
Antenna specification

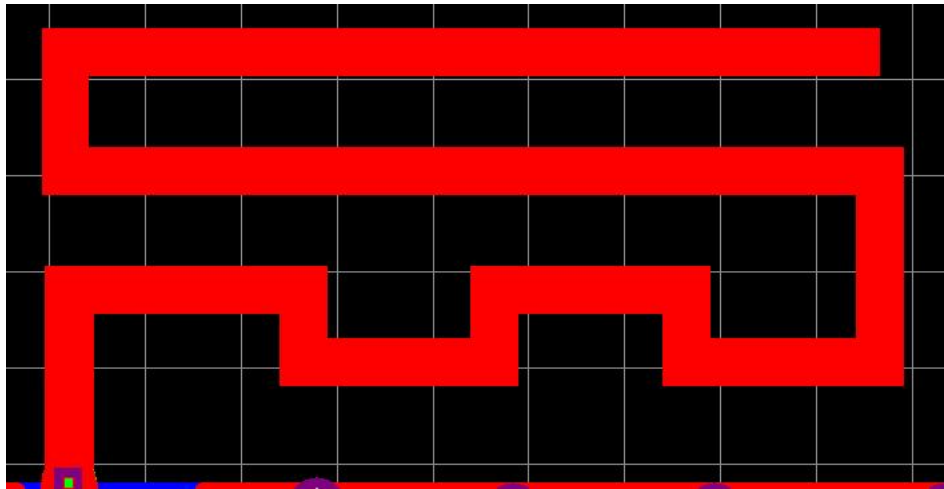
1、Antenna introduction

The Bluetooth module antenna is directly used on the PCB.

Manufacturer: Shenzhen xlw technology

Address: A436, Huafeng Internet Creative Park, No.107 Gong He Industrial Road, Xixiang, Bao'An, Shenzhen, 518102, China

2、Antenna shape



3、Antenna parameter

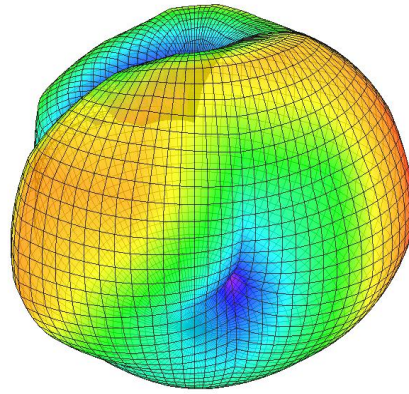
The Bluetooth antenna operates at 2402-2480 MHz and generates resonance in this band. The table below shows the main parameters of the antenna.

Frequency (MHz)	2402 ~ 2480 MHz
VSWR	≤ 1.7
Impedance	50 Ohm Nominal
Return Loss	-12 dB Max
Gain (Peak)	-2.94dBi

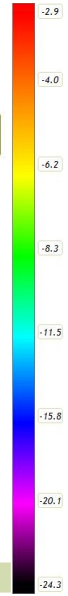
4、Antenna gain report

TRP(dBm)	-6.64	-6.52	-6.64	-6.99	-7.43	-6.85	-7.65	-7.68	-8.1	-8.07	-7.93
参数\频率 (mhz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak EIRP(dBm)	-2.94	-2.97	-3.34	-3.73	-4.08	-3.36	-4.01	-3.9	-4.24	-4.2	-4.1
Directivity	3.7	3.55	3.3	3.26	3.35	3.49	3.64	3.78	3.86	3.87	3.83
Gain(dBi)	-2.94	-2.97	-3.34	-3.73	-4.08	-3.36	-4.01	-3.9	-4.24	-4.2	-4.1
Efficiency(dB)	-6.64	-6.52	-6.64	-6.99	-7.43	-6.85	-7.65	-7.68	-8.1	-8.07	-7.93
Efficiency(%)	21.68	22.28	21.68	20	18.07	20.65	17.18	17.06	15.49	15.6	16.11
NHPRP π /4(dBm)	-7.42	-7.29	-7.42	-7.77	-8.22	-7.64	-8.45	-8.48	-8.9	-8.87	-8.72
NHPRP π /6(dBm)	-8.76	-8.63	-8.77	-9.12	-9.56	-8.99	-9.81	-9.83	-10.26	-10.22	-10.07
Min. EIRP(dBm)	-14.19	-13.95	-14.03	-14.21	-14.56	-13.91	-14.73	-14.84	-15.44	-15.59	-15.44
Upper Hem. PRP(dBm)	-9.15	-9.03	-9.15	-9.5	-9.95	-9.38	-10.16	-10.18	-10.59	-10.56	-10.43
Lower Hem. PRP(dBm)	-10.22	-10.09	-10.23	-10.57	-11	-10.41	-11.23	-11.26	-11.7	-11.68	-11.52
Ant. Port Input Pwr.(dBm)	0	0	0	0	0	0	0	0	0	0	0

$\theta: 60^\circ$
 $\psi: 45^\circ$

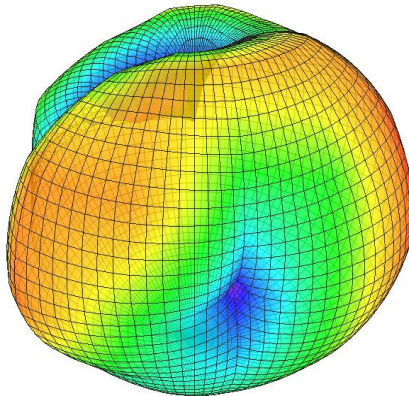


频率(mhz):2400
型号:XLW-BLE0031
测试面:3D
端口:A
日期:2016/6/29
时间:14:33:42
PASSIVE_TRP =
-6.64281655539345 dBm
Frequency(MHz) = 2400

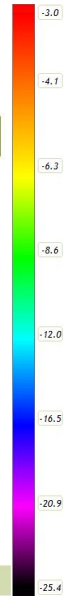


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$\theta: 60^\circ$
 $\psi: 45^\circ$

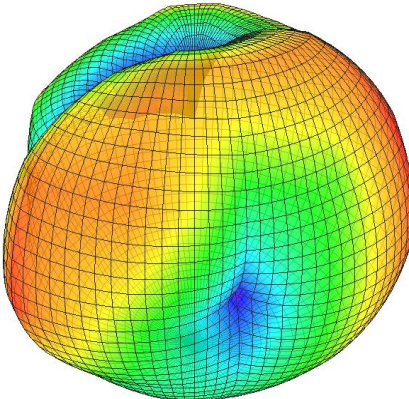


频率(mhz):2410
型号:XLW-BLE0031
测试面:3D
端口:A
日期:2016/6/29
时间:14:33:42
PASSIVE_TRP =
-6.51575838800583 dBm
Frequency(MHz) = 2410



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$\theta: 60^\circ$
 $\psi: 45^\circ$

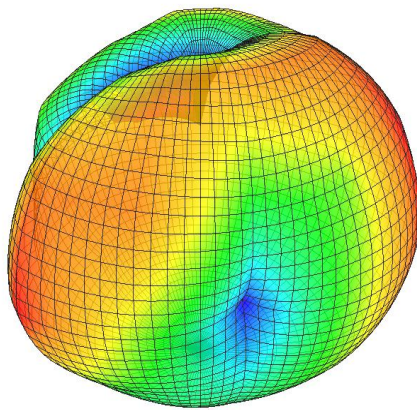


频率(mhz):2420
型号:XLW-BLE0031
测试面:3D
端口:A
日期:2016/6/29
时间:14:33:42
PASSIVE_TRP =
-6.64377376778776 dBm
Frequency(MHz) = 2420

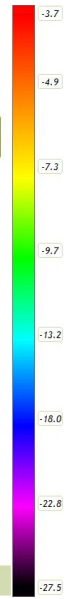


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$\theta: 60^\circ$
 $\varphi: 45^\circ$

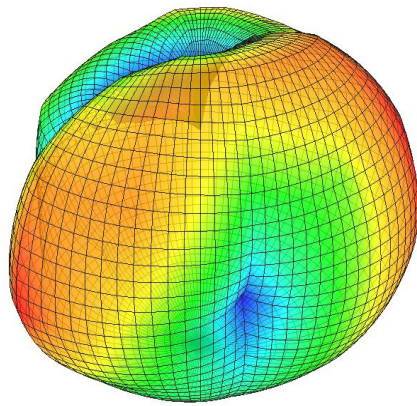


频率(mhz):2430
型号:XLW-BLE0031
测试面:3D
端口:A
日期:2016/6/29
时间:14:33:42
PASSIVE_TRP =
-6.99245660602229 dBm
Frequency(MHz) = 2430

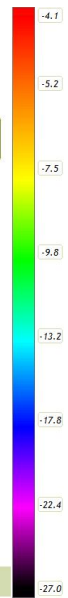


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$\theta: 60^\circ$
 $\varphi: 45^\circ$

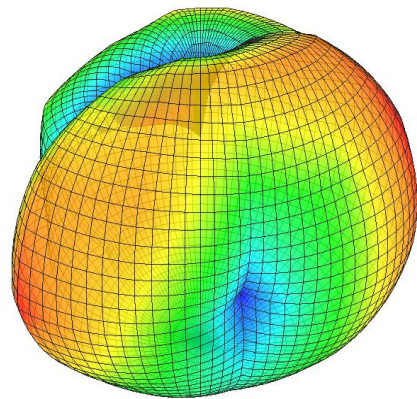


频率(mhz):2440
型号:XLW-BLE0031
测试面:3D
端口:A
日期:2016/6/29
时间:14:33:42
PASSIVE_TRP =
-7.42996117644261 dBm
Frequency(MHz) = 2440



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$\theta: 60^\circ$
 $\varphi: 45^\circ$

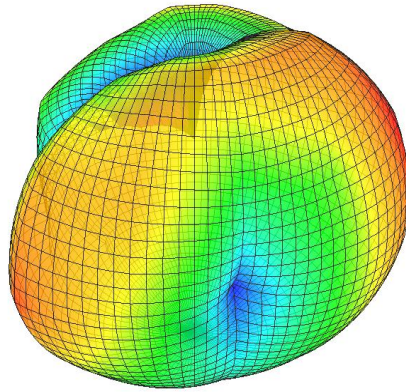


频率(mhz):2450
型号:XLW-BLE0031
测试面:3D
端口:A
日期:2016/6/29
时间:14:33:42
PASSIVE_TRP =
-6.8528033204934 dBm
Frequency(MHz) = 2450

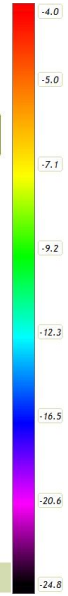


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$\theta: 60^\circ$
 $\psi: 45^\circ$

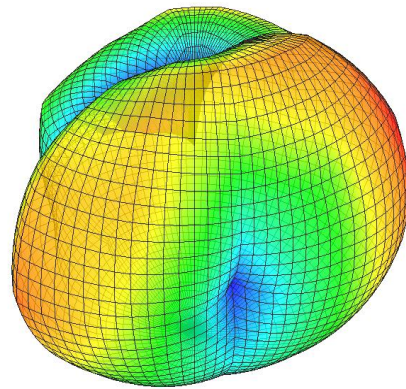


频率(mhz):2460
型号:XLW-BLE0031
测试面:3D
端口:A
日期:2016/6/29
时间:14:33:42
PASSIVE_TRP =
-7.65025818012351 dBm
Frequency(MHz) = 2460

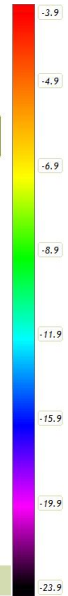


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$\theta: 60^\circ$
 $\psi: 45^\circ$

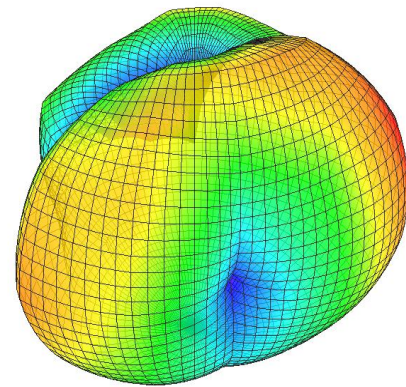


频率(mhz):2470
型号:XLW-BLE0031
测试面:3D
端口:A
日期:2016/6/29
时间:14:33:42
PASSIVE_TRP =
-7.67581937767671 dBm
Frequency(MHz) = 2470



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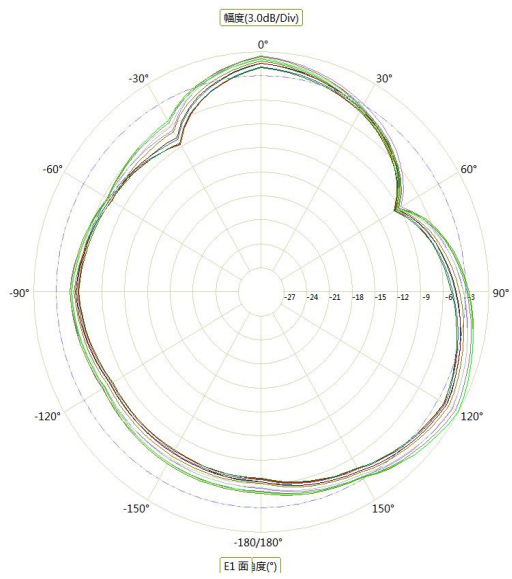
$\theta: 60^\circ$
 $\psi: 45^\circ$



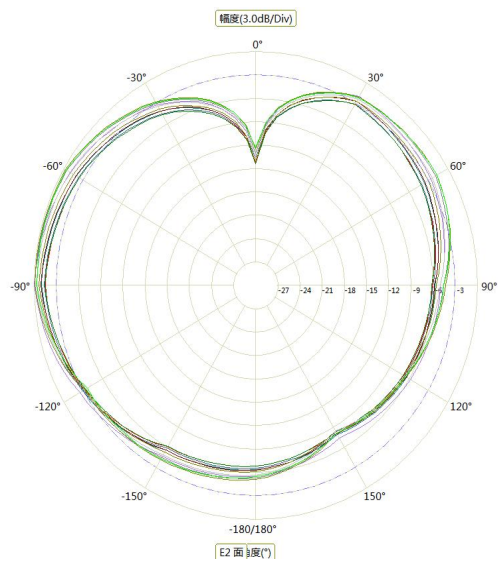
频率(mhz):2500
型号:XLW-BLE0031
测试面:3D
端口:A
日期:2016/6/29
时间:14:33:42
PASSIVE_TRP =
-7.93057864451588 dBm
Frequency(MHz) = 2500



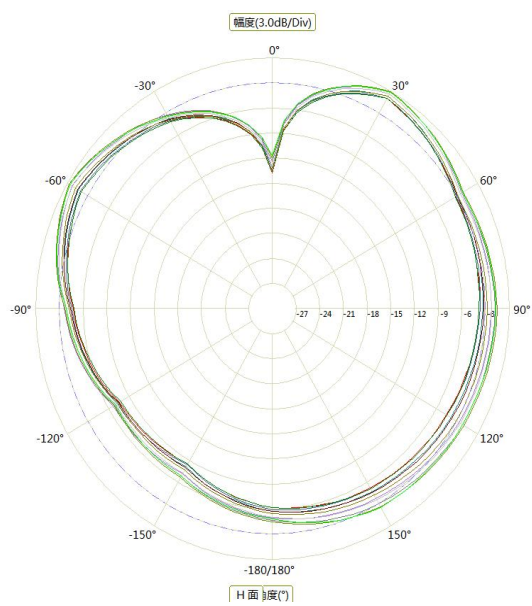
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hm_1_passive_trp(h) 2500M
 hm_1_passive_trp(h) 2490M
 hm_1_passive_trp(h) 2480M
 hm_1_passive_trp(h) 2470M
 hm_1_passive_trp(h) 2460M
 hm_1_passive_trp(h) 2450M
 hm_1_passive_trp(h) 2440M
 hm_1_passive_trp(h) 2430M
 hm_1_passive_trp(h) 2420M
 hm_1_passive_trp(h) 2410M
 hm_1_passive_trp(h) 2400M



vm_1_passive_trp(e1) 2500M
 vm_1_passive_trp(e1) 2490M
 vm_1_passive_trp(e1) 2480M
 vm_1_passive_trp(e1) 2470M
 vm_1_passive_trp(e1) 2460M
 vm_1_passive_trp(e1) 2450M
 vm_1_passive_trp(e1) 2440M
 vm_1_passive_trp(e1) 2430M
 vm_1_passive_trp(e1) 2420M
 vm_1_passive_trp(e1) 2410M
 vm_1_passive_trp(e1) 2400M



vm_2_passive_trp(e2) 2500M
 vm_2_passive_trp(e2) 2490M
 vm_2_passive_trp(e2) 2480M
 vm_2_passive_trp(e2) 2470M
 vm_2_passive_trp(e2) 2460M
 vm_2_passive_trp(e2) 2450M
 vm_2_passive_trp(e2) 2440M
 vm_2_passive_trp(e2) 2430M
 vm_2_passive_trp(e2) 2420M
 vm_2_passive_trp(e2) 2410M
 vm_2_passive_trp(e2) 2400M