



**SHEN ZHEN DX-SMART TECHNOLOGY CO.,LTD.**

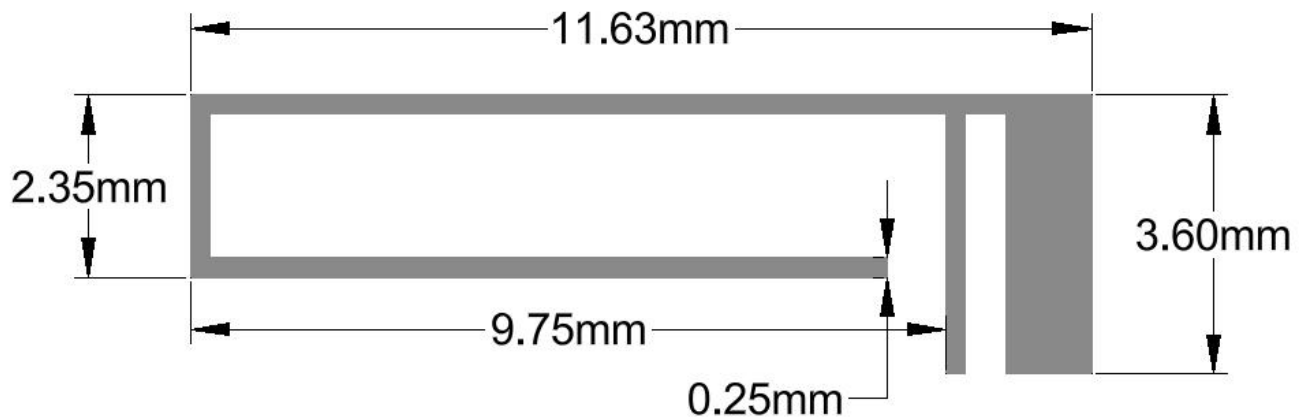
## **DX-CP27 Antenna Data Sheet**

### **PCB Antenna**

**Manufacturer: SZHUHAI JIELI TECHNOLOGY CO.,. LTD**

Add: 333 Kexing Rd, Nanping Town, Xiangzhou Dist, Zhuhai City,  
Guangdong Province, China

## 1. Antenna Size Diagram



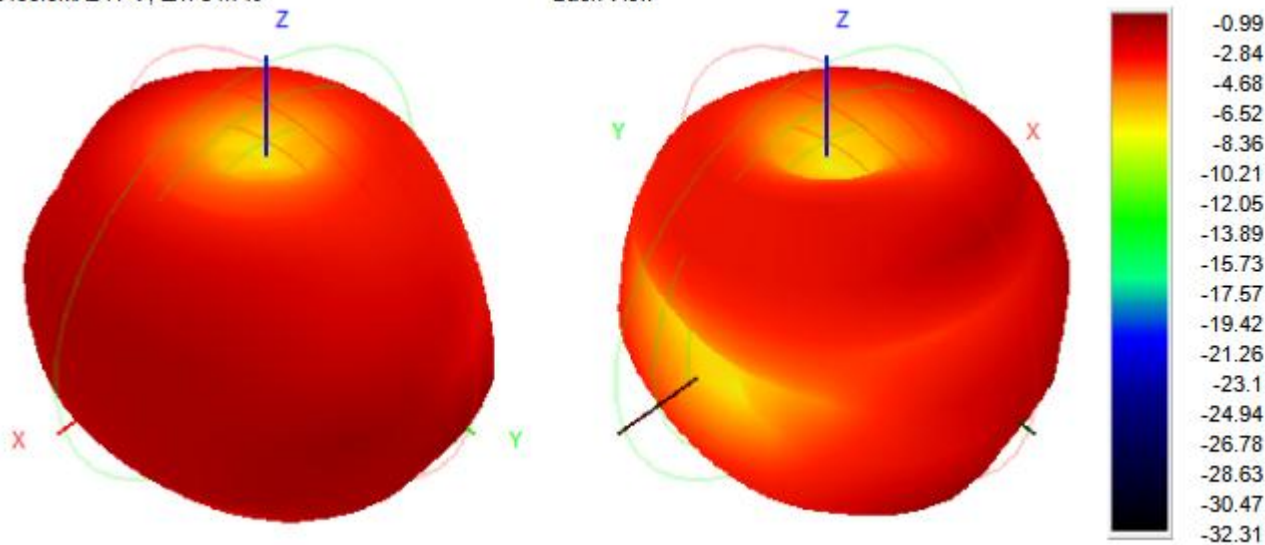
## 2. Antenna Efficiency And Gain

| Frequency ID               | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Frequency (MHz)            | 2400.0 | 2410.0 | 2420.0 | 2430.0 | 2440.0 | 2450.0 | 2460.0 | 2470.0 | 2480.0 | 2490.0 | 2500.0 |
| Efficiency (dBi)           | -4.60  | -4.45  | -4.16  | -3.91  | -4.10  | -4.42  | -4.89  | -5.15  | -5.56  | -5.80  | -6.19  |
| Gain (dBi)                 | -0.99  | -0.84  | -0.50  | -0.10  | -0.53  | -0.92  | -1.32  | -1.34  | -1.61  | -1.76  | -2.26  |
| Efficiency (%)             | 34.69  | 35.87  | 38.35  | 40.67  | 38.90  | 36.10  | 32.41  | 30.53  | 27.81  | 26.29  | 24.05  |
| Directivity (dB)           | 3.60   | 3.61   | 3.67   | 3.81   | 3.57   | 3.51   | 3.57   | 3.81   | 3.94   | 4.04   | 3.93   |
| Peak Gain Position (Theta) | 120.00 | 120.00 | 120.00 | 120.00 | 120.00 | 120.00 | 120.00 | 120.00 | 120.00 | 120.00 | 120.00 |
| Peak Gain Position (Phi)   | 270.00 | 270.00 | 270.00 | 270.00 | 270.00 | 270.00 | 270.00 | 270.00 | 270.00 | 270.00 | 270.00 |
| Efficiency ThetaPol (%)    | 22.46  | 23.33  | 25.01  | 26.51  | 26.22  | 24.45  | 21.97  | 20.62  | 18.76  | 17.73  | 16.25  |
| Efficiency PhiPol (%)      | 12.23  | 12.55  | 13.34  | 14.15  | 12.68  | 11.65  | 10.44  | 9.91   | 9.05   | 8.56   | 7.80   |
| Upper Hem. Efficiency (%)  | 16.65  | 17.05  | 18.15  | 19.24  | 18.54  | 17.03  | 15.10  | 14.08  | 12.74  | 11.99  | 10.95  |
| Lower Hem. Efficiency (%)  | 18.04  | 18.82  | 20.20  | 21.43  | 20.37  | 19.07  | 17.32  | 16.45  | 15.07  | 14.31  | 13.09  |

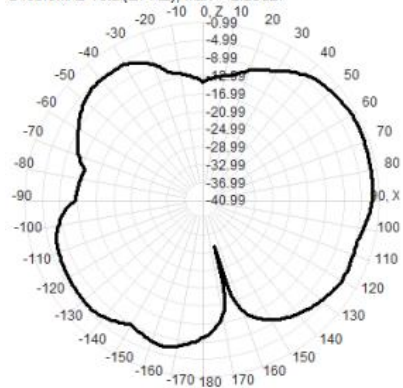
|                                                        |        |        |        |        |        |        |        |        |        |        |        |
|--------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| T90(H)Roundness                                        | 13.42  | 14.01  | 14.68  | 14.90  | 13.06  | 14.30  | 15.22  | 16.35  | 17.22  | 17.77  | 19.01  |
| E1(XZ)Wave flap width                                  | 89.00  | 87.00  | 65.00  | 62.00  | 57.00  | 58.00  | 77.00  | 76.00  | 76.00  | 76.00  | 77.00  |
| E1(XZ)front-to-back ratio                              | 4.69   | 4.81   | 5.17   | 5.38   | 5.62   | 5.42   | 5.08   | 4.86   | 4.49   | 4.28   | 4.12   |
| E2(YZ)Wave flap width                                  | 62.00  | 60.00  | 60.00  | 59.00  | 59.00  | 57.00  | 56.00  | 54.00  | 54.00  | 55.00  | 56.00  |
| E2(YZ)front-to-back ratio                              | 4.14   | 3.97   | 3.83   | 3.80   | 3.33   | 3.19   | 3.08   | 3.29   | 3.36   | 3.38   | 3.28   |
| Axis ratio at maximum gain(P)                          | 11.64  | 11.14  | 10.48  | 9.99   | 8.49   | 8.21   | 8.00   | 7.84   | 7.67   | 7.55   | 7.59   |
| vertex(Theta=0)Axis ratio(P)                           | 23.32  | 19.24  | 11.31  | 9.01   | 12.83  | 12.84  | 13.29  | 14.39  | 15.52  | 18.66  | 21.24  |
| Elevation angle 10 degrees worst (large) axis ratio(P) | 49.84  | 52.52  | 52.07  | 52.01  | 55.35  | 55.09  | 51.77  | 51.29  | 53.43  | 54.14  | 55.70  |
| Hc(XY)Wave flap width                                  | 228.00 | 227.00 | 228.00 | 231.00 | 238.00 | 234.00 | 231.00 | 227.00 | 223.00 | 223.00 | 224.00 |
| Hc(XY)Front to back ratio                              | 0.54   | 0.52   | 0.42   | 0.13   | 0.07   | 0.31   | 0.44   | 0.64   | 0.69   | 0.66   | 0.75   |
| Left-hand circular polarization efficiency(%)          | 18.53  | 19.32  | 20.68  | 21.50  | 19.99  | 18.77  | 16.82  | 15.58  | 14.05  | 13.12  | 11.98  |
| Left-hand circular polarization efficiency(%)          | 16.16  | 16.56  | 17.67  | 19.16  | 18.92  | 17.33  | 15.59  | 14.96  | 13.77  | 13.17  | 12.06  |

2400.0MHz H+V, Eff: 34.7%

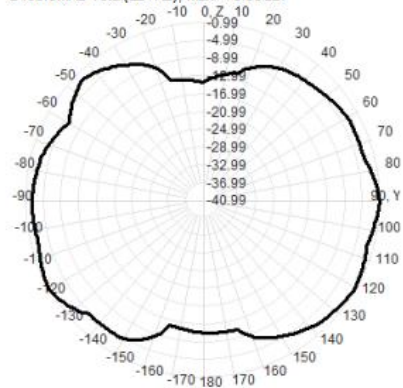
Back View



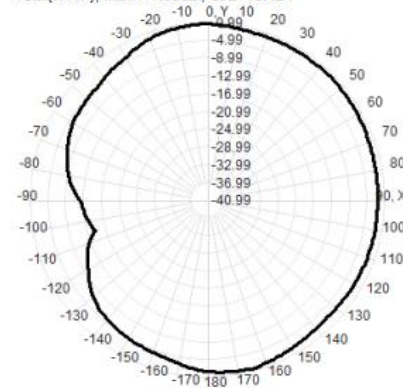
2400.0MHz Total(E1-XZ), Max=-2.23dBi



2400.0MHz Total(E2-YZ), Max=-0.99dBi

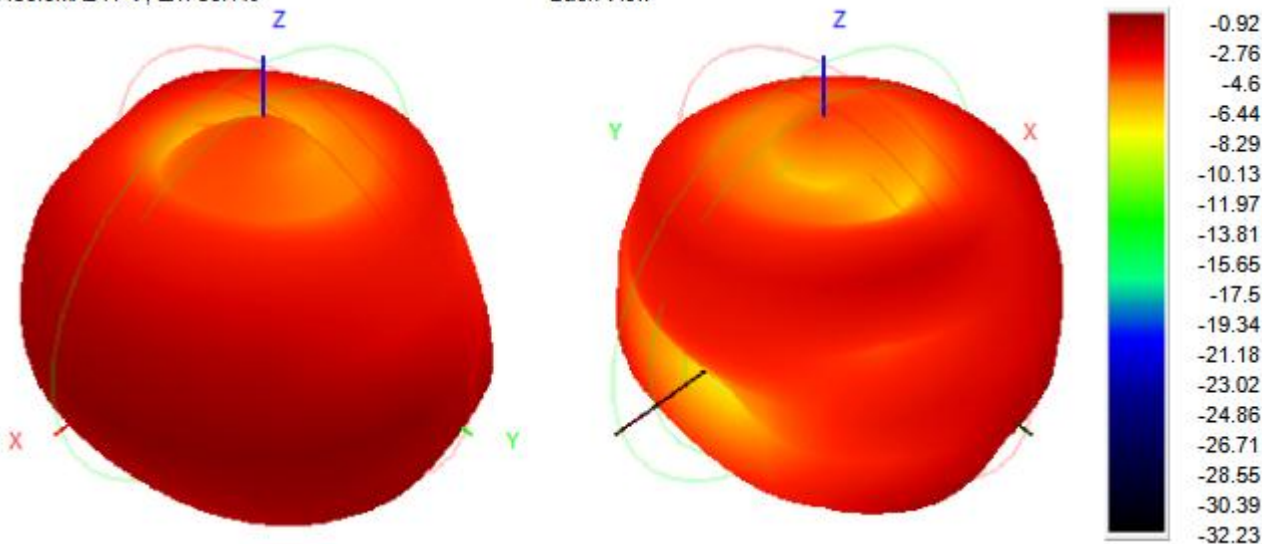


Total(H-XY), Max=-1.33dBi, CirD=13.42



2450.0MHz H+V, Eff: 36.1%

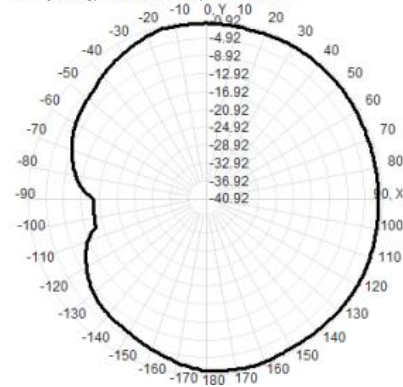
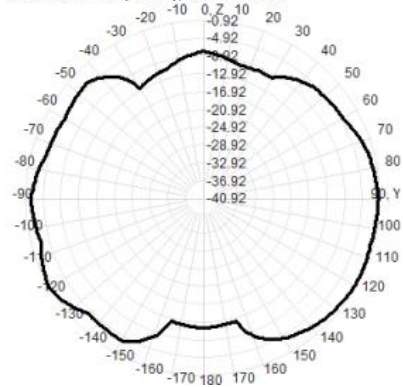
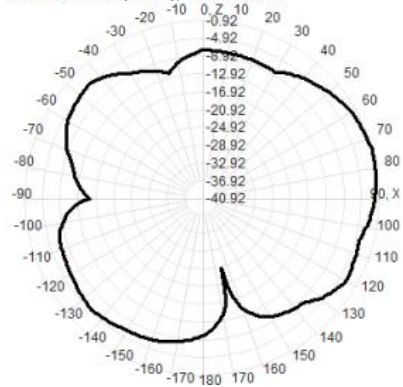
Back View



2450.0MHz Total(E1-XZ), Max=-1.28dBi

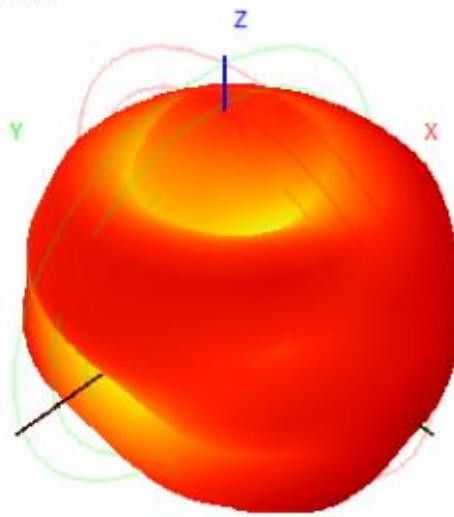
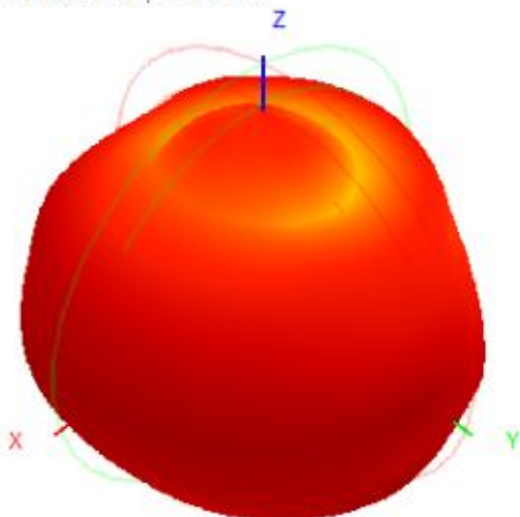
2450.0MHz Total(E2-YZ), Max=-0.92dBi

Total(H-XY), Max=-1.51dBi, CirD=14.30

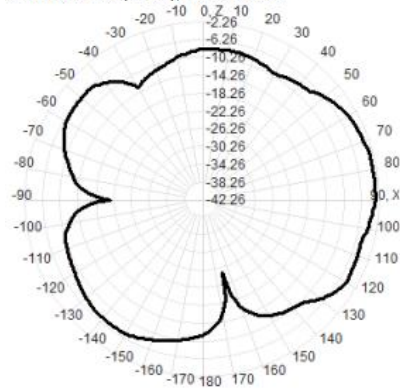


2500.0MHz H+V, Eff: 24.0%

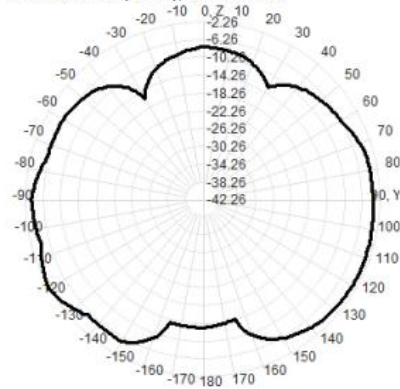
Back View



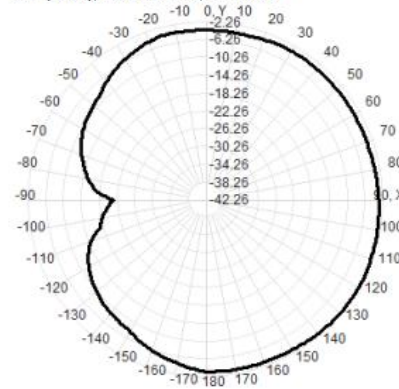
2500.0MHz Total(E1-XZ), Max=-3.38dBi



2500.0MHz Total(E2-YZ), Max=-2.26dBi

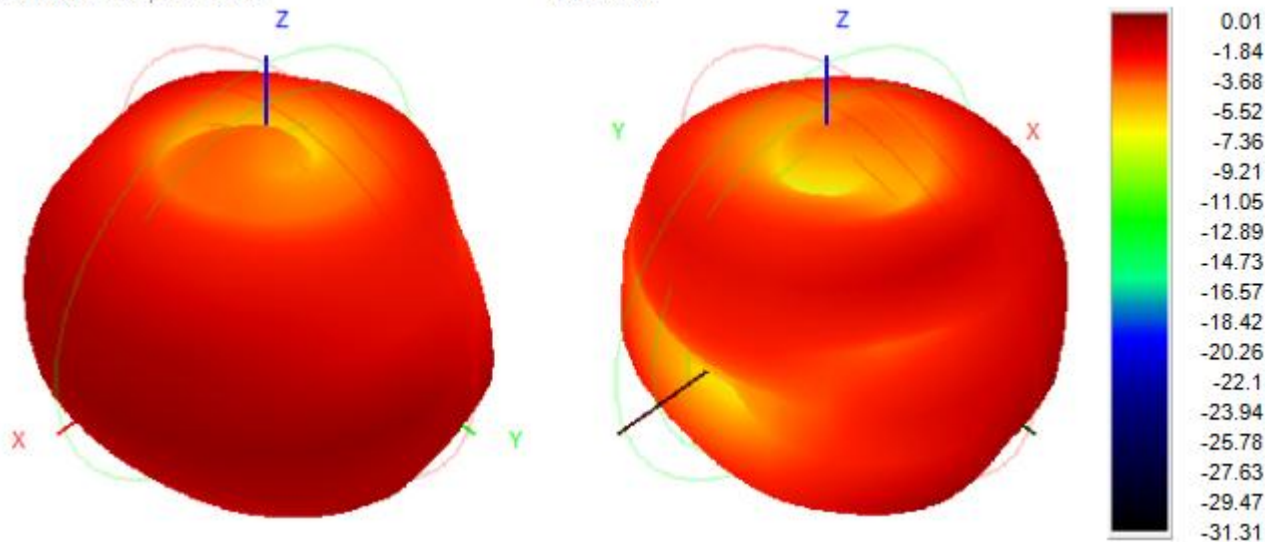


Total(H-XY), Max=-2.62dBi, CirD=19.01



2430.0MHz H+V, Eff: 42.2%

Back View



2430.0MHz Total(E1-XZ), Max=-0.68dBi

2430.0MHz Total(E2-YZ), Max=0.01dBi

Total(H-XY), Max=-0.70dBi, CirD=12.73

