

SAW DPX 897.5/942.5 MHz Band 8 SMD 1.8X1.4 mm (BW=34.52 MHz)

MODEL NO.:TF0209A

REV.1.0

A. MAXIMUM RATING:

1. Maximum DC Voltage: 5 V
2. Operating temperature range: -30 °C to +85 °C
3. Storage temperature range: -40 °C to +100 °C
4. Input power : 29dBm (Ta=+50 °C,10000h,LTE 5MHz modulation)
5. Moisture Sensitivity Level: Level 1 (MSL 1)
- 6.ESD 100V(MM) 200V(HBM)



Electrostatic Sensitive Device (ESD)

B. ELECTRICAL CHARACTERISTICS:

Terminating impedance (Tx Port): 50//22nH Ω(Single-ended)

Terminating impedance (Rx Port): 50 Ω (Single-ended)

Terminating impedance (Ant Port): 50//8.2nH Ω (Single-ended)

Tx to ANT (f_{T0}=897.5 MHz)

| Parameters Description | | Unit | Min | Typ | Max | Remarks | |
|----------------------------|------------------|------------------|-----|-----|-----|------------|---|
| Insertion Loss | 882.4~912.6MHz | dB(*2) | - | 1.3 | 2.4 | -20~+85°C | |
| | 880.24~914.76MHz | dB | - | - | 3.6 | -30~ -20°C | |
| | | dB | - | 1.6 | 3.2 | -20~+85°C | |
| Amplitude ripple | 880.24~914.76MHz | dB | - | 1.0 | 3.2 | - | |
| VSWR | ANT | 880.24~914.76MHz | - | - | 1.4 | 2.1 | - |
| | Tx | 880.24~914.76MHz | - | - | 1.4 | 2.1 | - |
| Attenuation: | | | | | | | |
| 927.4 ~ 957.6 MHz | | dB(*2) | 48 | 54 | - | -20~+85°C | |
| 925.24 ~ 959.76 MHz | | dB | 37 | - | - | -30~ -20°C | |
| | | dB | 42 | - | - | -20~ 0°C | |
| | | dB | 48 | 54 | - | 0~+85°C | |
| 1565 ~ 1606 MHz | | dB | 40 | 43 | - | | |
| 1760 ~ 1830 MHz | | dB | 40 | 48 | - | | |
| 2640 ~ 2745 MHz | | dB | 28 | 37 | - | | |

(*1)Specification of insertion loss excludes loss that comes from the test board.

(*2)Integrated over +/-1.92MHz around the WCDMA channel center frequency.

ANT to Rx ($f_{T0}=942.5$ MHz)

| Parameters Description | | Unit | Min | Typ | Max | Remarks |
|------------------------|-------------------|--------|-----|-----|-----|------------|
| InsertionLoss(*1) | 927.4~957.6 MHz | dB(*2) | - | 1.5 | 2.5 | -20~+85°C |
| InsertionLoss(*1) | 925.24~959.76 MHz | dB | - | - | 3.5 | -30~ -20°C |
| InsertionLoss(*1) | | dB | - | 1.8 | 3.0 | -20~+85°C |
| Amplitude ripple | 925.24~959.76 MHz | dB | - | 1.1 | 2.9 | |
| VSWR | ANT | - | - | 1.8 | 2.1 | |
| | Rx | | | | | |
| 925.24~959.76 MHz | | - | - | 1.7 | 2.1 | |
| Attenuation: | | | | | | |
| 880.24 ~ 914.76 MHz | | dB | 45 | 54 | - | |
| 1805 ~ 1875 MHz | | dB | 40 | 52 | - | |
| 2400 ~ 2500 MHz | | dB | 40 | 49 | - | |
| 2685 ~ 2790 MHz | | dB | 40 | 48 | - | |

(*1) Specification of insertion loss excludes loss that comes from the test board.

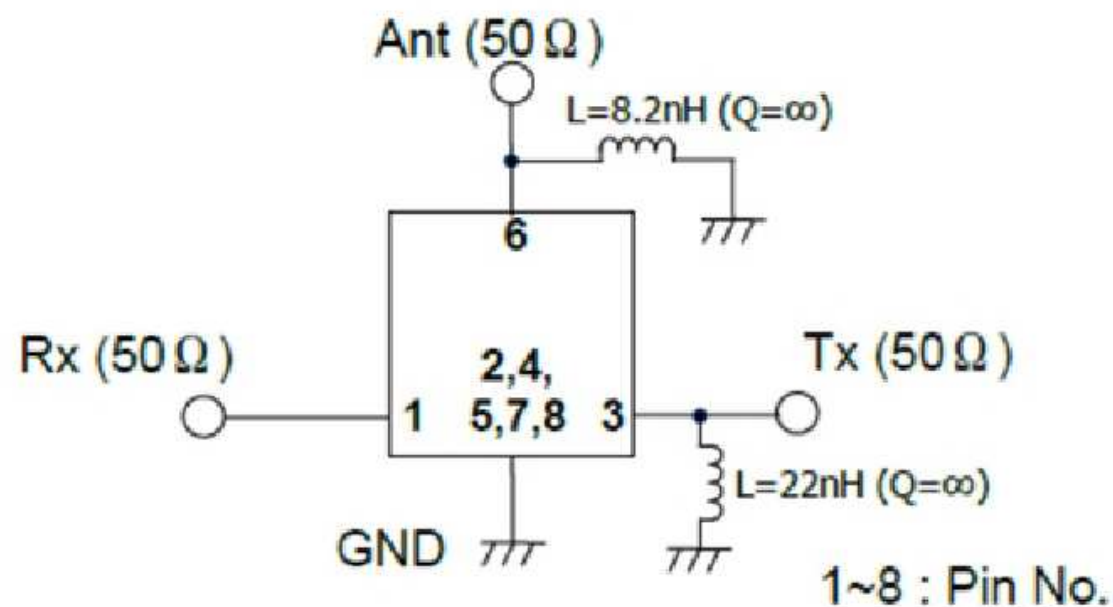
(*2) Integrated over +/-1.92MHz around the WCDMA channel center frequency.

Tx to Rx

| | | | | | | |
|-----------|-------------------|--------|----|----|---|------------|
| Isolation | 882.4~912.6MHz | dB(*2) | 55 | 58 | - | -20~+85°C |
| | 880.24~914.76 MHz | dB | 48 | - | - | |
| | | dB | 55 | 58 | - | -30~ +25°C |
| | 927.4~957.6MHz | dB(*2) | 55 | 58 | - | -20~+85°C |
| | 925.24~959.76 MHz | dB | 40 | - | - | -30~ -20°C |
| | | dB | 45 | - | - | -20~ 0°C |
| | | dB | 53 | 56 | - | 0~ +85°C |

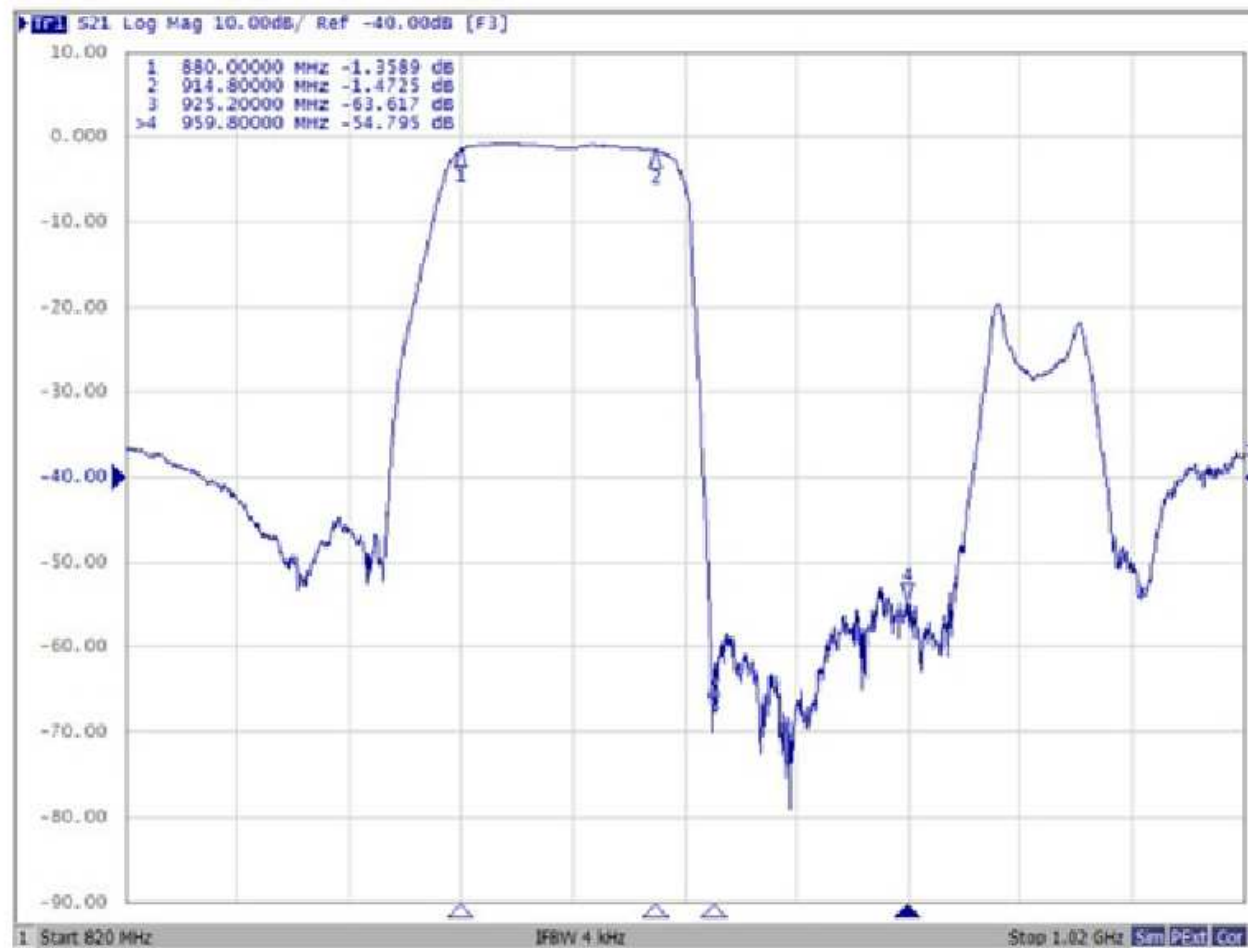
(*2) Integrated over +/-1.92MHz around the WCDMA channel center frequency

C.Evaluation Circuit

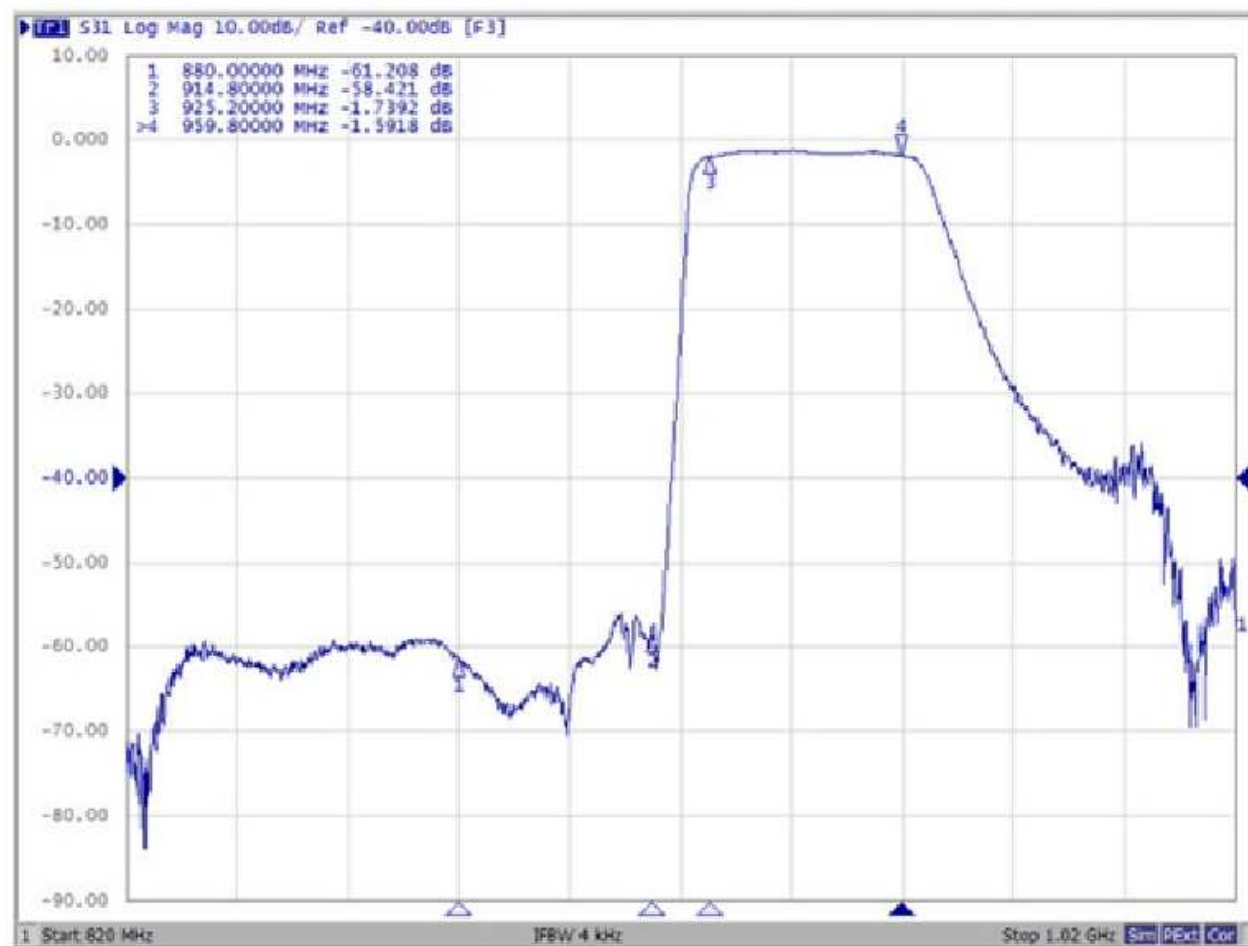


D. FREQUENCY CHARACTERISTICS:

Tx to Ant



Ant to Rx



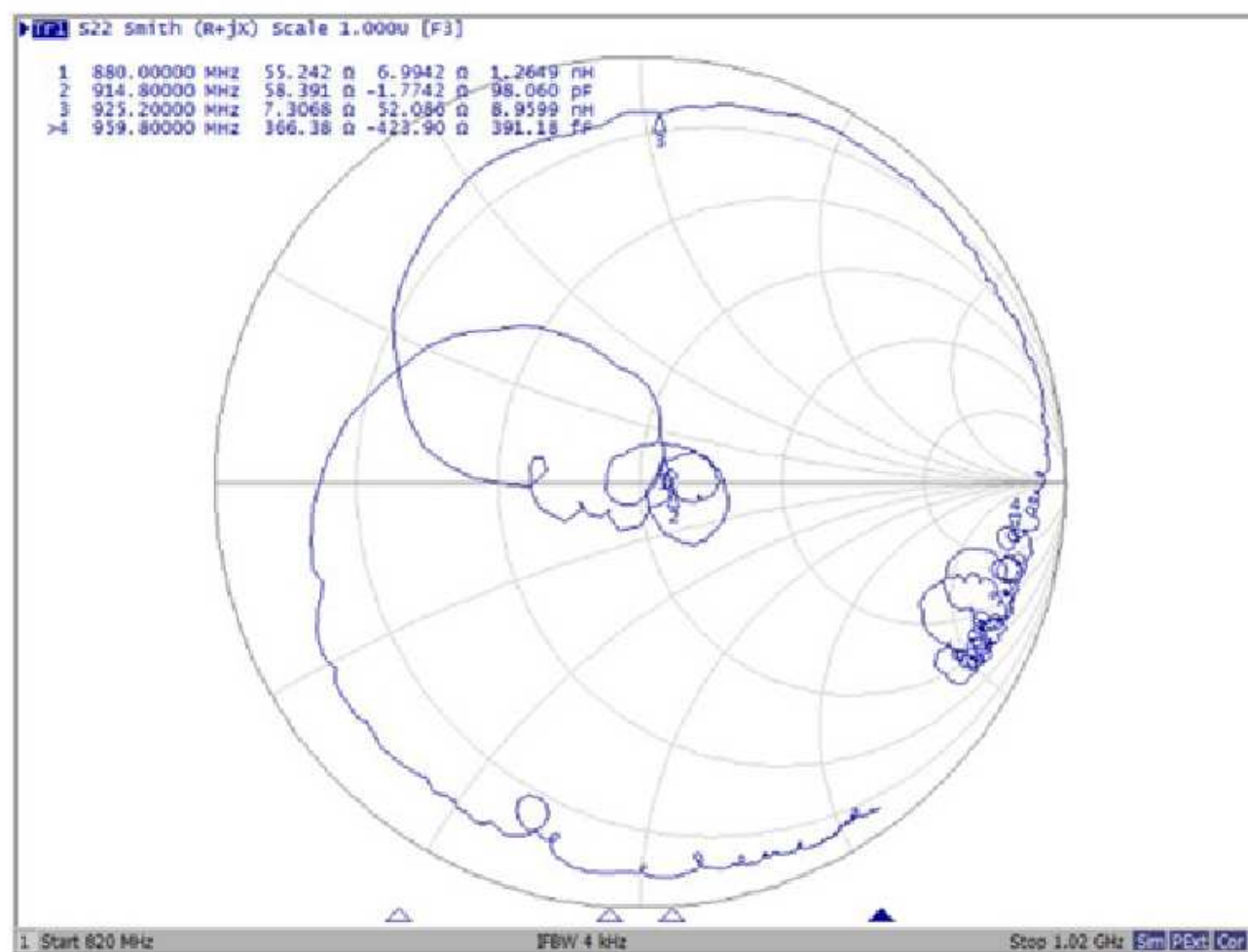
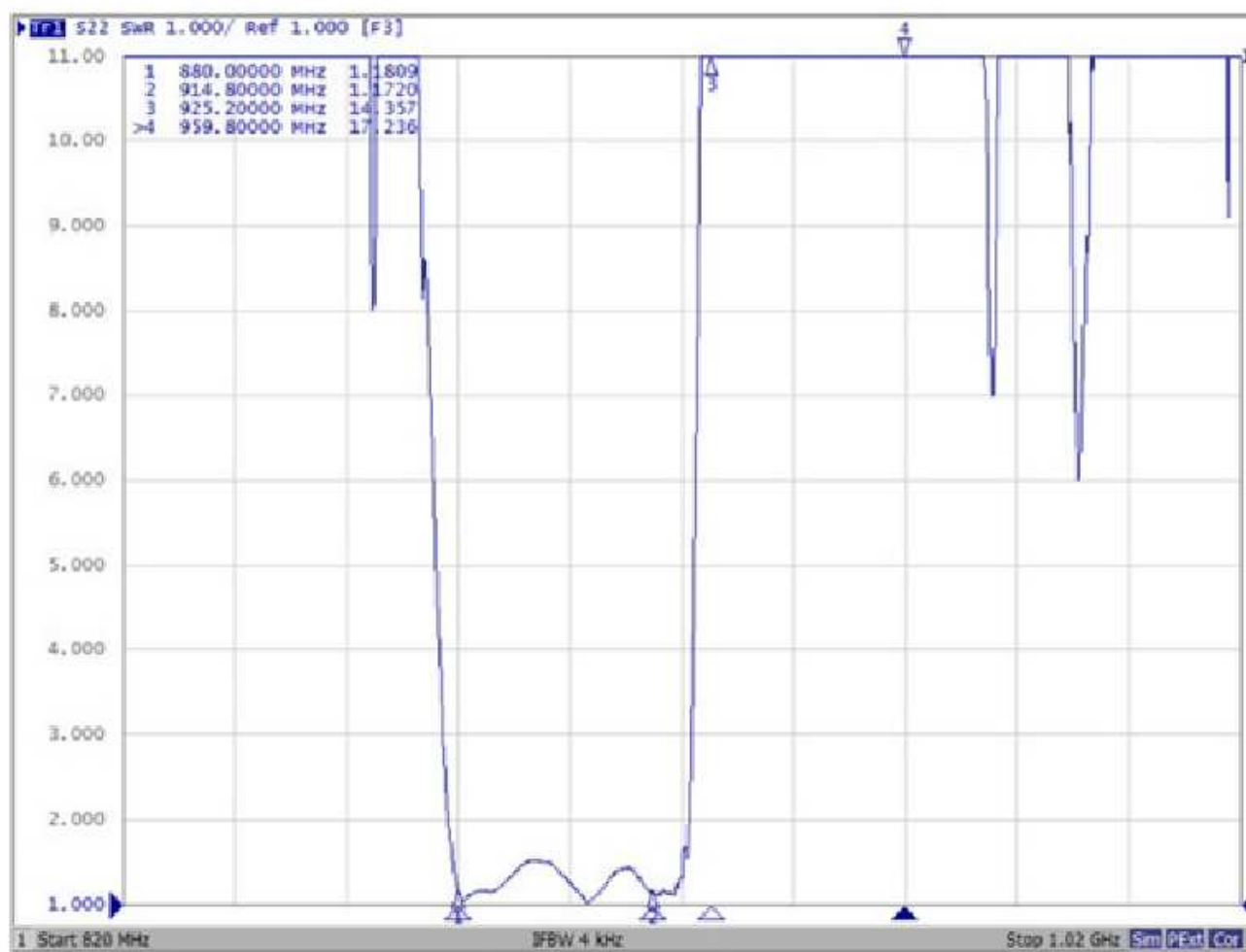
Tx to Ant ,Ant to Rx



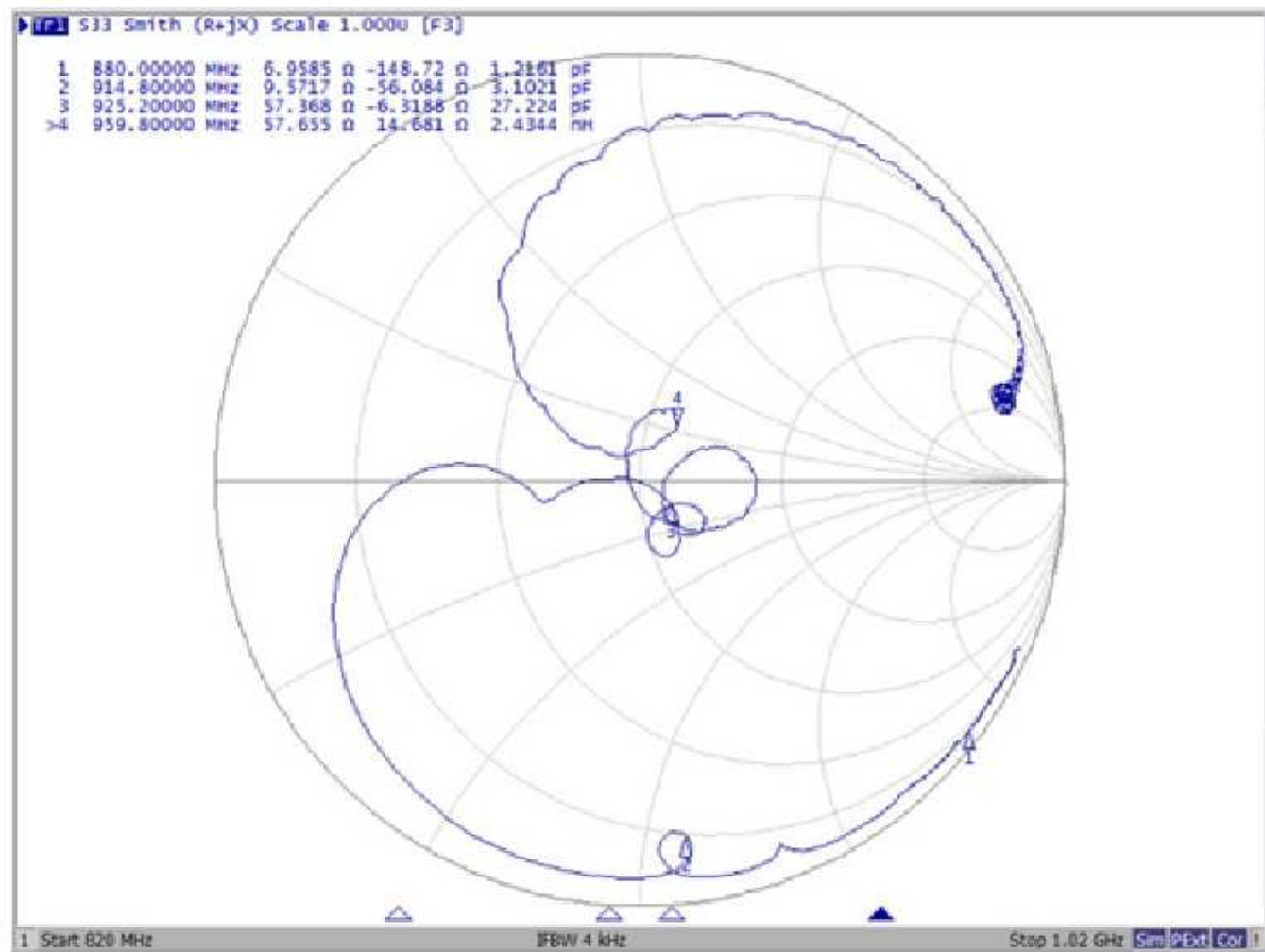
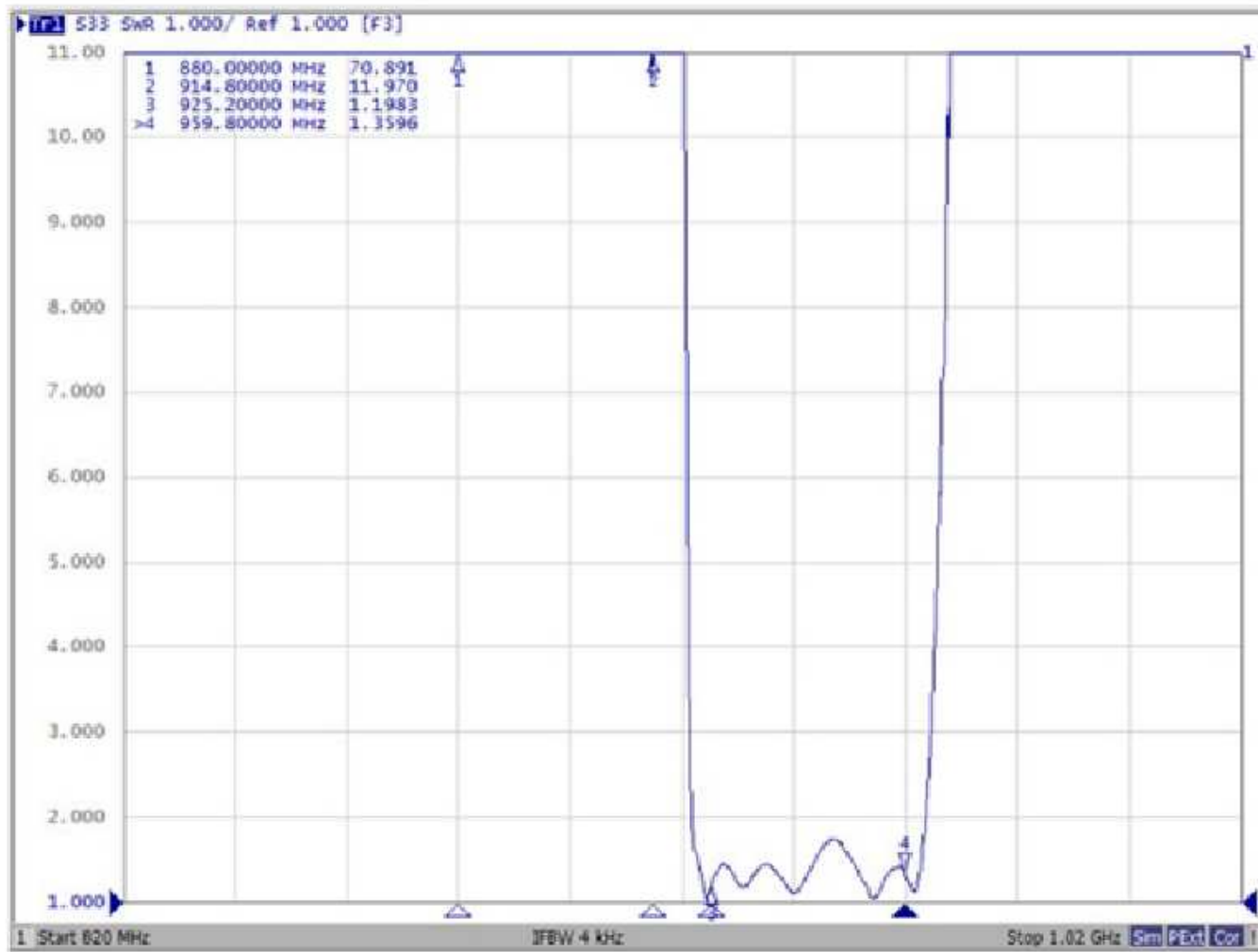
Tx to Rx Isolation



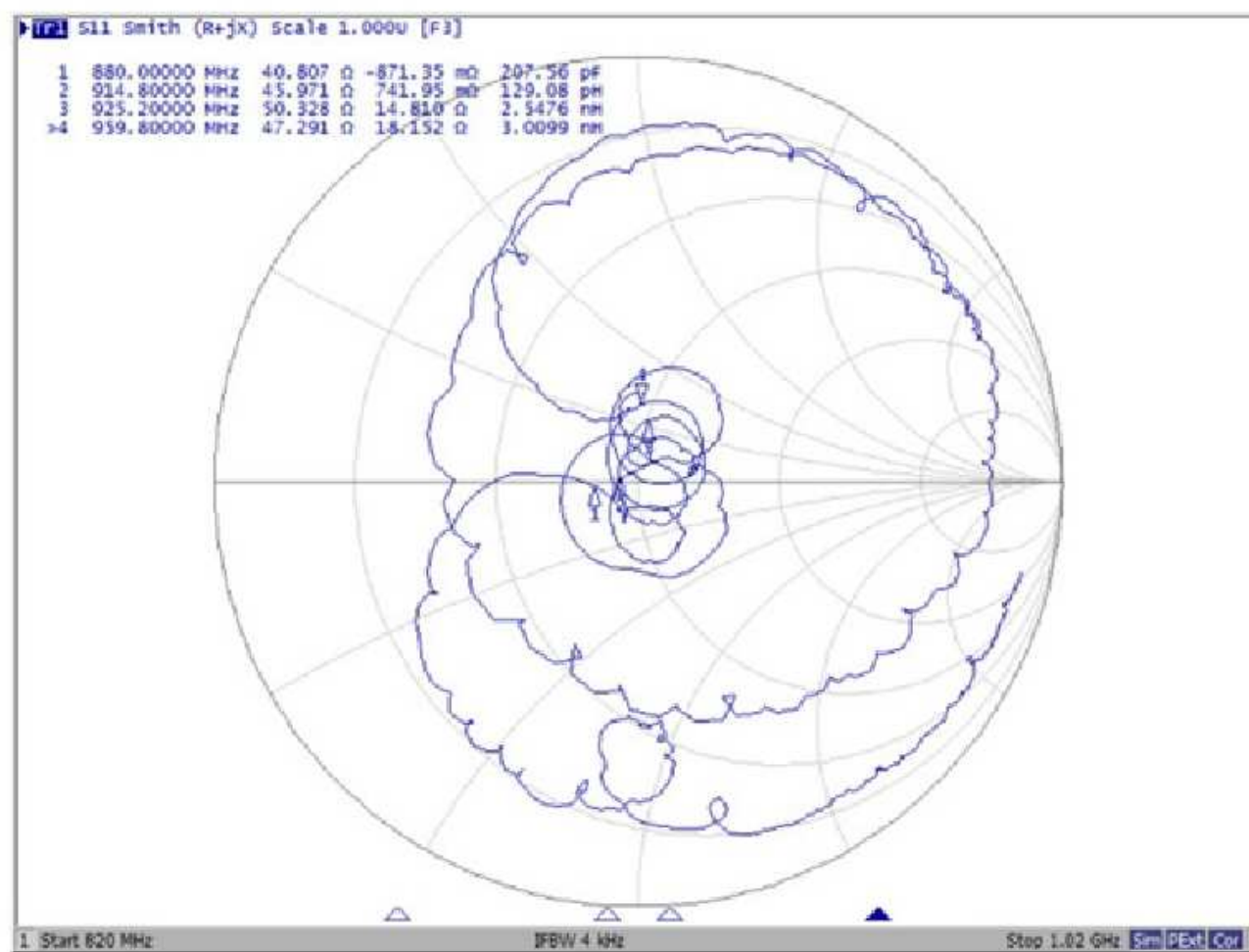
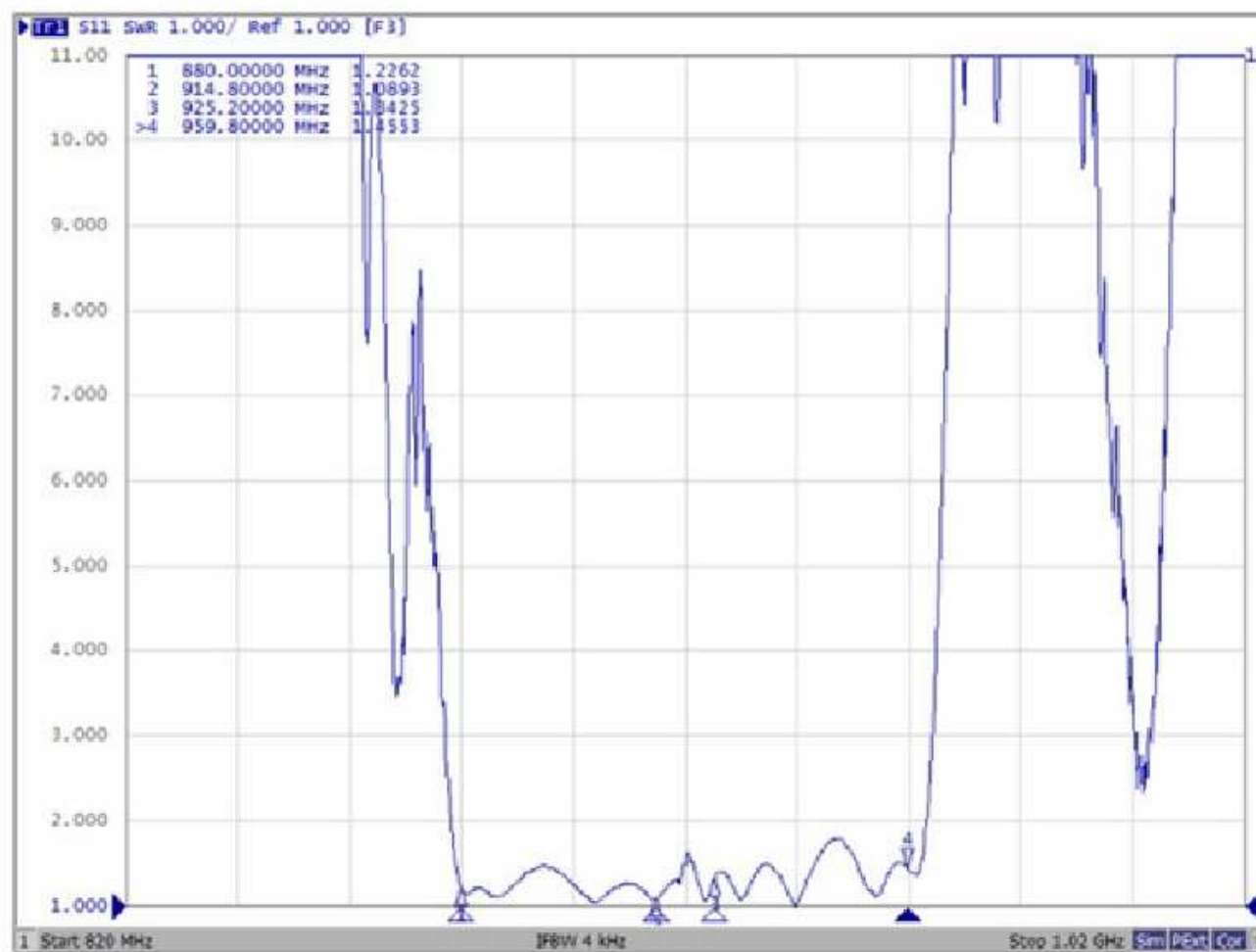
Tx Port



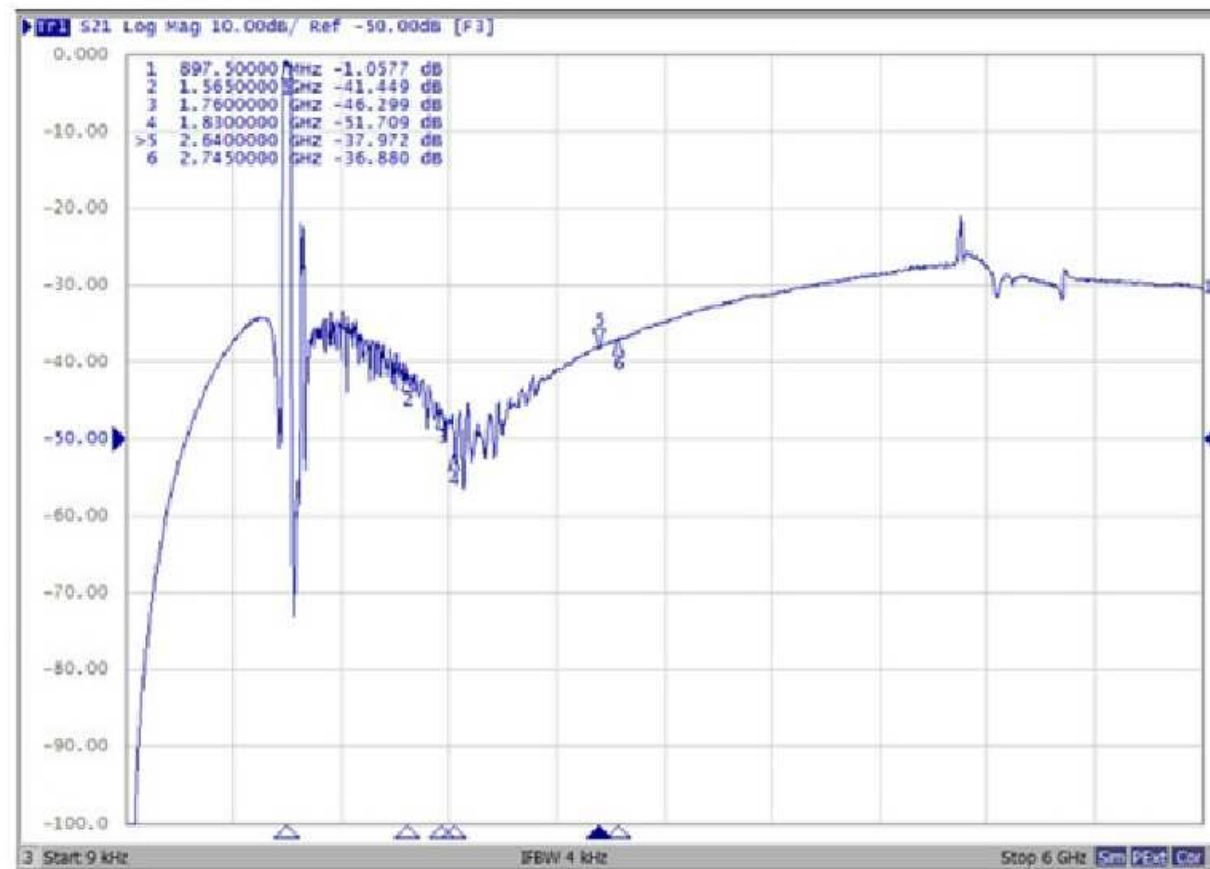
Rx Port



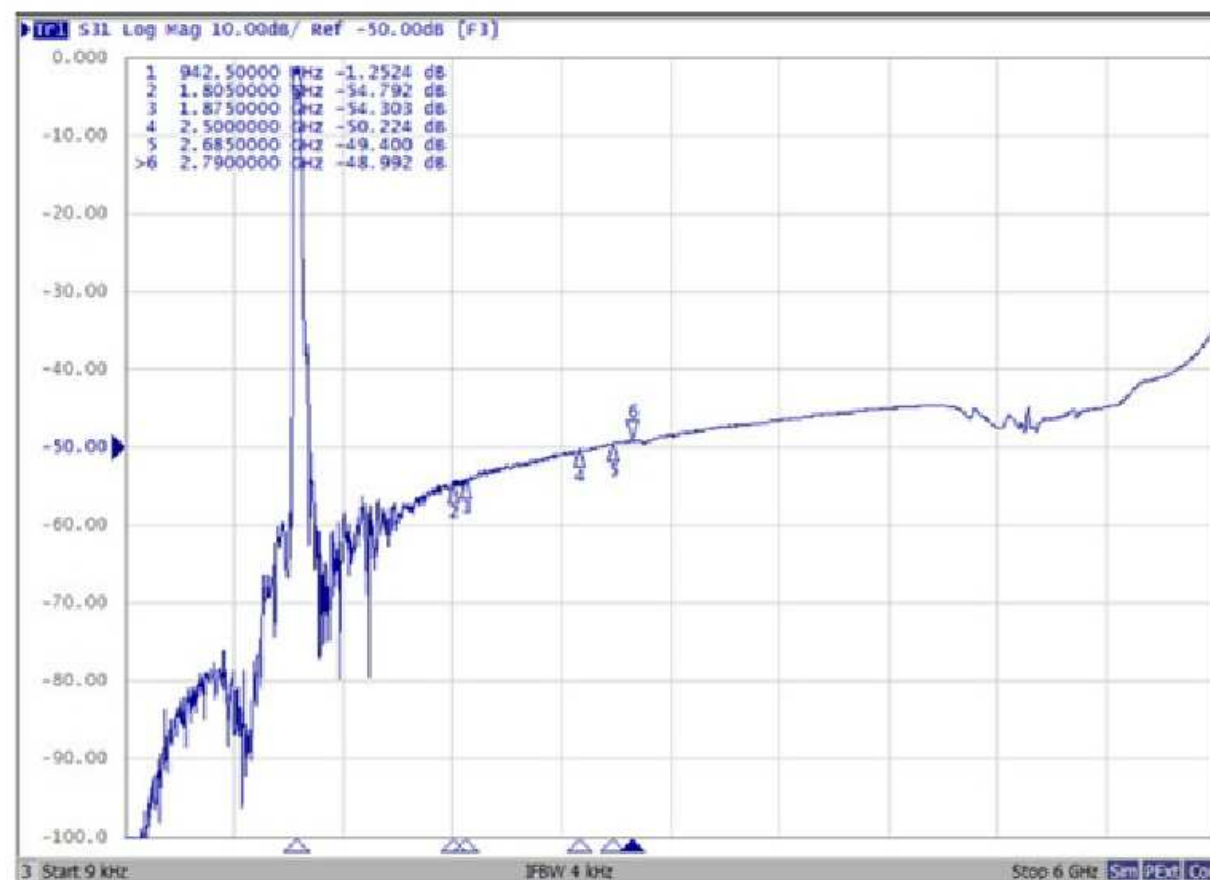
Ant Port



Tx to Ant (Wide span)



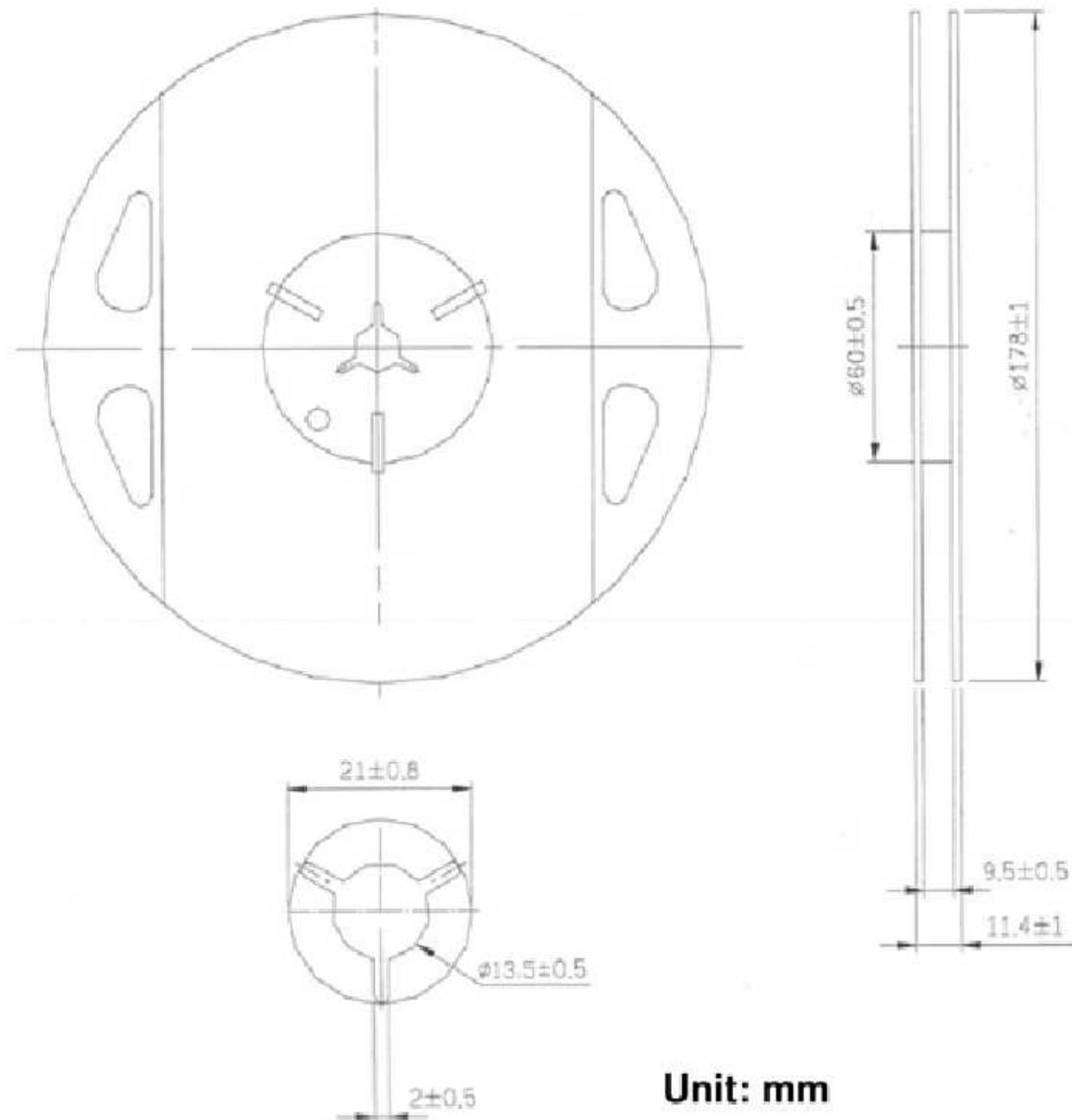
Ant to Rx (Wide span)



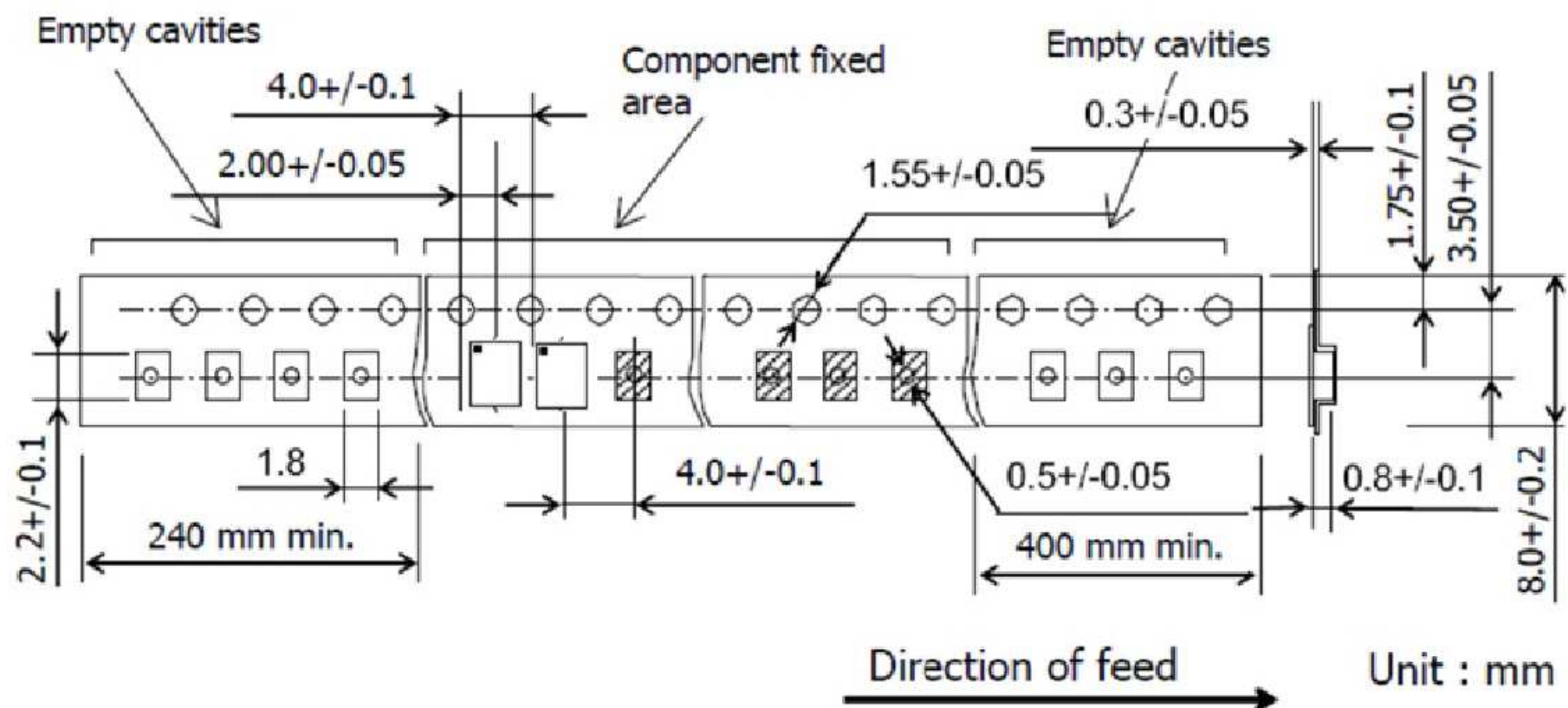
G. PACKING:

1. REEL DIMENSION

(Please refer to FR-75D10 for packing quantity)



2. TAPE DIMENSION



H. RECOMMENDED REFLOW PROFILE :

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 245~260°C peak (min. 10sec).
4. Time : 2 times.

