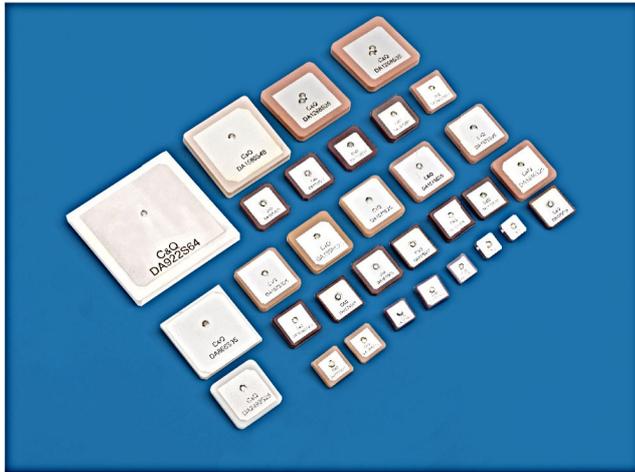


介质天线系列 / Dielectric Patch Antenna



■ 介质天线在目前卫星导航、定位与授时以及勘测领域中得到了非常广泛的应用，由于介质天线在小体积的条件下就可以得到较大的增益，从而在对体积要求较高的产品中被广泛的使用。

■ Dielectric antenna has been widely used in the field of satellite navigation, positioning and timing surveying. Dielectric antenna can get a high gain under small dimensions, it is widely used in products with compact size requirements.

主要指标 PRINCIPAL PARAMETERS +

Part No. 型号	频率 (MHz)	带宽 (MHz)	增益 (dB)	应用 Application
DA1575S25T4A	1575.42	15min	4.5	GPS L1
DA1568S25T4A	1568	15min	4.5	GPS L1/ BD2 B1
DA1590S25T4A	1590	15min	4.5	GLONASS L1
DA2492S25T4A	2492	15min	4.5	BD1
DA1590S35T4A	1575~1602	30min	6.0	GPS L1/ GLONASS L1
DA1568S40T7A	1561~1575	40min	5.0	GPS L1/BD1

注：（1）尺寸从10X10mm至40X40mm可选。（2）厚度根据实际需求定制。

命名方式 NAMING PATTERNS +

DA 1575 S25 T4 A
① ② ③ ④ ⑤

①DA---Dielectric Antenna（介质天线）

②Center Frequency（中心频率）

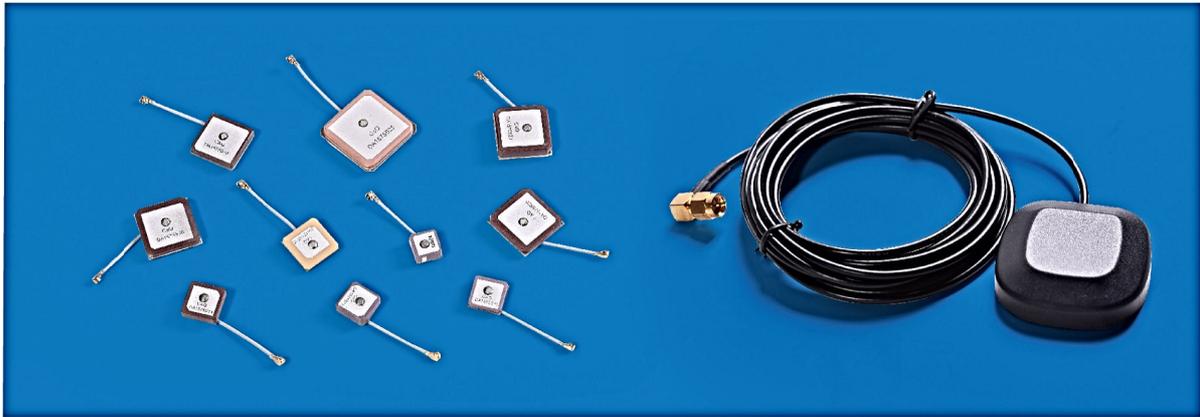
③Size（天线边长）

④Thickness（厚度）

⑤Versions（版本号）

天线边长(mm)	代码
40x40	S40
35x35	S35
25x25	S25
20x20	S20
18x18	S18
15x15	S15
13x13	S13
12x12	S12
10x10	S10
20x6	S2006
15x6	S1506

天线模组系列 / Antenna Module



- 天线模组设计为单频或多频共用工作方式，适用于GPS、GLONASS、BDS、伽利略等多个卫星导航系统，车载导航、PDA等。
- Antenna module designed for single or multi frequency mode, apply in GPS, GLONASS, BDS, GALILEO and other satellite navigation systems, car navigation, PDA etc.

产品特点 PRODUCT FEATURES +

多种尺寸、高温度稳定性、高质量的介质陶瓷、高增益、低噪音、极好的方向图

A variety of size, high temperature stability, high-quality dielectric ceramics, high-gain, low noise, excellent pattern.

主要指标 PRINCIPAL PARAMETERS +

Part No. 型号	频率 center frequency (MHz)				增益 Gain (dB)			电流 Current (mA)
	GPS L1	BD2 B1	BD2 B3	GLONASS L1	0	15	25	
DAMB1575AT4/2	●				○	○	○	13 max
DAMB1568AT4/2	●	●			○	○	○	13 max
DAMB1590AT4/2	●			●	○	○	○	13 max
DAMB1561AT4/2		●			○	○	○	13 max
DAMB1268AT4/2			●		○	○	○	13 max
DAMB1602AT4/2				●	○	○	○	13 max
DAMA1575A	●				○		○	13 max
DAMA1568A	●	●			○		○	13 max
DAMA1590A	●			●	○		○	13 max

注：(1) ●—定值 ○—可选 Note: (1) ●—default ○—optional

(2) 天线尺寸从9X9mm至25X25mm Size from 9X9mm to 25X25mm

(3) DAMB---内置天线模组(Internal) DAMA---外置天线模组(External)

(4) 可接受客户定制 Design it as customer' s request.

卫星授时天线系列 / Satellite Time-Service Antenna



- 系列卫星授时天线设计为单频或多频 共用工作方式，分别适用于GPS、GLONASS、BDS单个或多个卫星导航系统，可与国内外多种授时模块配套使用，可为基站、电力设备、航海等提供高精度的时钟同步信号。
- Satellite Time-Service antenna series are designed for single frequency or multi-frequency sharing work. Application , for GPS, GLONASS, BDS single or multiple satellite navigation system, can match with worldwide time-service module application, It can provide high-precision clock synchronization signal to the base station, power equipment navigation, etc.

性能特点 PERFORMANCE CHARACTERISTICS +

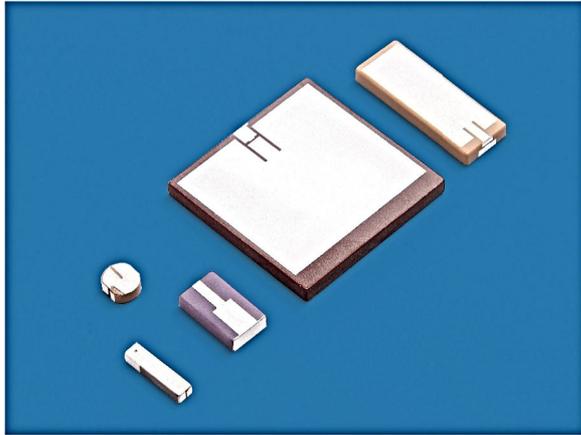
1. 天线增益高，方向图波束宽，低仰角接收效果好；噪声系数低，保证接收机获得较高的信噪比；
 2. 内置防雷电路，有效保护内部电路免受雷电破坏；防雷击浪涌特性；
 3. 天线外罩采用耐候性良好、抗老化优质材料，适合长期野外环境下工作。
1. High gain antenna wide beam in directional graph. Best performance in low elevation angle, low noise coefficient to ensure high signal to noise ratio in receiving mode.
 2. Built-in lightning protection circuit to effectively protect the internal circuit from lightning damage; Anti-lightning surge characteristics:
 3. Antenna cover case using anti-aging high quality materials, with good weather resistance, suitable for long term working outdoor environment.

主要指标 PRINCIPAL PARAMETERS +

Part No. 型号	频率 (MHz)	增益 (dB)	电流 (mA)	电压 (V)	应用 Application
TSA1575AT4	1575.42	38	45	4~6	GPS L1
TSA1568AT4	1568	38	45	4~6	GPS L1/ BD2 B1
TSA1590AT4	1590	38	45	4~6	GLONASS L1
TSA2492AT4	2492	38	45	4~6	BD1
TSAGBAT4	1575.42 2492	47	70	5~12	GPS L1 BD1

射频 (RFID) 天线系列

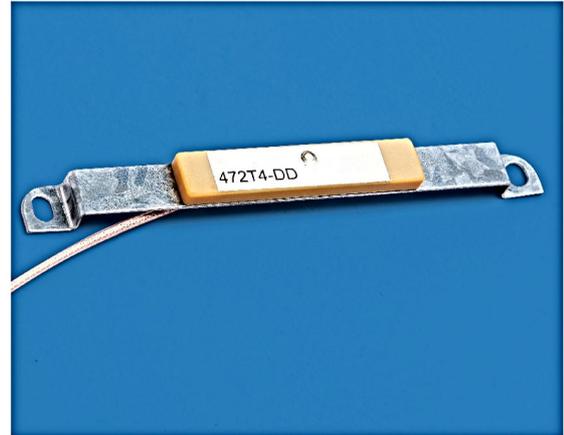
RFID and other antenna



- 适用于RFID电子标签。可根据客户要求定制。
- For RFID tag, can be customized according to customer requirements.

抄表系统天线系列

Smart Metering System



- 适用于智能抄表系统。可根据客户要求定制。
- For Smart Metering System, can be customized according to customer requirements.

航空天线



◆可按要求定制各种GPS/北斗/GLONASS单频/双频/三频/多阵元天线

◆安装

天线用4个M5螺钉安装在4个φ5.5的通孔中

◆使用与维修

天线与系统之间通过射频电缆连接，并通过电缆给天线提供4V~5.5V的直流即可使用。天线的输出口如不与电缆连接时，应加防尘罩。

主要指标 PRINCIPAL PARAMETERS +

Part No. 型号	工作频率 (MHz)	方向图	增益 (dB)	极化 方式	轴比(dB)	噪声系数 (dB)	阻抗 (Ω)	驻波	使用电源		备注
									电压 (V)	电流 (mA)	
AT000GAAV50A	1575.42 ± 5	方位面全向 垂直面半球	52 ± 2	RHCP	≤3	≤1.5	50	≤1.5	3-5	20	GPS单频
AT00GBAAV32A	1575.42 ± 5	方位面全向 垂直面半球	32	RHCP	≤4	≤2.0	50	≤2.0	3-5	20	GPS/北斗 车载天线
	1561.0 ± 2										
AT000BAAV40A	2491.75 ± 4	3dB波束 宽度110 ± 10°	44 ± 2	RHCP	≤5	≤2.0	50	≤1.5	5~12	35	北斗单频
AT00GBAAV45A	1575.42 ± 5		45	RHCP	≤4	≤2.0	50	≤1.5	5~12	35	GPS/北斗 双频
	2491.75 ± 4										
AT00GBAAV38A	1575.42 ± 5		38	RHCP	≤4	≤2.0	50	≤1.5	5~12	35	GPS/北斗 双频
	2491.75 ± 4										

阵列天线 / Array antenna



此天线是一款高增益一体化多模抗干扰天线，它能兼容BD2，GPS系统，包含四个B3阵元，一个B1&GPS阵元，此天线配合抗干扰接收机使用，具有体积小，功耗低，可靠性高等特性。

This antenna is an integrative high-gain multi-mode anti-interference antenna. It can be compatible with BD2 and GPS system, containing four B3 array elements and one B1&GPS array element. This antenna is matched with anti-jam receiver, with the characteristics such as small size, low power dissipation and high reliability.

特点：兼容北斗二代和GPS系统，实现BDB3抗干扰定制化设计，可分局客户要求定制

Features: It is compatible with BD2 and GPS system, achieving the anti-jamming of BD3. It can be design as customer' s request.

主要指标 **PRINCIPAL** PARAMETERS +

产品名称(Item Name)	规格型号(Part No.)	BDB3B1L1A-N6	生产厂家	灿勤
天线技术指标 (Technical criteria of antenna)	项目(Item)	四阵元B3(Four elements B3)	单独B1&L1(Single B1&L1)	单独B3(Single B3)
	中心频率(Center Frequency)	1268 ± 2 MHz	1568 ± 2MHz	1268 ± 2 MHz
	极化(Polarity)	RHCP	RHCP	RHCP
	驻波(V.S.W.R)	≤2.0	≤2.0	≤2.0
	轴向轴比(Axial ratio)	≤6dB	≤6dB	≤6dB
	轴向增益(Axial gain)	≥1dB	≥1.5dB	≥0dB
	隔离度(Isolation)	≥5dB		
	阻抗(Impedance)	50 Ω		
LNA技术指标 (Technical criteria of LNA)	工作频率(Frequency)	1268 ± 10.23MHz	1568 ± 9.5MHz	1268 ± 10.23MHz
	增益(Gain)	33 ± 2dB	40 ± 2dB	40 ± 2dB
	带内平坦度(Flatness in Band)	≤1dB	≤1dB	≤1dB
	噪声系数(Noise Figure)	≤1.5dB	≤1.5dB	≤1.5dB
	驻波比(V.S.W.R)	≤2	≤2	≤2
	工作电流(Working Current)	≤200mA		
	工作电压(Working Voltage)	+5V		
	工作电压(Working Voltage)	≥30dBm		
	P1dB	≥10dBm		
连接器(Connector)	SMRF-5GK			

GPS/北斗/GLONASS天线阵列



产品名称	多频天线阵列			
项目	B1+L1+GLONASS	L	S	B3
中心频率	1584 ± 0.5MHz	1615.68 ± 0.5MHz	2492 ± 0.5MHz	1268.5 ± 0.5MHz
带宽 (RL=-10dB)	≥50MHz	≥8MHz	≥8MHz	≥20MHz
极化	RHCP	LHCP	RHCP	RHCP
增益	≥-2dBi (20° -90°)		≥-1.5dBi (20° -90°)	≥-3dBi (20° -90°)
驻波	≤2			
轴比	≤4dB			
收发隔离	≥22dB			
阻抗	50 Ω			
接头方式	B1L1LS (SMP-J)、BD2B3 (SMP-K)			

产品名称	5阵元GPS/北斗天线阵列				
天线技术指标	项目	B3	L1		
	1	中心频率	1268 ± 3MHz	1575.42 ± 3MHz	
	2	带宽(RL=-10dB)	≥20MHz	≥15MHz	
	3	极化	RHCP	RHCP	
	4	驻波	≤1.5	≤1.5	
	5	轴向轴比	≤3dB	≤3dB	
	6	轴向增益	≥3dB	≥3dB	
	7	增益(≥20° 仰角)	≥-3dB	≥-3dB	
LNA技术指标	8	阻抗	50 Ω		
	9	工作频率	1268MHz	1575.42MHz	
	10	增益	33 ± 1dB	40 ± 1dB	
	11	带内平坦度	≤1dB	≤1dB	
	12	噪声系数	≤1.5dB	≤1.5dB	
	13	驻波比	≤2	≤2	
	14	输出功率P-1	≥0dB	≥0dB	
	15	带外抑制	f0 ± 100MHz以外, 抵制度 > 45dB		
	16	工作电流	≤100mA		
	17	工作电压	± 5V		

规格参数, 可根据客户要求设计

- 此类天线是一款高增益一体化多模抗干扰天线, 它能兼容BD2, GPS系统, 包含四个B3阵元, 一个BD2B3&GPS&GLONASS阵元, 此天线配合抗干扰接收机使用, 具有体积小, 功耗低, 可靠性高等特性。
- This antenna is an integrative high-gain multi-mode anti-interference antenna. It can be compatible with BD2 and GPS system, containing four B3 array elements and one BD2B3&GPS&GLONASS array element. This antenna is matched with anti-jam receiver, with the characteristics such as small size, low power dissipation and high reliability
- 特点: 兼容北斗二代和GPS和GLONASS系统, 实现BDB3抗干扰, 低仰角增益高, 卫星跟踪能力强, 定制化设计, 可根据客户要求定制
- Features: It is compatible with BD2, GPS and GLONASS system, achieving the anti-jamming of BDB3, with characteristics of low elevation, high gain and strong ability of satellite tracking. It can be design as customer' s request.

主要指标 PRINCIPAL PARAMETERS +

产品名称(Item Name)	规格型号(Part No.)	BDB3GPSL1G1 -MCX	生产厂家 Manufacturer	灿勤(Canqin)	
天线技术指标 (Technical criteria of antenna)	项目(Item)	B3	B1&L1&G1		
	1 工作频率(Frequency)	1268 ± 10.23 MHz	1590 ± 20MHz&1268 ± 10.23MHz		
	2 带宽(RL=-10dB) (Band Width)	≥20MHz	≥20MHz		
	3 极化(Polarity)	RHCP	RHCP		
	4 驻波(V.S.W.R)	≤2.0	≤2.0		
	5 轴向轴比(Axial Ratio)	≤5dB	≤5dB		
	6 仰角20° 轴比(20° Axial Ratio)	≤12dB	≤12dB		
	7	轴向增益(Gain)	≥3dB	≥3dB	
		仰角20° 增益(20° Gain)	≥-5dB	≥-5dB	
	8 仰角20° 不圆度(20° Non-circularity)	≤5dB			
9 天线单元隔离度(Isolation)	≥10dB				
10 阻抗(Impedance)	50Ω				
LNA技术指标 (Technical criteria of LNA)	11 工作频率(Frequency)	1268 ± 10.23MHz	1590 ± 20MHz&1268 ± 10.23 MHz		
	12 增益(Gain)	35 ± 3dB	45 ± 3dB		
	13 带内平坦度(Flatness in Band)	≤2dB	≤2dB		
	14 噪声系数(Noise Figure)	≤2dB	≤2dB		
	15 驻波比(V.S.W.R)	≤2	≤2		
	16 输出功率P-1(Output Power)	≥10dBm	≥8dBm		
	17 带外抑制(Out of Band Rejection)	f0 ± 100MHz以外, 抑制度≥45dB beyond f0 ± 100MHz, rejection out band over 45dB			
	18 工作电流(Working Current)	≤350mA			
	19 工作电压(Working Voltage)	+5V			
	20 大功率保护(Power Protection)	≥30dBm, 防雷保护 lightning protection when over 30Bm			
备注: 前端加滤波器, 防止带外杂波对低噪声性能的影响 Note: Put the filter on front stage, in order to avoid the out-of-band clutter affecting the performance of low noise amplifier.					

高精度授时天线 / Antenna Form: high-accurate time-service antenna



- 此款天线是涵盖BD2、GPS、GLONASS三系统全频外置授时测量天线，该天线采用多馈点设计，使用防水防紫外线外壳，具有相位中心稳定，定位精度高，低仰角接收效果好特点，天线部分采用多馈点设计，将天线对测量误差的影响减小到最小
- This antenna is the full range time-service measuring antenna which covers BD2, GPS and GLONASS systems. This antenna is designed with multiple feed points, using waterproof and UV case, with the features such as stable phase center, accurate location and good effect of elevation receive. This antenna is designed with multiple feed points, minimizing the effect from antenna to the testing result.
- 天线单元增益高，方向图波束宽，确保低仰角信号的接收效果
- The high gain of antenna and wide beam pattern ensure the effect of low elevation receive.
- 防水、防紫外线外壳使天线能在野外长期工作
- The waterproof and UV case let the antenna work permanently in the wild.

主要指标 PRINCIPAL PARAMETERS +

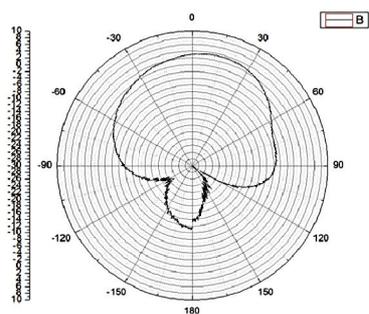
序号NO	项目ITEM	规格SPEC		单位UNIT
1	频率范围(Frequency Range)	1568 ± 15	1268 ± 10.23	MHz
2	电压(Voltage)	DC 5 ± 0.3		V
3	电流(Current)	90max		mA
4	增益(Gain)	46 ± 2	46 ± 2	dB
5	噪声系数(Noise Figure)	≤ 1.0		dB
6	输出驻波(Output V.S.W.R)	≤ 2.0		
7	输入输出阻抗(Input and Output Impedance)	50		Ω
8	输出接口(Output connector)	TNC		mm
9	转接电缆(Patch Cable)	TNC-J/BNC(电缆长度15m)		
10	外壳材料(Cunning Material)	ASA		
11	重量(Weight)	< 1		Kg

多频天线 / Antenna Form: Multi-band Antenna

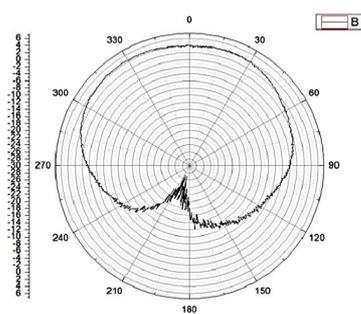


主要指标 PRINCIPAL PARAMETERS +

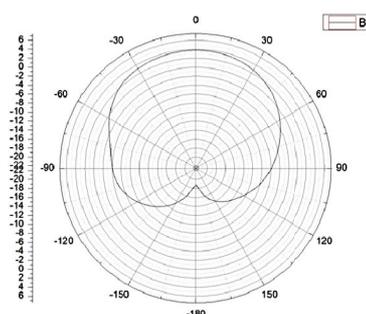
产品名称 (Item Name)	北斗三频天线 (Beidou tri-band antenna)		规格型号 (Part No.)	BDTR01B1MA	生产厂家 (Manufacturer)	灿勤 (Caiqin)
技术指标 (Technical criteria)		项目(Item)		TX	RX	B1
	1	中心频率(Center Frequency)		1616 ± 5MHz	2492 ± 5MHz	1561 ± 5MHz
	2	带宽(RL=-10dB)(Band Width)		≥20MHz	≥80MHz	≥10MHz
	3	极化(Polarity)		LHCP	RHCP	RHCP
	4	驻波(V.S.W.R)		≤2.0	≤2.0	≤2.5
	5	轴比(Axial Ratio)		≤3dB	≤3dB	≤3dB
	6	增益(Gain)		≥4dBi	≥4.5dBi	≥3dBi
	7	收发隔离(Tx-Rx Isolation)		≥20dB	≥15dB	≥20dB
	8	波束宽度(Beamwidth)		≥100°	≥100°	≥100°
9	阻抗(Impedance)			50 Ω		



1616方向图



2492方向图



1561方向图