	ROHS、符合 UL94 ROHS、符合 UL94 ROHS、符合 UL94 ROHS、符合 UL94				-	ROHS、UL 規範

*Without adhesives *The figures shown below are reference values.

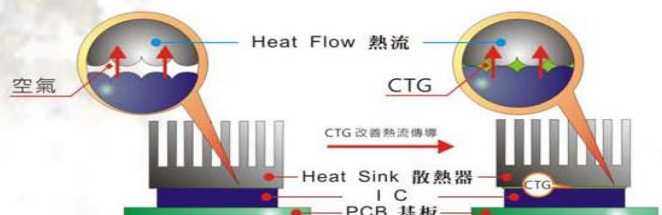


● 用途

行動電話、PDA 手機 IC 散熱	LED 散熱模組
數位相機(DSC) IC 散熱	液晶電視(LCD TV) 系統散熱
數位機上盒(STB) IC 散熱	微型顯示器(MD TV) 系統散熱
無線產品 IC 系統散熱	數位投影機 系統散熱
筆記型電腦(NB) 晶體散熱	微型電腦(EPC) 晶體散熱
散熱器(Heat Sink)應用	間隙填縫.導熱.防震

- 具有極佳填充間隙的功能，熱傳導的接觸面積
- 極佳之緩衝、絕緣及耐高電壓特性
- 將過熱的熱流組件熱，引流較佳熱對流材質上
- 增強熱組件與金屬散熱片間之熱傳導效能
- 使電子零組件間形成電氣絕緣性

未使用導熱材料 兩連接面傳導熱流較緩慢 導熱效能降低
使用CTG材料連接兩面傳導.熱流傳導速度快導熱效提高



Graphite Thermal Materials



Product Feature

1. High thermal conductivity, low thermal resistance.
2. Excellent electromagnetic shielding effectiveness.
3. Light weight, easy construction, material flexibility prone to braking..
4. Low moisture absorption. It doesn't spill gas or leak liquid.
5. Graphite layer is not easy to aging, suitable for a variety of products.
6. Application: Aerospace industry, computers and related electronic products.

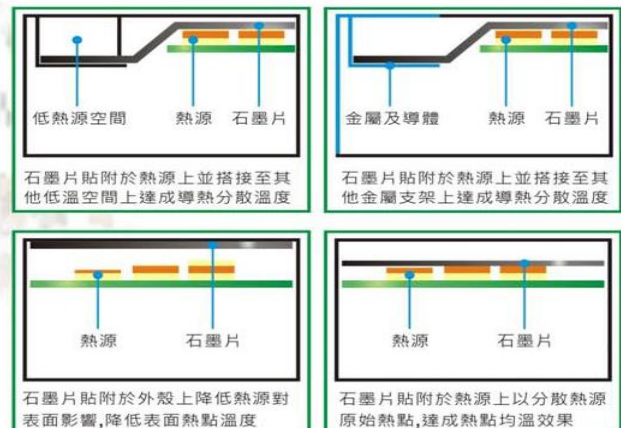
規格	單位	GS-500	GS-700	GS-800	GS-1200	GS-1500
顏色 Color	/	黑色	黑色	黑色	黑色	黑色
導熱系數(Z 軸) Conductivity(Z)	W/mk	4	6	7	8	10
導熱系數(X/Y 軸) Conductivity(X/Y)	W/mk	500	700	800	1200	1500
熱阻 Heat Resistance	K/W	0.04	0.03	0.03	0.028	0.02
硬度 Hardness	Shore D	30	30	30	30	30
抗拉強度 Tensile strength	Mpa	17.5	19.3	21.2	25.3	28.6
密度 Density	g/cm ³	0.75	0.86	1.23	1.75	1.86

*Without adhesives *The figures shown below are reference values.

● 用途及使用方法



行動電話、PDA 手機 IC 散熱	LED 散熱模組
數位相機(DSC) IC 散熱	液晶電視(LCD TV) 系統散熱
數位機上盒(STB) IC 散熱	微型顯示器(MD TV) 系統散熱
無線產品 IC 系統散熱	數位投影機 系統散熱
筆記型電腦(NB) 晶體散熱	微型電腦(EPC) 晶體散熱
散熱器(Heat Sink)應用	間隙填縫.導熱.防震

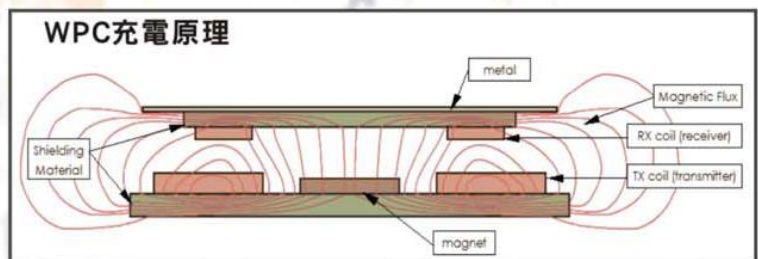
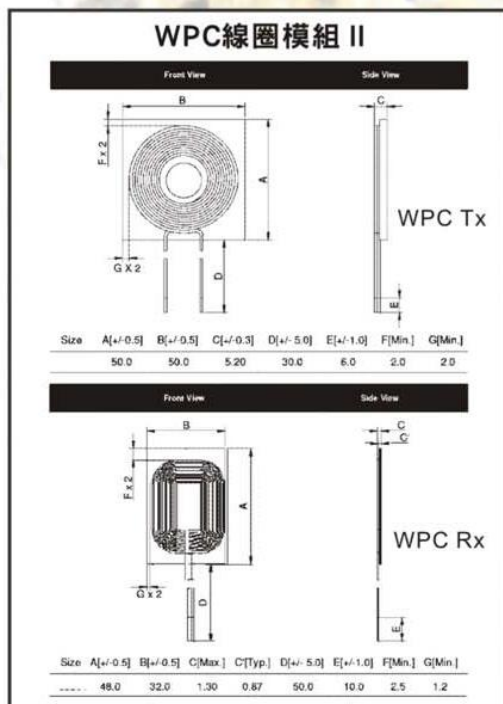


WPC Wireless charger materials




Wireless charger components (special coil and ferrite materials), are in line with WPC (Wireless Power Consortium), the principle is passed between the near-field magnetic induction power transmitter and receiver power. Flux path for the coil to prevent the coil is magnetically coupled to the other element, the electromagnetic interference and reduce the receiver coil from the eddy current generated when the battery is installed in the heat of the mobile device (the flux of metal), and causes the power converter efficiency.

Type	WPC PN	Inductance (μH)	DCR(mOhm)	Isat (A)	Irms (A)
Rx Type					
WPC-RS-032B15YTS	NA	13.0 +/- 8%	210.0 Typ. / 250.0 Max.	3.0 Max.	2.5 Max.
Tx Type					
WPC-RS-11A20RTNS	A1	24.0 +/- 8%	71.0 Typ. / 75.0 Max.	30.0 Max.	5.0 Max.
WPC-RS-11A20RTN	A10	24.0 +/- 8%	71.0 Typ. / 75.0 Max.	30.0 Max.	5.0 Max.
WPC-RS-08B10RTNS	A5	6.30 +/- 10%	28.5 Typ. / 35.0 Max.	40.0 Max.	10.0 Max.
WPC-RS-08B10RTN	A11	6.30 +/- 10%	28.5 Typ. / 35.0 Max.	40.0 Max.	10.0 Max.
WPC-RS-12C12RTS	A6	11.5 +/- 10%	60.0 +/- 20%	35.0 Max.	5.2 Max.



Ceramic chip antenna(2.4GHz)



1. Omni-directional in azimuth.
2. RoHS compliance.
3. Application: 2.4GHz wireless communication system (WLAN, Bluetooth, Zigbee, etc.)

	AN2051	AN9520	PF1004
Product image			
Dimension (mm)	5.1(L)x2.0(W)x1(H) mm	9.5(L)x2.1(W)x1(H)	10.1(L)x4.2(W)x3.1(H)
Center frequency (MHz)	2450MHz	2450MHz	2450MHz
VSWR	2.0(max)	2.0(max)	2.0(max)
Gain (dBi)	0.5dBi	1.5dBi	3dBi
Bandwidth (MHz)	110MHz	200MHz	250MHz
Working temperature (°C)	-40 ~ +85 °C		

Ceramic chip antenna(2.4GHz/5GHz)

Product Feature

1. Omni-directional in azimuth.
2. RoHS compliance.
3. Application: 2.4GHz & 5GHz wireless communication system (WLAN 802.11a/b/g/n).

	AN1003	PF1004D
Product image		
Dimension (mm)	10.3(L)x3.0(W)x1.6(H) mm	10.1(L)x4.2(W)x3.1(H)
Center frequency (MHz)	2450MHz, 5~6GHz	2450MHz
VSWR	2.0(max)	2.0(max)
Gain (dBi)	1dBi	3dBi
Bandwidth (MHz)	70MHz/500MHz	250MHz/500MHz
Working temperature (°C)	-40 ~ +85 °C	



Ceramic chip antenna (433/868/916MHz)

1. Omni-directional in azimuth.
2. RoHS compliance.
3. Application: 433/868/916MHz wireless communication system.

	AN1603-433	AN1603-868	AN1603-916
Product image			
Dimension (mm)	16(L)x3.1(W)x1.65(H) mm	16(L)x3.1(W)x1.65(H) mm	16(L)x3.1(W)x1.65(H) mm
Center frequency (MHz)	433MHz	868MHz	916MHz
VSWR	2.0(max)	2.0(max)	2.0(max)
Gain (dBi)	0.5dBi	0.5dBi	0.5dBi
Bandwidth (MHz)	8MHz	8MHz	8MHz
Working temperature (°C)	-40 ~ +85 °C		

Ceramic chip antenna for GPS (1575MHz)



1. Omni-directional in azimuth.
2. RoHS compliance.
3. Application: GPS 1575MHz communication system.

	GPS1003	GPS1004
Product image		
Dimension (mm)	10(L)x3(W)x1.47(H) mm	16(L)x3.1(W)x1.65(H) mm
Center frequency (MHz)	1575MHz	1575MHz
VSWR	1.5(max)	1.5(max)
Gain (dBi)	4.3dBi	2dBi
Bandwidth (MHz)	150MHz	10MHz
Working temperature (°C)	-40 ~ +85 °C	

FPC Antenna

FPC SPECS

1. Plate: PI: 1/2mil and 1mil
2. Copper thickness: 1/2oz and 1oz, double-sided and single-sided ED copper
3. Circuit may be a single or double.
4. Double-sided or single-sided solder, color: black, white or customer's requirement
5. Non-solder mask area can be gold plating ($0.3\mu\text{m}$) or OSP
6. NI thickness of 1 ~ 4 μm
7. Normal PCB board testing standard (QC-QA-0035)

Type	WAN	WIFI	GPS	NFC
Portrait				
Frequency Range	850,900,1800,1900,2100MHz	2450,5200MHz	1575MHz	13.56MHz
Gain(dBi)	≥ -5	1.5 ± 0.5	-8	1~2
VSWR	≤ 2	1~2	> 2	1~2
Input Impedance	50 (Ω)	50 (Ω)	50 (Ω)	50 (Ω)
Temperature	-40 ~ 70 $^{\circ}\text{C}$	-40 ~ 70 $^{\circ}\text{C}$	-40 ~ 70 $^{\circ}\text{C}$	-40 ~ 70 $^{\circ}\text{C}$
Polarization		Vertical	Linear	

*Without adhesives *The figures shown below are reference values.

