

- 54.50 MHz IF SAW Filter / 21.00 MHz Bandwidth
- Revision 0: 15 Apr. 2011

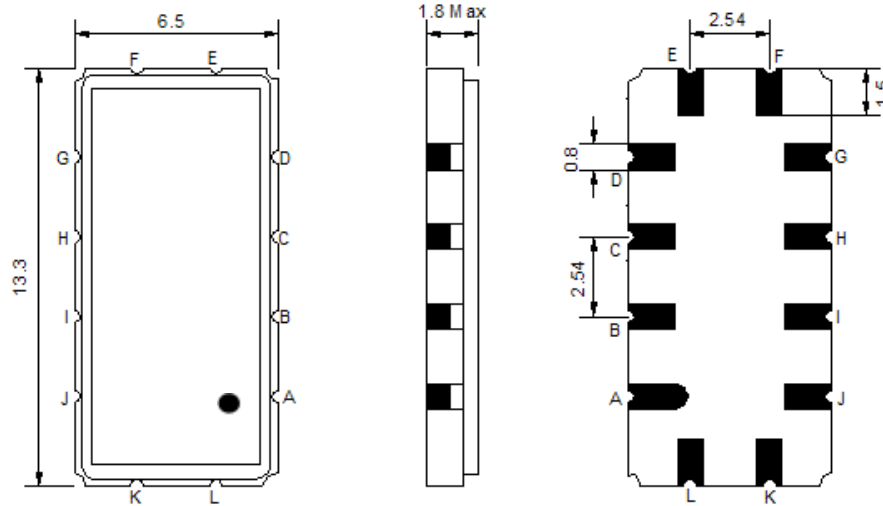
## Electrical Characteristics

| MAXIMUM RATING                                 |                 |         |            |         |
|--|-----------------|---------|------------|---------|
| PARAMETERS DESCRIPTION                         | UNIT            | MINIMUM | TYPICAL    | MAXIMUM |
| Operating Temperature Range                    | °C              | -10     | -          | 70      |
| 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                            | V               |         |            |         |
| Length x Width                                 | mm <sup>2</sup> | -       | 13.3 x 6.5 | -       |
| Height   | mm              | -       | -          | 1.8     |

| ELECTRICAL SPECIFICATION           |        |         |         |         |
|------------------------------------|--------|---------|---------|---------|
| PARAMETERS DESCRIPTION             | UNIT   | MINIMUM | TYPICAL | MAXIMUM |
| Center Frequency (Fo)              | MHz    | -       | 54.50   | -       |
| Insertion Loss at Fo               | dB     | -       | 15.00   | 17.00   |
| Group Delay Variation (Fo±9.50MHz) | nsec   | -       | 17      | 40      |
| Absolute Delay at Fo               | usec   | -       | 0.93    | 1.00    |
| Passband Ripple (Fo±9.50MHz)       | dB     | -       | 0.30    | 0.80    |
| Bandwidth at -1dB                  | MHz    | 20.70   | 21.00   | -       |
| Bandwidth at -3dB                  | MHz    | -       | 22.15   | -       |
| Bandwidth at -40dB                 | MHz    | -       | 26.80   | 27.10   |
| Ultimate Rejection                 | dB     | -       | 43      | -       |
| Temperature coefficient            | ppm/°C | -       | -86     | -       |

**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.

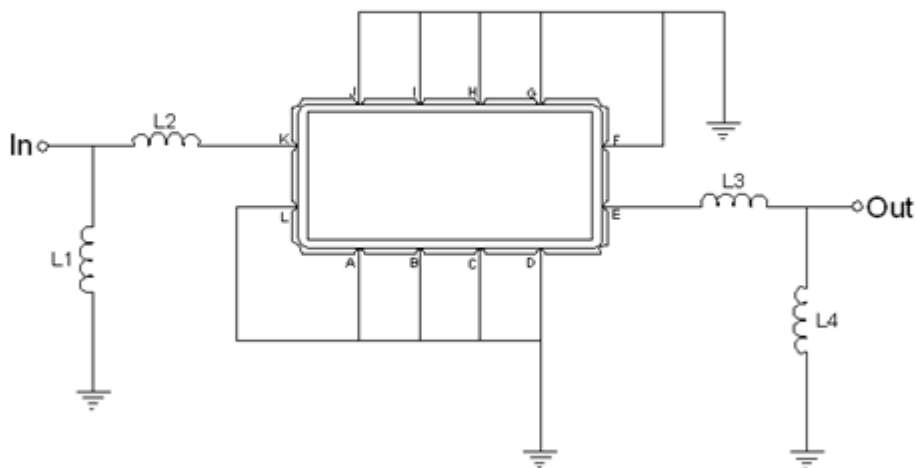
## Package Dimensions



- ① **TRANSKO:** Brand
- ② **TL05421A:** 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, J, L | Ground |
| K                            | Input  |
| E                            | Output |

## Testing Environment



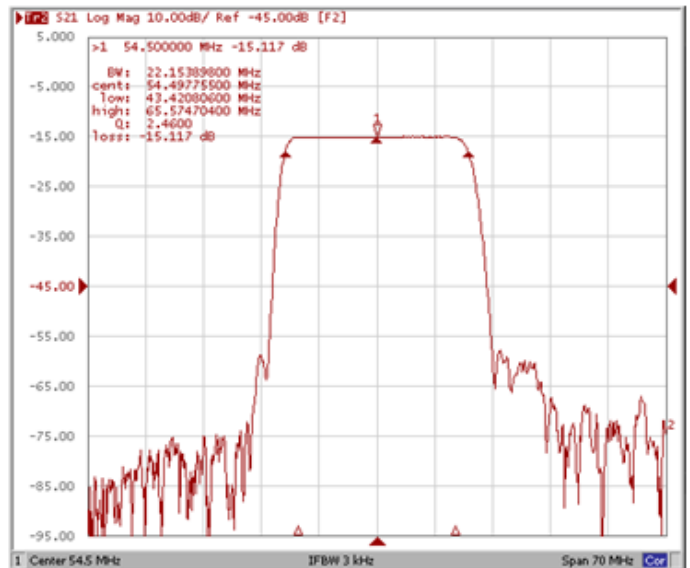
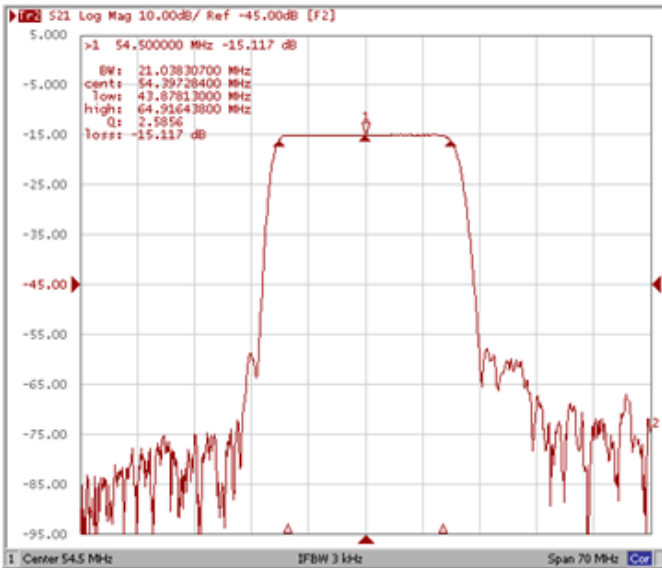
| Test Fixture & Values        |                          |
|------------------------------|--------------------------|
| <b>Input</b>                 | L1 = 470 nH, L2 = 180 nH |
| <b>Output</b>                | L3 = 150 nH, L4 = 470 nH |
| <b>Source/Load Impedance</b> | 50 Ω                     |

## Frequency Characteristics

### Frequency Response

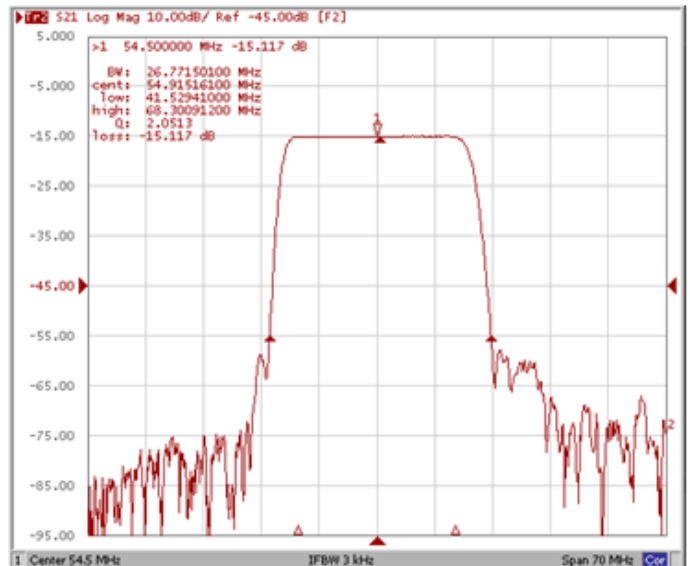
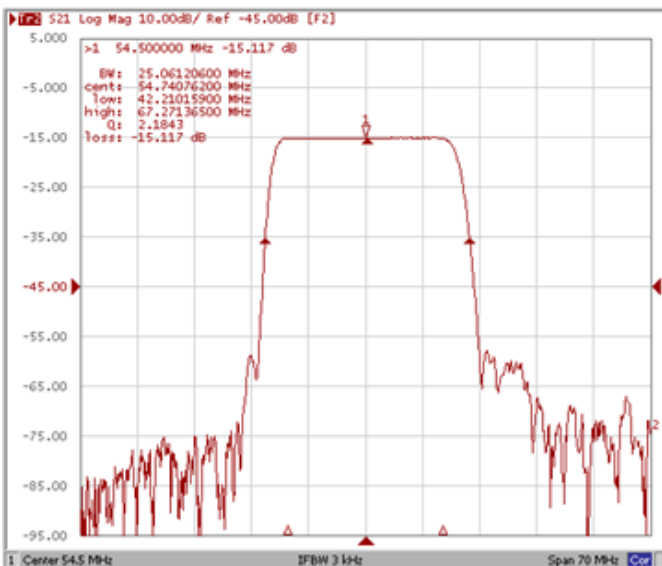
**Bandwidth at -1.0 dB**

**Bandwidth at -3.0 dB**



**Bandwidth at -20.0 dB**

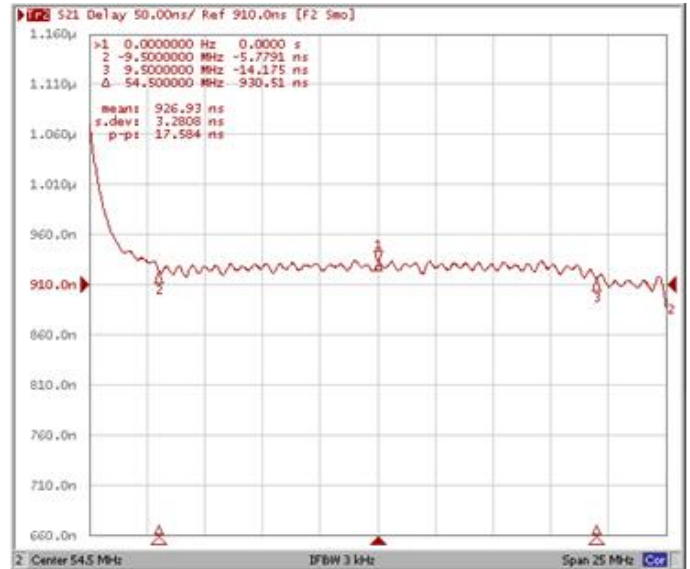
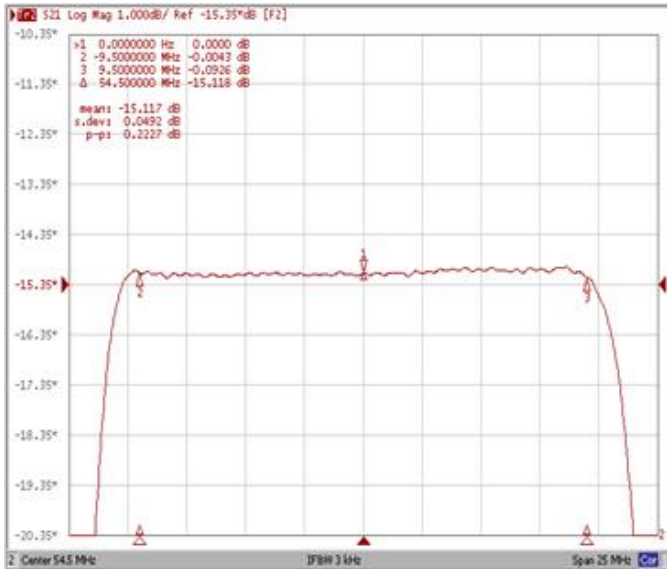
**Bandwidth at -40.0 dB**



**Frequency Response**

**Ripple Variation Fo ±9.50MHz**

**Group Delay Variation Fo ±9.50MHz**



**Smith Chart**

**VSWR**

