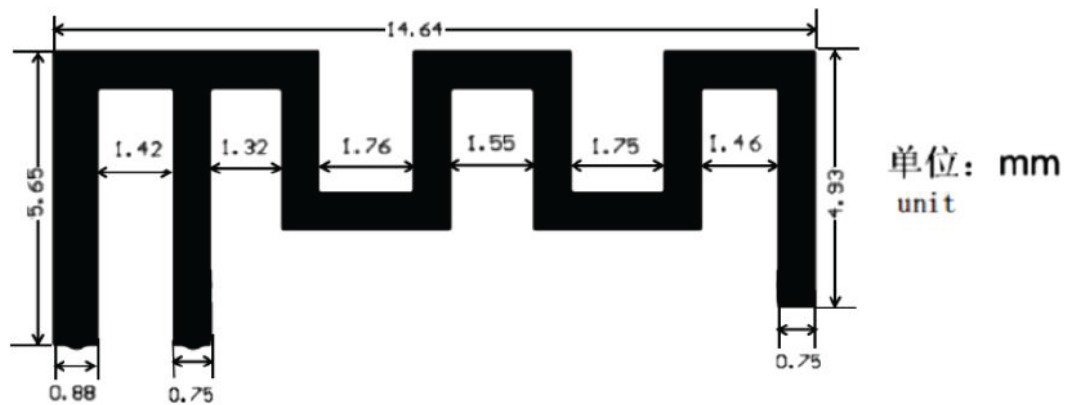


Antenna Describe

Antenna	Internal Antenna
Antenna Gain	1.7dBi
Frequency Range	2.4Ghz-2.483Ghz
Connector Type	Direct
Manufacturer:	SHENZHEN TWHALE ROBOT CO.,LTD
Address:	ROOM 303-1,Jinhu Building,Mingzhi Street,Longhua District,Shenzhen City, Guangdong Province,China

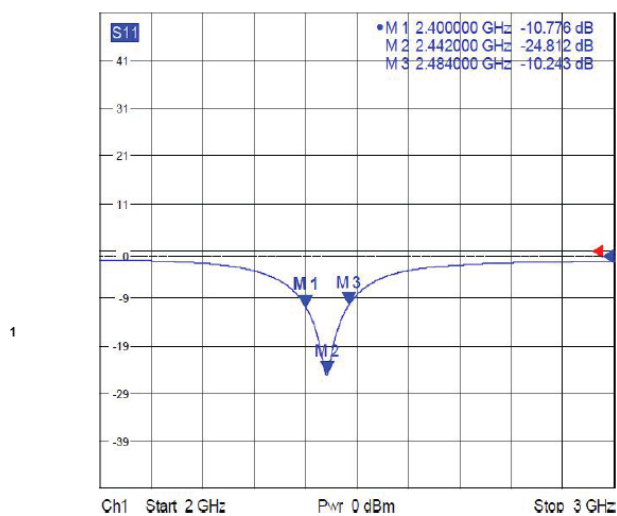
2: External View Drawing

Antenna Photo & Length (mm)



Working Frequency Range	2400 ~2484 MHz
Bandwidth	84 (Min.)
Peak Gain	1.7 dBi (Typ.)
Impedance	50 Ohm
Return loss	10 dB (Min)
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Operation Temperature(°C)	-40 ~85°C
Resistance to Soldering Heats	10sec. (@ 280°C)
Termination	Ni / Au (Leadless)

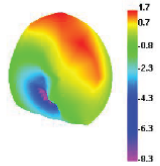
Return Loss



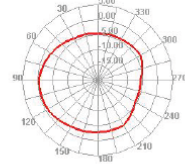
Frequency(MHz)	S11 (dB)
2400	-10.77
2450	-24.81
2484	-10.243

Radiation

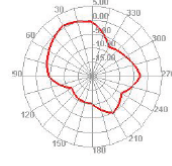
2450.000MHz



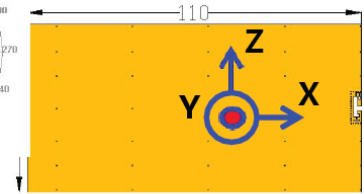
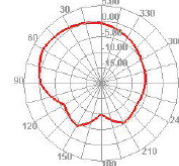
2450.000MHz H



2450.000MHz E1



2450.000MHz E2



	2400MHz	2450MHz	2500MHz
Efficiency	70.56%	75.25%	71.01%

