

# WiMAX PRODUCTS

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| PRODUCT        | JTI P/N       | SPECS                         |                 | SIZE   | APPLICATION COMMENTS  |
|----------------|---------------|-------------------------------|-----------------|--|---|
| Antenna (Chip) | 2500AT52M3555 | Frequency (MHz)               | 2300 - 2690     | Case<br>L= 0.394<br>(10.0)<br>W=0.394<br>(10.0)<br>T= 0.031<br>(0.80)      | Newest & Industry leading triband antenna for WiMAX standard. Antenna has compact form factor (10 x 10 x 0.8 mm) and is equipped to cover 2.5/3.5/5.5 GHz bands. This part is suitable for WiMAX applications worldwide (US, Europe & Asia) |
|                |               | Peak Gain (XZ-V)              | 2.0 dBi typ     |  |   |
|                |               | Average Gain (XZ-V)           | -2.0 dBi typ    |  |   |
|                |               | Return Loss (min)             | 9.5 dB min.     |  |   |
|                |               | Frequency (MHz)               | 3300 - 3900     |  |   |
|                |               | Peak Gain (XZ-V)              | 2.0 dBi typ     |  |   |
|                |               | Average Gain (XZ-V)           | -4.0 dBi typ    |  |   |
|                |               | Return Loss (min)             | 9.5 dB min.     |  |   |
|                |               | Frequency (MHz)               | 5150 - 5875     |  |   |
|                |               | Peak Gain (XZ-V)              | 2.0 dBi typ     |  |   |
|                |               | Average Gain (XZ-V)           | -3.0 dBi typ    |  |   |
|                |               | Return Loss (min)             | 9.5 dB min.     |  |   |
| Antenna (Chip) | 2500AT44M0400 | Frequency (MHz)               | 2300 - 2700     | Case<br>L= 0.394<br>(10.0)<br>W=0.394<br>(10.0)<br>T= 0.031<br>(0.80)      | Newest chip antenna release dedicated for WiMAX 2.3/2.5 GHz band. Excellent wideband performance in a compact profile. Also suitable for worldwide WiMAX application (US, Europe & Asia)  |
|                |               | Peak Gain (XZ-V)              | 2.5 dBi typ     |  |   |
|                |               | Average Gain (XZ-V)           | 0.5 dBi typ     |  |   |
|                |               | Return Loss (min)             | 9.5 dB min.     |  |   |
| Balun          | 2500BL14M050  | Frequency (MHz)               | 2300 - 2700     | Case 14-1<br>L= 0.063<br>(1.60)<br>W=0.031<br>(0.80)<br>T= 0.024<br>(0.60) | New 1:1 balun in EIA 0603 profile for WiMAX 2.3/2.5 GHz band. Excellent I.L, R.L and Phase difference performance over the entire band.   |
|                |               | Impedance Unbalanced/Balanced | 50/50           |  |   |
|                |               | Insertion Loss (max)          | 1.2 dB (Prelim) |  |   |
|                |               | Return Loss (min)             | 9.5 dB          |  |   |
|                |               | Phase Difference              | 180°±15°        |  |   |
|                |               | Amplitude Difference (max)    | 1.5 dB          |  |   |

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| PRODUCT | JTI P/N      | SPECS                         |                 | SIZE  | APPLICATION COMMENTS  |
|---------|--------------|-------------------------------|-----------------|---|---|
| Balun   | 2500BL14M100 | Frequency (MHz)               | 2300 - 2700     | Case 14-1<br>L= 0.063<br>(1.60)<br>W=0.031<br>(0.80)<br>T= 0.024<br>(0.60)  | New 2:1 balun in EIA 0603 profile for WiMAX 2.3/2.5 GHz band. Excellent I.L, R.L and Phase difference performance over the entire band. |
|         |              | Impedence Unbalanced/Balanced | 50/100          |   |   |
|         |              | Insertion Loss (max)          | 1.2 dB (Prelim) |   |   |
|         |              | Return Loss (min)             | 9.5 dB          |   |   |
|         |              | Phase Difference              | 180°±15°        |   |   |
|         |              | Amplitude Difference (max)    | 1.5 dB          |   |   |
| Balun   | 3600BL14M050 | Frequency (MHz)               | 3300 - 3900     | Case 14-1<br>L= 0.063<br>(1.60)<br>W=0.031<br>(0.80)<br>T= 0.024<br>(0.60)  | New 1:1 balun in EIA 0603 profile for WiMAX 3.3/3.9 GHz band. Excellent I.L, R.L and Phase difference performance over the entire band. |
|         |              | Impedence Unbalanced/Balanced | 50/50           |   |   |
|         |              | Insertion Loss (max)          | 1.2 dB (Prelim) |   |   |
|         |              | Return Loss (min)             | 9.5 dB          |   |   |
|         |              | Phase Difference              | 180°±15°        |   |   |
|         |              | Amplitude Difference (max)    | 1.5 dB          |   |   |
| Balun   | 3600BL14M100 | Frequency (MHz)               | 3300 - 3900     | Case 14-1<br>L= 0.063<br>(1.60)<br>W=0.031<br>(0.80)<br>T= 0.024<br>(0.60)  | New 2:1 balun in EIA 0603 profile for WiMAX 3.3/3.9 GHz band. Excellent I.L, R.L and Phase difference performance over the entire band. |
|         |              | Impedence Unbalanced/Balanced | 50/100          |   |   |
|         |              | Insertion Loss (max)          | 1.2 dB (Prelim) |   |   |
|         |              | Return Loss (min)             | 9.5 dB          |   |   |
|         |              | Phase Difference              | 180°±15°        |   |   |
|         |              | Amplitude Difference (max)    | 1.5 dB          |   |   |
| Balun   | 3700BL15B050 | Frequency (MHz)               | 3400 - 4000     | Case 15-1B<br>L= 0.079<br>(2.00)<br>W=0.049<br>(1.25)<br>T= 0.035<br>(0.90) | A 1:1 balun suitable for WiMAX 3.5 GHz application. Features a 3.4/4.0 GHz application band in an EIA 0805 profile.                     |
|         |              | Impedence Unbalanced/Balanced | 50/50           |   |   |
|         |              | Insertion Loss (max)          | 1.2 dB          |   |   |
|         |              | Return Loss (min)             | 9.5 dB          |   |   |
|         |              | Phase Difference              | 180°±25°        |   |   |
|         |              | Amplitude Difference (max)    | 2.0 dB          |   |   |
| Balun   | 3700BL15B100 | Frequency (MHz)               | 3400 - 4000     | Case 15-1B<br>L= 0.079<br>(2.00)<br>W=0.049<br>(1.25)<br>T= 0.035<br>(0.90) | A 2:1 balun suitable for WiMAX 3.5 GHz application. Features a 3.4/4.0 GHz application band in an EIA 0805 profile.                     |
|         |              | Impedence Unbalanced/Balanced | 50/100          |   |   |
|         |              | Insertion Loss (max)          | 1.0 dB          |   |   |
|         |              | Return Loss (min)             | 9.5 dB          |   |   |
|         |              | Phase Difference              | 180°± 20°       |   |   |
|         |              | Amplitude Difference (max)    | 1.0 dB          |   |   |

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|------------------|---------------|-------------------------------|--|---|---|
| Balun            | 3700BL15B200  | Frequency (MHz)               | 3400 - 4000                                      | Case 15-1B<br>L= 0.079<br>(2.00)<br>W=0.049<br>(1.25)<br>T= 0.035<br>(0.90) | A 4:1 balun suitable for WiMAX 3.5 GHz application. Features a 3.4/4.0 GHz application band in a EIA 0805 profile.  |
|                  |               | Impedence Unbalanced/Balanced | 50/200   |   |   |
|                  |               | Insertion Loss (max)          | 1.0 dB   |   |   |
|                  |               | Return Loss (min)             | 9.5 dB   |   |   |
|                  |               | Phase Difference              | 180°±10°   |   |   |
|                  |               | Amplitude Difference (max)    | 2.0 dB   |   |   |
| Balun Filter     | 2345FB39A0050 | Frequency (MHz)               | 2300 - 2390                                      | Case 39-2B<br>L= 0.098<br>(2.50)<br>W=0.079<br>(2.00)<br>T= 0.043<br>(1.10) | New Filter Balun for WiBro Applications. Features a passband of 2.3 - 2.39 GHz with integrated 1:1 balun. Good overall electrical performance.<br><br>Note: WiBro is Korean market's version of WiMAX |
|                  |               | Impedence Unbalanced/Balanced | 50/50  |   |   |
|                  |               | Insertion Loss (max)          | 3.2 dB   |   |   |
|                  |               | Return Loss (min)             | 11.73 dB   |   |   |
|                  |               | Phase Difference              | 180°±10°   |   |   |
|                  |               | Amplitude Difference (max)    | 1.5 dB   |   |   |
| Balun Filter     | 2595FB39A0050 | Frequency (MHz)               | 2500 - 2690                                      | Case 39-2B<br>L= 0.098<br>(2.50)<br>W=0.079<br>(2.00)<br>T= 0.043<br>(1.10) | New Filter Balun for BRS Applications. Features a passband of 2.5 - 2.69 GHz with integrated 1:1 balun. Good overall electrical performance.<br><br>Note: BRS - Broadband Radio Service               |
|                  |               | Impedence Unbalanced/Balanced | 50/50  |   |   |
|                  |               | Insertion Loss (max)          | 3.2 dB   |   |   |
|                  |               | Return Loss (min)             | 11.73 dB   |   |   |
|                  |               | Phase Difference              | 180°±10°   |   |   |
|                  |               | Amplitude Difference (max)    | 1.5 dB   |   |   |
| Balun Filter     | 3500FB39A0050 | Frequency (MHz)               | 3400 - 3600                                      | Case 39-2B<br>L= 0.098<br>(2.50)<br>W=0.079<br>(2.00)<br>T= 0.043<br>(1.10) | New Filter Balun for ETSI Applications. Features a passband of 3.4 - 3.6 GHz with integrated 1:1 balun.<br><br>Note: ETSI - European Telecom Std Institute  |
|                  |               | Impedence Unbalanced/Balanced | 50/50  |   |   |
|                  |               | Insertion Loss (max)          | 2.9 dB   |   |   |
|                  |               | Return Loss (min)             | 9.5 dB   |   |   |
|                  |               | Phase Difference              | 180°±12°   |   |   |
|                  |               | Amplitude Difference (max)    | 1.5 dB   |   |   |
| Band Pass Filter | 2500BP15M400  | Frequency (MHz)               | 2300 - 2700                                      | Case 15-3A<br>L= 0.079<br>(2.00)<br>W=0.049<br>(1.25)<br>T= 0.037<br>(0.95) | New WiMAX 2.3/2.5 GHz Band Pass Filter in EIA 0805 profile. Good I.L and harmonic rejection performance over entire band of operation.  |
|                  |               | Insertion Loss (max)          | 2.0 dB   |   |   |
|                  |               | Attenuation (min)             | 15 dB @ 100-1800 MHz<br>20 dB @ 3400 - 11700 MHz |   |   |
|                  |               | Return Loss (min)             | 9.5 dB   |   |   |
| Band Pass Filter | 2593BP44B186  | Frequency (MHz)               | 2500 - 2686                                      | Case 44-1<br>L= 0.299<br>(7.60)<br>W=0.138<br>(3.50)<br>T= 0.051<br>(1.30)  | 2.5 Ghz Band Pass Filter suitable for WiMAX 2.5 GHz application. Features excellent attenuation performance.  |
|                  |               | Insertion Loss (max)          | 2.0 dB   |   |   |
|                  |               | Attenuation (min)             | 40 dB @ 1870 - 2056 MHz                          |   |   |
|                  |               | Return Loss (min)             | 9.5 dB   |   |   |

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|------------------|---------------|----------------------|--|---|---|
| Band Pass Filter | 2600BP14M0200 | Frequency (MHz)      | 2300 - 2700  | Case 14-2<br>L= 0.063<br>(1.60)<br>W=0.031<br>(0.80)<br>T= 0.022<br>(0.55)  | New WiMAX 2.5 GHz BPF in EIA 0603 profile.<br>(T = 0.55 mm nom). Excellent attenuation<br>performance over entire band of operation                                 |
|                  |               | Insertion Loss (max) | 2.2 dB @ 25 dB<br>2.5 dB @ -40 - 85 dB   |   |   |
|                  |               | Attenuation (min)    | 30 @ 806 - 915MHz<br>30 @ 1710 - 1785MHz<br>30 @ 1850 - 1910MHz<br>30 @ 1920 - 1980MHz<br>13 @ 3300 - 3900MHz<br>20 @ 4900 - 5900MHz |   |   |
|                  |               | Return Loss (min)    | 9.5 dB   |   |   |
|                  |               |                      |  |   |   |
| Band Pass Filter | 3600BP14M600  | Frequency (MHz)      | 3300 - 3700  | Case 14-2<br>L= 0.063<br>(1.60)<br>W=0.031<br>(0.80)<br>T= 0.022<br>(0.55)  | New WiMAX 3.5 GHz BPF in EIA 0603 profile.<br>(T = 0.55 mm nom). Excellent I.L and attenuation<br>performance.  |
|                  |               | Insertion Loss (max) | 1.8 dB @ 25 dB<br>2.0 dB @ -40 - 85 dB   |   |   |
|                  |               | Attenuation (min)    | 30 @ 806 - 915MHz<br>30 @ 1710 - 1785MHz<br>30 @ 1850 - 1910MHz<br>30 @ 1920 - 1980MHz<br>31 @ 2400 - 2500MHz<br>18 @ 4900 - 5900MHz |   |   |
|                  |               | Return Loss (min)    | 12 dB  |   |   |
|                  |               |                      |  |   |   |
| Band Pass Filter | 3600BP15M600  | Frequency (MHz)      | 3300 - 3900 (Prelim)   | Case 15-3B<br>L= 0.079<br>(2.00)<br>W=0.049<br>(1.25)<br>T= 0.026<br>(0.65) | New WiMAX 3.3/3.9 Ghz Band Pass Filter in EIA<br>0805 profile. Good I.L, R.L performance over band<br>of operation.   |
|                  |               | Insertion Loss (max) | 1.8 dB (Prelim)  |   |   |
|                  |               | Attenuation (min)    | 15 dB @ 100 - 2600 MHz (Prelim)<br>9 dB @ 4400 MHz (Prelim)<br>20 dB @ 6000 - 9900 MHz (Prelim)                                      |   |   |
|                  |               | Return Loss (min)    | 9.5 dB (Prelim)  |   |   |
|                  |               |                      |  |   |   |
| Low Pass Filter  | 3550LP14A300  | Frequency (MHz)      | 3400 - 3700  | Case 14-1<br>L= 0.063<br>(1.60)<br>W=0.031<br>(0.80)<br>T= 0.024<br>(0.60)  | 3.5 GHz Low Pass Filter for WiMAX 3.5 GHz in<br>an EIA 0603 profile. Excellent I.L, R.L & harmonic<br>rejection performance throughout entire band of<br>operation. |
|                  |               | Insertion Loss (max) | 0.65 dB  |   |   |
|                  |               | Attenuation (min)    | 25 dB @ 2x $F_o$<br>25 dB @ 3x $F_o$   |   |   |
|                  |               | Return Loss (min)    | 14 dB  |   |   |
|                  |               |                      |  |   |   |

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