

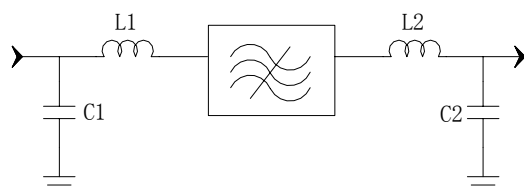
### Specifications

| Parameter                                      | Unit                     | Minimum                                 | Typical | Maximum |   |
|--|--------------------------|---|---------|---------|---|
| Center Frequency                               | MHz                      | 114.9                                   | 115     | 115.1   |   |
| Insertion Loss                                 | dB                       | -                                       | 25.7    | 27.5    |   |
| 3 dB Bandwidth                                 | MHz                      | 4.75                                    | 4.753   | 4.85    |   |
| Selectivity                                    | $F0 \pm (4.8/2+0.4)$ MHz | dBc                                     | 35      | 42      | - |
|  | $F0 \pm (4.8/2+0.6)$ MHz | dBc                                     | 40      | 61      | - |
|  | $F0 \pm (4.8/2+1)$ MHz   | dBc                                     | 50      | 62      | - |
|  | $F0 \pm (4.8/2+5)$ MHz   | dBc                                     | 55      | 67      | - |
| Group delay Variation<br>( $f0 \pm 2.375$ MHz) | nsec                     | -                                       | 140     | -       |   |
| Passband Variation                             | dB                       | -                                       | 0.7     | 1.5     |   |
| Ultimate Rejection( $f0 \pm 15$ MHz)           | dB                       | 50                                      | 70      | -       |   |
| Absolute delay                                 | usec                     | -                                       | 3.92    | -       |   |
| Substrate Material                             |                          |   | 112LT   |         |   |
| Ambient Temperature                            | °C                       |   | 25      |         |   |
| Package Size                                   |                          | DIP3512 (35.0x12.8x4.7mm <sup>3</sup> ) |         |         |   |

#### Notes:

1. All specifications are based on the test circuit shown
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
4. This is the optimum impedance in order to achieve the performance shown

### Matching Configuration



**L1=33nH    L2=22nH**  
**C1=82pF    C2=36pF**

**Source/Load Impedance=50 ohm**

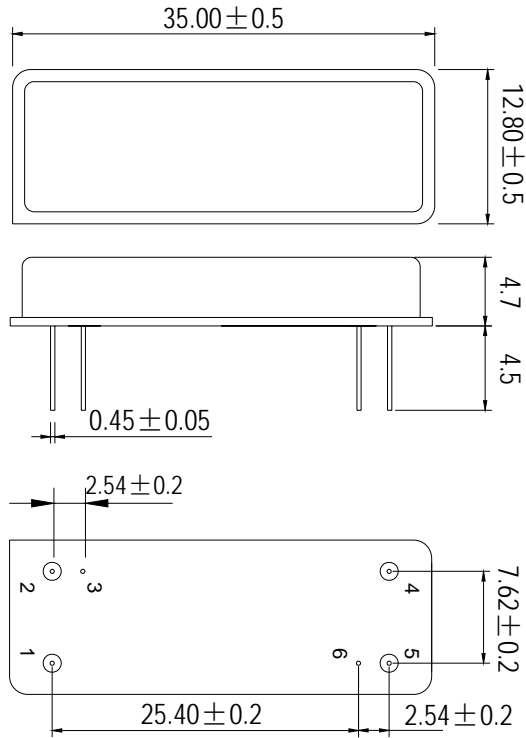
Notes - Component values may change depending  
on board layout.



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|             |           |          |  |
|-------------|-----------|----------|--|
| Part Number | LBT11528  |          |  |
| Rev. Date   | 2006-11-1 |          |  |
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*Package Dimension*

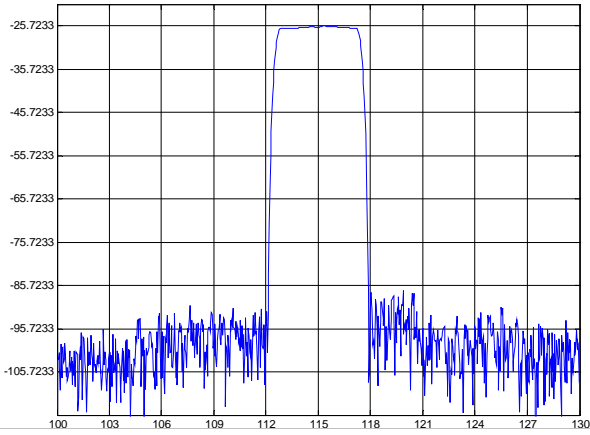


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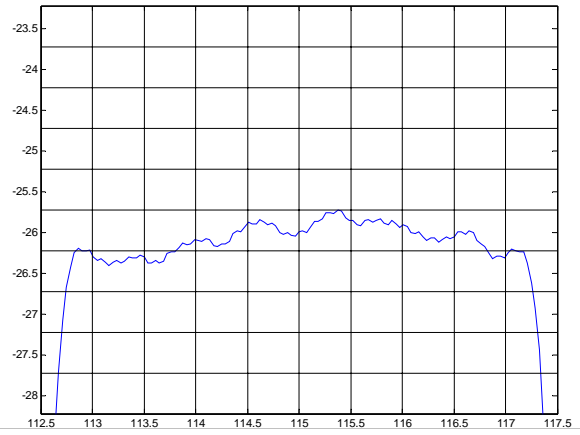
*Typical Performance*

Frequency Respond



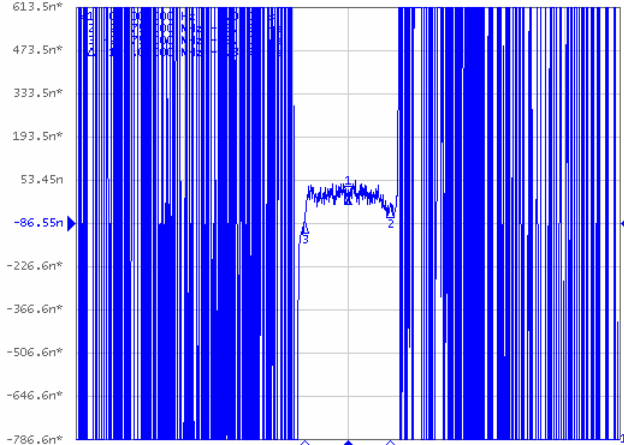
Group Delay Variation( $f_0 \pm 2.375\text{MHz}$ )

Passband Respond



Phase Linearity( $f_0 \pm 2.375\text{MHz}$ )

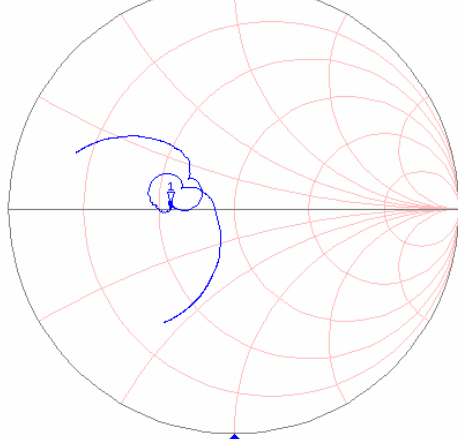
S21 Delay 140.0ns/ Ref -86.55ns [F2 Del]



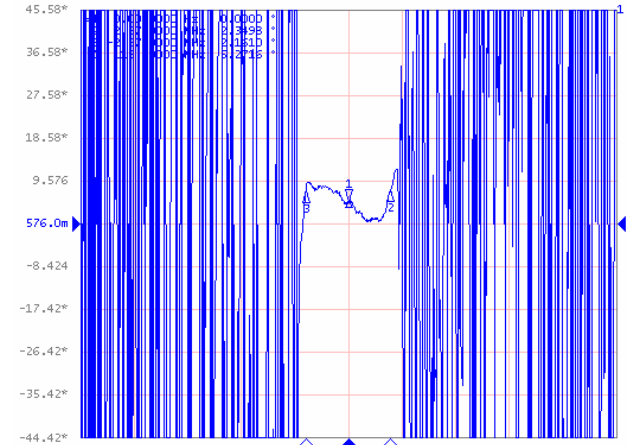
Smith Chart S11

S11 Smith (R+jX) Scale 1.000U [F2]

>1 115.00000 MHz 28.196  $\Omega$  1.5624  $\Omega$  2.1623 nH



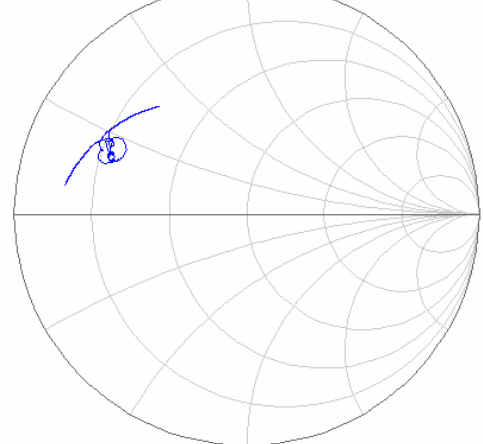
S21 Phase 9.000°/ Ref 576.0m° [F2 Del]



Smith Chart S22

S22 Smith (R+jX) Scale 1.000U [F2]

>1 115.00000 MHz 11.100  $\Omega$  10.892  $\Omega$  13.884 nH



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