

## Maximum Ratings

| Parameters Description                         | Unit            | Minimum | Typical    | Maximum |
|--|-----------------|---------|------------|---------|
| Operation Temperature Range                    | °C              | -30     | -          | 80      |
| Storage Temperature Range                      | °C              | -40     | -          | 85      |
| Maximum DC Voltage                             | V               | -       | -          | 10      |
| Maximum Input Power                            | dBm             | -       | -          | 10      |
| Source Impedance (single ended) <sup>(1)</sup> | Ω               | -       | 50         | -       |
| Load Impedance (single ended) <sup>(1)</sup>   | Ω               | -       | 50         | -       |
| Package type & size                            | D1              |         |            |         |
| Length x Width                                 | mm <sup>2</sup> | -       | 20.0 x 9.8 | -       |
| Height   | mm              | -       | -          | 1.8     |

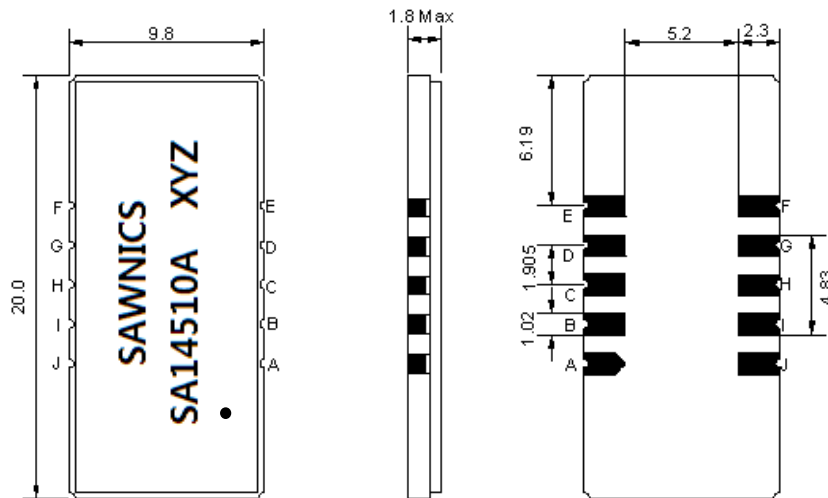
## Electrical Specification

| Parameters Description                    | Unit   | Minimum | Typical | Maximum |
|---|--------|---------|---------|---------|
| Center Frequency (Fo)                     | MHz    | 144.9   | 145.0   | 145.1   |
| Insertion Loss at Fo                      | dB     | -       | 25.0    | 27.0    |
| Group Delay Variation at Fo ±4.42 MHz     | nsec   | -       | 40      | 100     |
| Absolute Delay at Fo                      | usec   | -       | 3.14    | -       |
| Passband Ripple Variation at Fo ±4.42 MHz | dB     | -       | 0.55    | 0.8     |
| Bandwidth at -1dB                         | MHz    | 9.70    | 10.30   | -       |
| Bandwidth at -3dB                         | MHz    | -       | 10.60   | -       |
| Bandwidth at -40dB                        | MHz    | -       | 11.90   | -       |
| Ultimate Rejection                        | dB     | 50      | 55      | -       |
| Temperature Coefficient                   | ppm/°C | -       | -18     | -       |

**Notes :** (1) With Matching Network (Ref. Testing Environment Circuit as shown below).

Those impedances could be modified with different impedance values and/or structures, if necessary.

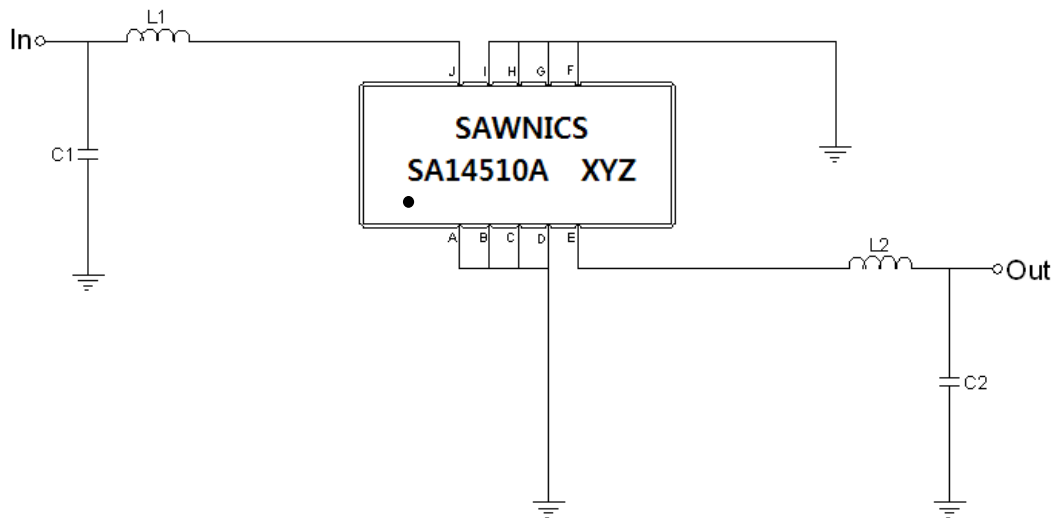
# Package Dimensions



- ① SAWNICs: Brand
  - ② SA14510A: Model Name
  - ③ X : Date Code (Year)
  - ④ Y : Date Code (Month)
  - ⑤ Z : Date Code (Date)
- : Index Dot

| Pin Description        |        |
|------------------------|--------|
| A, B, C, D, F, G, H, I | Ground |
| J                      | Input  |
| E                      | Output |

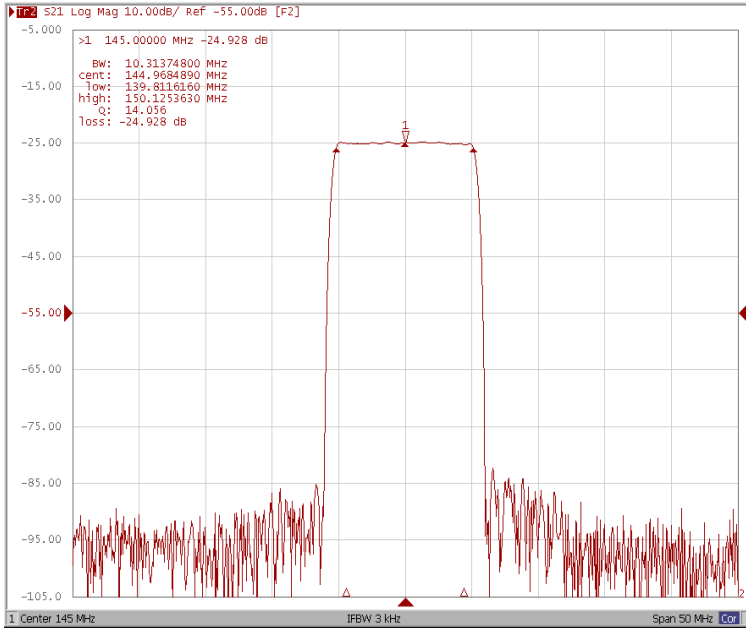
# Testing Environment



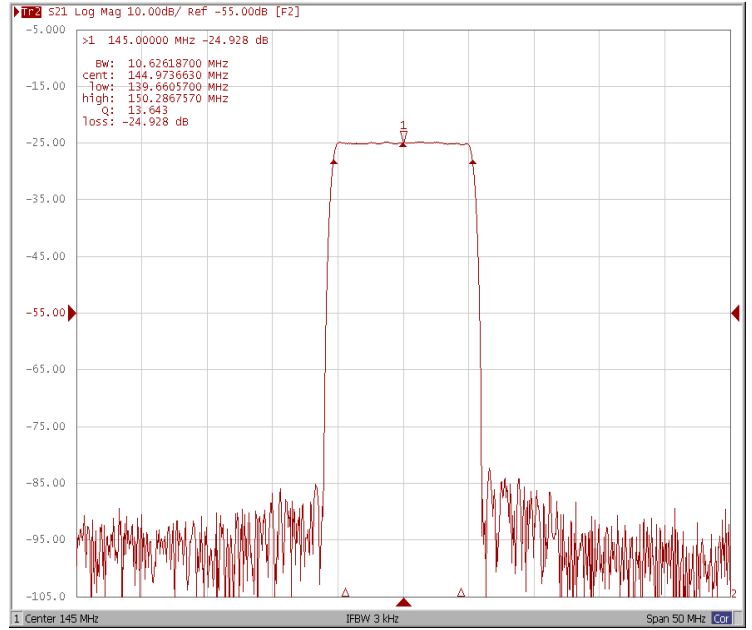
| Test Fixture & Values |                         |
|-----------------------|-------------------------|
| Input                 | L1 = 33 nH , C1 = 61 pF |
| Output                | L1 = 39 nH , C1 = 33 pF |
| Source/Load Impedance | 50 Ω                    |

## Frequency Response

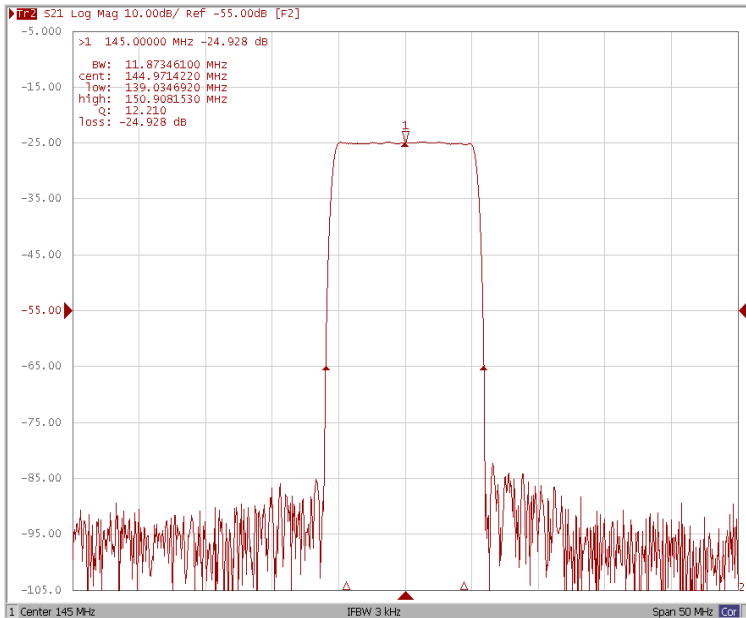
### Bandwidth at -1.0 dB



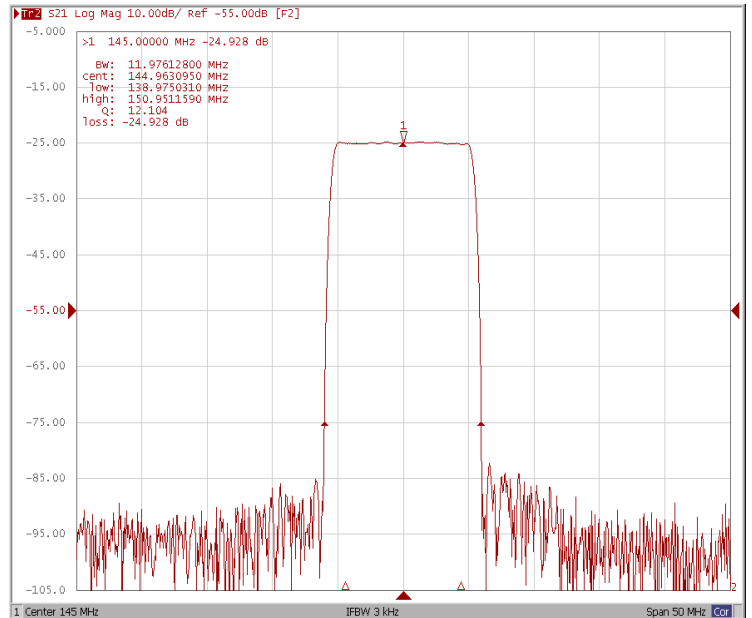
### Bandwidth at -3.0 dB



### Bandwidth at -40.0 dB

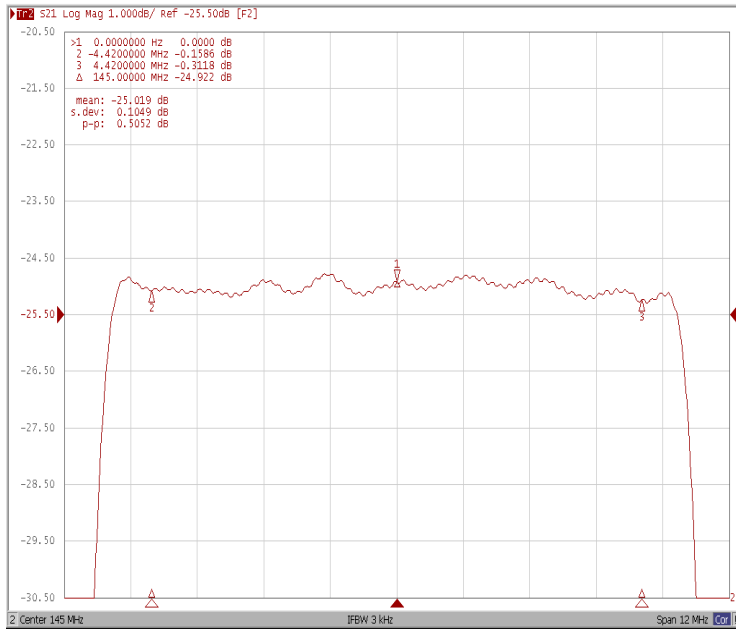


### Bandwidth at -50.0 dB

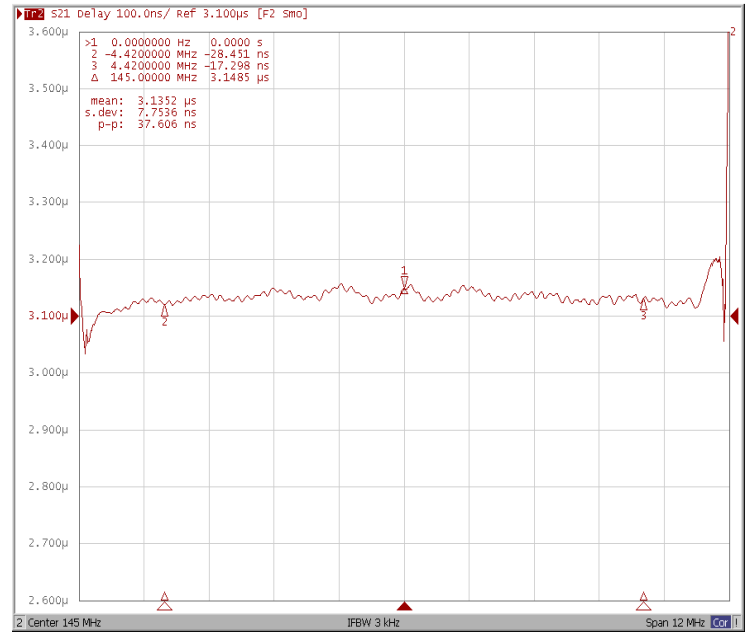


## Frequency Response

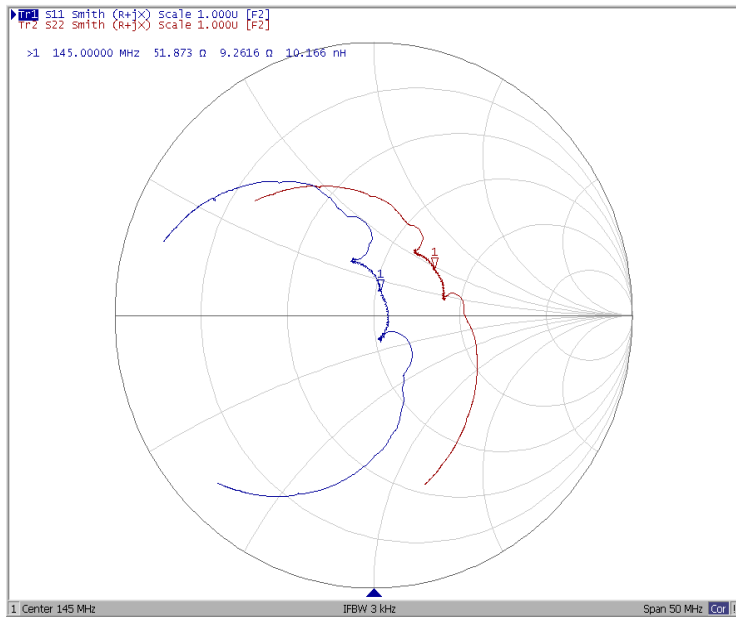
### Ripple Variation Fo±4.42MHz



### Group Delay Variation Fo±4.42MHz



### Smith Chart



### SWR

