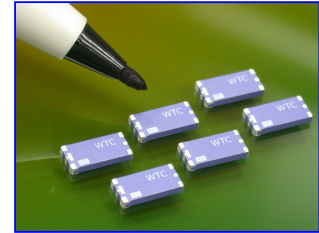


# Broad Band Ceramic Antenna

## RFANT7635110A1T Series

LTCC Multi Layer Chip Antenna  
 – Broad Band Type  
**For ISM Band 2.4GHz Application**

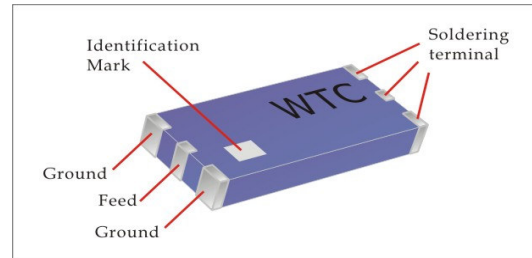
**Patent Pending**



### FEATURES

- Surface Mounted Devices with a small dimension of 7.6 x 3.5 x 1.1 mm<sup>3</sup> future meet miniaturization trend.
- 380MHz broad bandwidth design makes less influence, less frequency shifting due to outside environmental deviation, enlarge your manufacturing process window.
- Embedded and LTCC (Low Temperature Co-fired Ceramic) technology is able to future integrate with system design as well as beautifying the housing of final product.
- High Stability in Temperature / Humidity Change
- Suitable for ISM band 2.4 GHz Working Frequency Operation

### CONSTRUCTION



Outline of 2.4GHz Chip Antenna

### ELECTRICAL CHARACTERISTICS

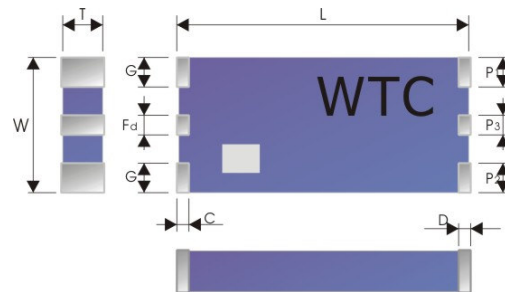
Item	Specification
Central frequency	2.450 GHz (*Note 1)
Bandwidth	380 MHz (Typical value)
Gain	0 ~ 2 dBi
VSWR	2 max.
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Impedance	50Ω

\*Note 1. Central Frequency should be defined after customers' application approval.

### APPLICATIONS

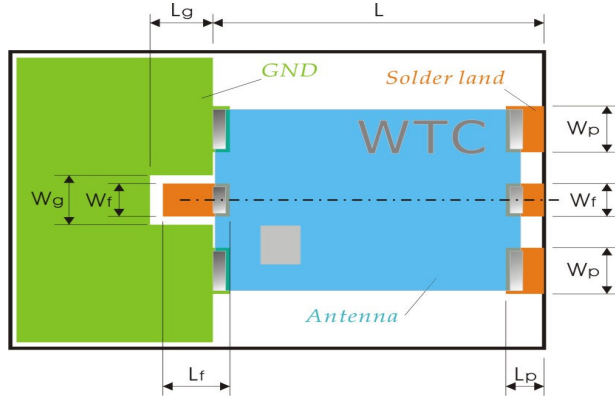
- Bluetooth
- Wireless LAN
- HormRF
- ISM band 2.4GHz applications.

### DIMENSION



Symbol	Dimension	Port Definition
L	7.60 ± 0.30 mm	-
W	3.50 ± 0.20 mm	-
T	1.10 ± 0.10 mm	-
F	0.50 ± 0.20 mm	Feed termination
G	0.80 ± 0.20 mm	Ground termination
C	0.50 ± 0.20 mm	
D	0.50 ± 0.20 mm	
P1	0.80 ± 0.20 mm	Solder termination
P2	0.80 ± 0.20 mm	Solder termination
P3	0.50 ± 0.10 mm	Solder termination

### SOLDER LAND PATTERN DESIGN



Symbol	Dimension
L	$8.10 \pm 0.10$ mm
$L_p$	$1.00 \pm 0.10$ mm
$W_p$	$1.20 \pm 0.10$ mm
$L_f$	$1.50 \pm 0.10$ mm
$W_f$	$0.80 \pm 0.10$ mm
$L_g$	$1.50 \pm 0.10$ mm
$W_g$	$1.50 \pm 0.10$ mm

The typical tuning range of Walsin’s chip antenna is about  $\pm 150$  MHz. The performance of embedded ceramic antenna is sensitive influenced by customer’s ground area, PC board size, thickness, material, mechanical design and the material of housing for end product, actually, we need customer below information so that we could provide optimal layout design services for the customer’s antenna installation reference:

1. Dimension of PC board includes thickness and material.
2. The dimension of area where will be reserved for antenna mounting. (Please note, this area should not have ground on the back-side)
3. Grounding size dimension
4. Mechanism design, included housing
5. Housing material
6. Any metal shielding existed on PCB or mechanism.

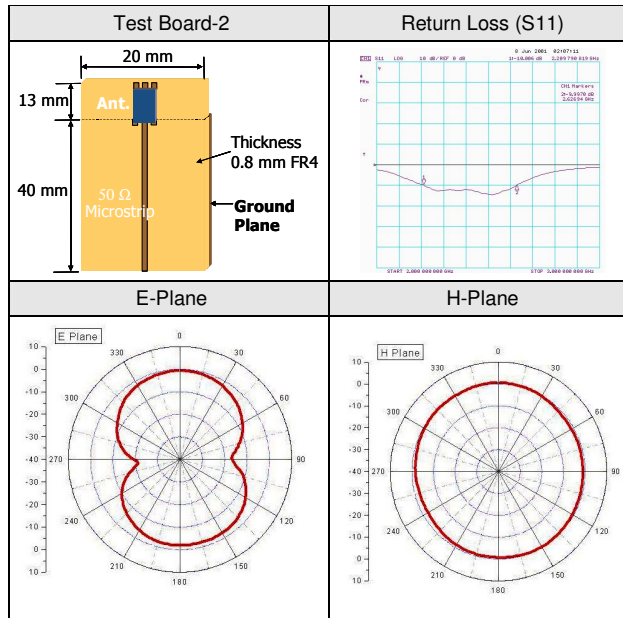
WTC engineers have significant expertise on embedded antenna designs and applications. We can work closely with you to ensure the requirements are met, and optimise the WTC’s antenna performance when installing on your application.

### MARKING

Upon customer requested, max. 5-digit code is allowed.

### Raiditation Pattern

Radiation Pattern and Gain were dependent on measurement board design. Walsin’s LTCC chip antenna is an electrically small antenna (size smaller than  $1/10\lambda$ ). The specification of RFANT7635110A1T series chip antenna was measured based on the PCB size and installation position as shown in the figure at table-1.



### CONTACT INFORMATION

For more information, please contact with [Walsin Technology Corporation](http://www.walsin.com).

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*Specification subject to change without prior notice.*