# STUDY | Location of Antenna



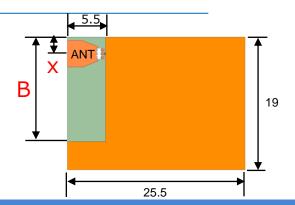


| Dimensions (mm) |       |       |      |  |  |
|-----------------|-------|-------|------|--|--|
|                 | L     | W     | Т    |  |  |
|                 | 1.60  | 0.80  | 0.45 |  |  |
|                 | ±0.10 | ±0.10 | Max. |  |  |
|                 |       |       |      |  |  |

# ☐ EVALUATION BOARD

Antenna Location: X
Board size: 25.5 x 19 x 1
Antenna keep out area: B x 5.5

Unit: mm

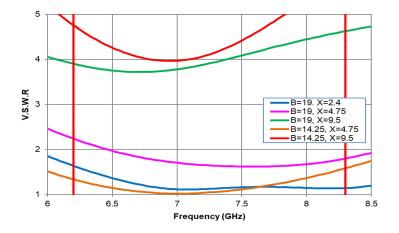


#### □ Remarks

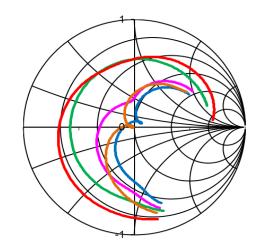
- ✓ VSWR and radiation efficiency of the antenna depend on location of the antenna on a printed circuit board in which the antenna is installed.
- ✓ The followings show location dependence of VSWR and radiation efficiency.
- √ VSWR is small in cases that the antenna is located on a corner of a printed circuit board.

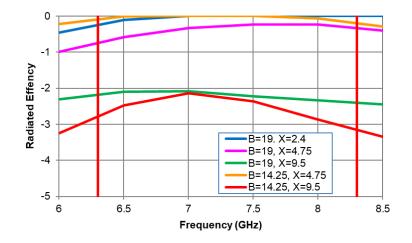
## ► VSWR & Efficiency (SIMULATION)

#### □ VSWR



#### ☐ Smith Chart





# STUDY | Dimensions of printed circuit board





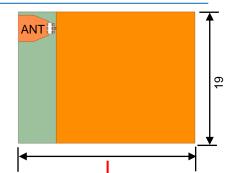
0.80

±0.10

☐ EVALUATION BOARD

Antenna Location: Corner Board size: L x 19 x 1 Antenna keep out area: 19 x 5.5

Unit: mm



#### □ Remarks

- ✓ VSWR and radiation efficiency of the antenna depend on the dimensions of a printed circuit board in which the antenna is installed.
- ✓ The followings show L dependence of VSWR and radiation efficiency.

## ► VSWR & Efficiency (SIMULATION)

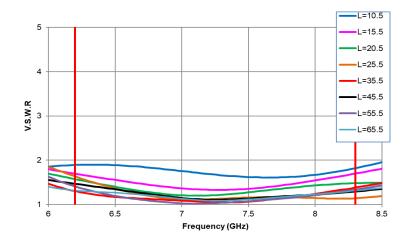
0.45

Max.

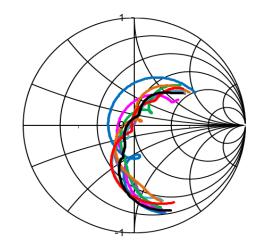
#### □ VSWR

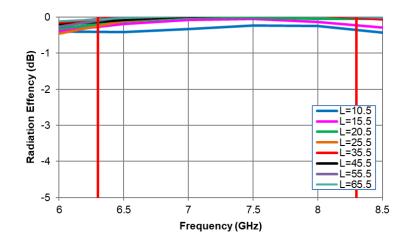
1.60

±0.10



#### ☐ Smith Chart





# STUDY | Dimensions of printed circuit board





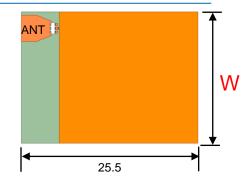
0.80

±0.10

#### □ EVALUATION BOARD

Antenna Location: Corner Board size: 25.5 x W x 1 Antenna keep out area: W x 5.5

Unit: mm



#### □ Remarks

- ✓ VSWR and radiation efficiency of the antenna depend on the dimensions of a printed circuit board in which the antenna is installed.
- The followings show W dependence of VSWR and radiation efficiency.

## ► VSWR & Efficiency (SIMULATION)

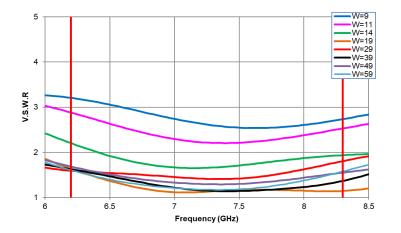
0.45

Max.

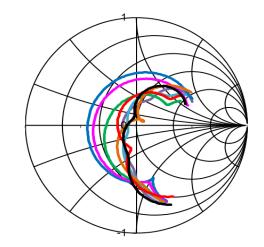
#### □ VSWR

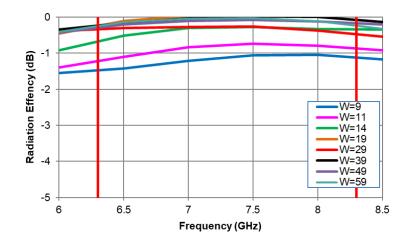
1.60

±0.10



#### ☐ Smith Chart





# STUDY | Dimensions of printed circuit board





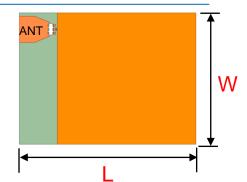
0.80

±0.10

#### ☐ EVALUATION BOARD

Antenna Location: Corner Board size: L x W x 1 Antenna keep out area: W x 5.5

Unit: mm



#### □ Remarks

- ✓ VSWR and radiation efficiency of the antenna depend on the dimensions of a printed circuit board in which the antenna is installed.
- ✓ The followings show L and W dependence of VSWR and radiation efficiency.

## ► VSWR & Efficiency (SIMULATION)

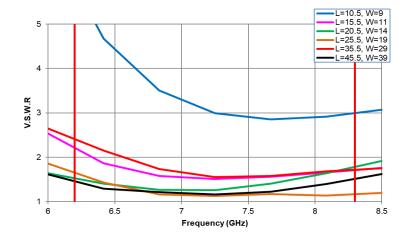
0.45

Max.

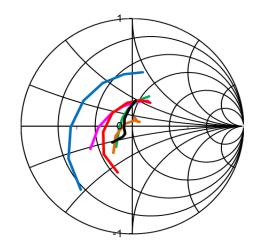
#### □ VSWR

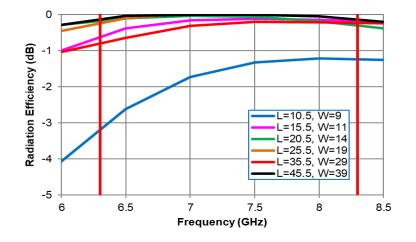
1.60

±0.10



#### ☐ Smith Chart





Т

0.45

Max.



W

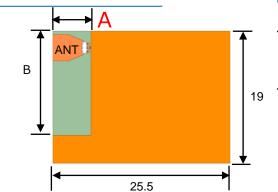
0.80

±0.10

☐ EVALUATION BOARD

Antenna Location: Corner Board size: 25.5 x 19 x 1 Antenna keep out area: B x A

Unit: mm



#### □ Remarks

- VSWR and radiation efficiency of the antenna depend on the dimensions of the antenna keep out area in which the antenna is installed.
- The followings show A dependence of VSWR and radiation efficiency.

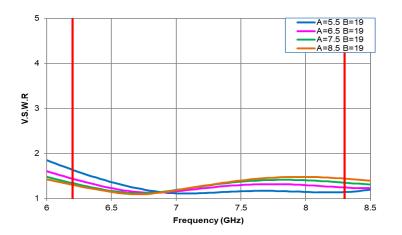
### ► VSWR & Efficiency (SIMULATION)

□ VSWR

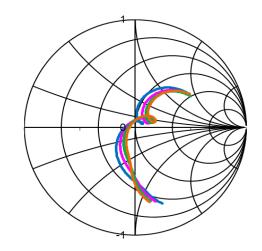
Dimensions (mm)

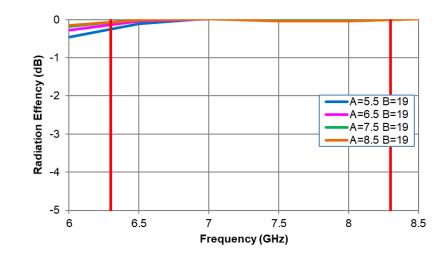
1.60

±0.10



☐ Smith Chart







 L
 W
 T

 1.60
 0.80
 0.45

 ±0.10
 ±0.10
 Max.

#### □ EVALUATION BOARD

Antenna Location: Corner Board size: 25.5 x 19 x 1 Antenna keep out area: B x 5.5

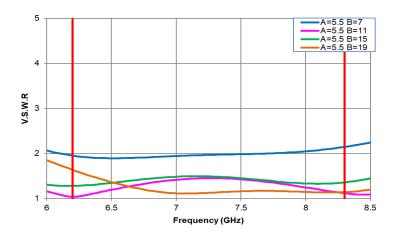
Unit: mm

# □ Remarks

- VSWR and radiation efficiency of the antenna depend on the dimensions of the antenna keep out area in which the antenna is installed.
- ✓ The followings show B dependence of VSWR and radiation efficiency.
- ✓ VSWR is large in cases that B is small.

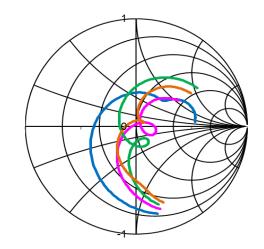
# ► VSWR & Efficiency (SIMULATION)

□ VSWR



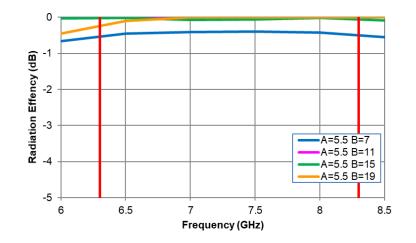
☐ Smith Chart

В



25.5

5.5



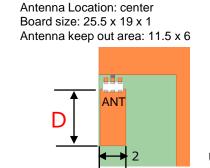
# STUDY | Example of Antenna layout

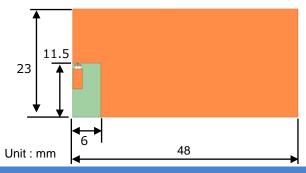




| Dimensions (mm) |       |      |  |  |  |
|-----------------|-------|------|--|--|--|
| L               | W     | Т    |  |  |  |
| 1.60            | 0.80  | 0.45 |  |  |  |
| ±0.10           | ±0.10 | Max. |  |  |  |

#### □ EVALUATION BOARD



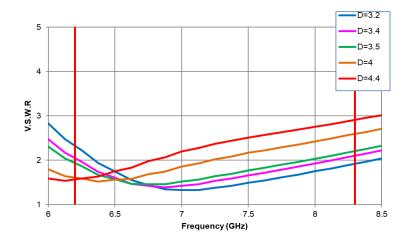


#### □ Remarks

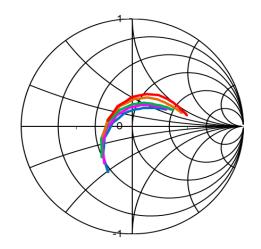
- ✓ VSWR and radiation efficiency of the antenna depend on location of the antenna on a printed circuit board in which the antenna is installed..
- ✓ This page shows an example of layout of antenna in cases that the antenna is not able to be located on a corner of a printed circuit board.

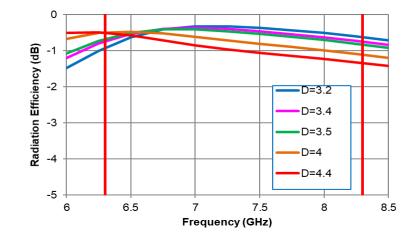
## ► VSWR & Efficiency (SIMULATION)

#### □ VSWR



#### ☐ Smith Chart





# STUDY | Example of Antenna layout

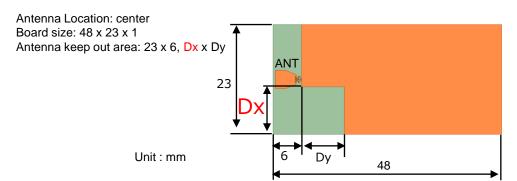


W

0.80

±0.10

#### □ EVALUATION BOARD



#### □ Remarks

- ✓ VSWR and radiation efficiency of the antenna depend on location of the antenna on a printed circuit board in which the antenna is installed..
- ✓ This page shows an example of layout of antenna in cases that the antenna is not able to be located on a corner of a printed circuit board.

## ► VSWR & Efficiency (SIMULATION)

Т

0.45

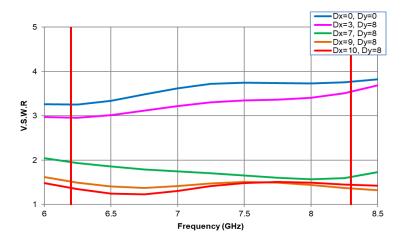
Max.

□ VSWR

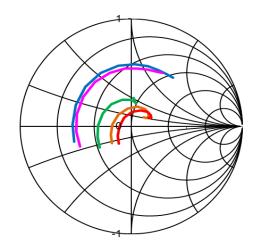
Dimensions (mm)

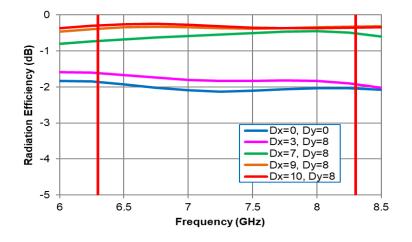
1.60

±0.10



☐ Smith Chart





# STUDY | Example of Antenna layout



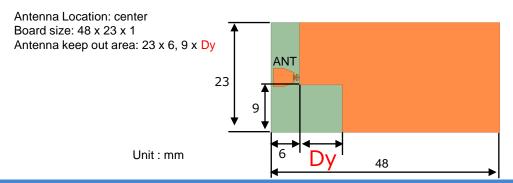


W

0.80

±0.10

#### □ EVALUATION BOARD



#### □ Remarks

- ✓ VSWR and radiation efficiency of the antenna depend on location of the antenna on a printed circuit board in which the antenna is installed..
- ✓ This page shows an example of layout of antenna in cases that the antenna is not able to be located on a corner of a printed circuit board.

## ► VSWR & Efficiency (SIMULATION)

Т

0.45

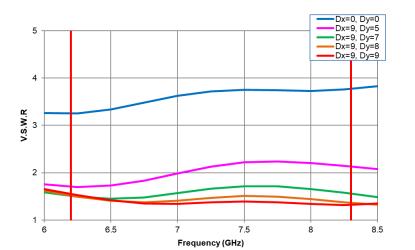
Max.

□ VSWR

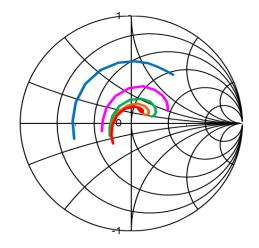
Dimensions (mm)

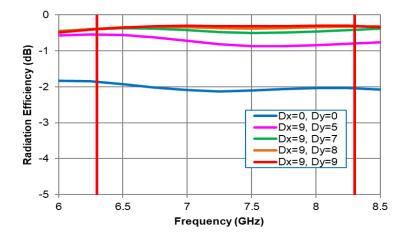
1.60

±0.10



☐ Smith Chart







0.80

±0.10

#### □ EVALUATION BOARD

Unit: mm

Antenna Location: center Board size: 48 x 23 x 1 Antenna keep out area: 23 x 6

ANT EX 6 Ey 48

#### □ Remarks

- ✓ VSWR and radiation efficiency of the antenna depend on location of the antenna on a printed circuit board in which the antenna is installed..
- ✓ This page shows an example of layout of antenna in cases that the antenna is not able to be located on a corner of a printed circuit board.

## ► VSWR & Efficiency (SIMULATION)

0.45

Max.

#### □ VSWR

Dimensions (mm)

1.60

±0.10

# 5 Ex=9, Ey=8 Ex=9, Ey=6 Ex=9, Ey=4 Ex=8, Ey=6 Ex=9, Ey=4 Ex=8, Ey=6 Ex=9, Ey=

#### ☐ Smith Chart

