



# LTS100

LimitTester BASIC (BT100 add-on feature)



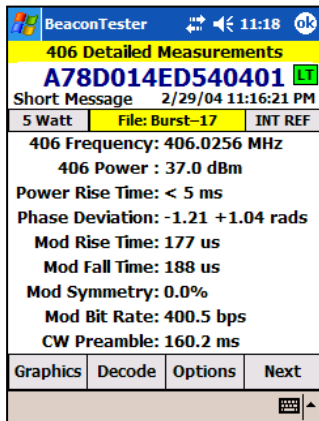
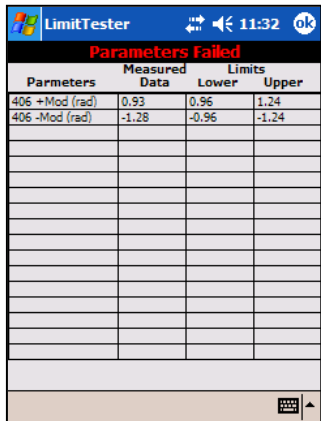
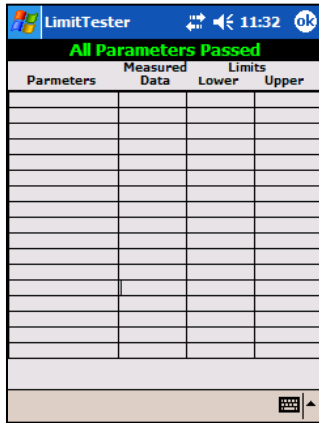
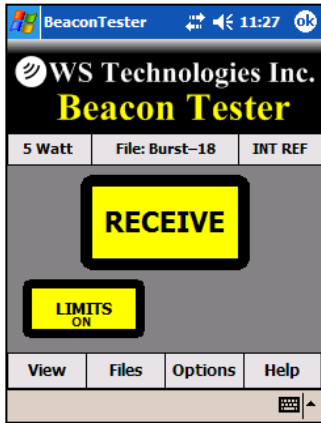
### Take the guess work out of testing beacons!

*Perfect companion to the BT100 series of Beacon Testers!*

*Ensure the beacons you test are tested thoroughly!*

The LTS100 LimitTester is an add-on feature to the industry standard BT100 series of Beacon Testers. The LTS100 verifies your Beacon test results against a defined set of limits and immediately shows if the beacon passes or fails! A report is generated showing all of the measured parameter names, the upper and lower limits, the measured values and a pass or fail indication for each parameter.

- you can select the measurements you want to test
- Test Report is in tabulated html format – interrogate on the fly, import into a spreadsheet, save electronically, or print as-is
- automatically determines measurement modes from BT100 settings
- re-test previous measurements to different limit settings



### LimitTester Report

A78D014ED540401

Organization:  
 Tested By:  
 Date: 3/1/04 12:13:44 AM  
 Tester Model/Serial No./File Name: BT100A/64021/Burst-20  
 Tester Cal Due Date: Aug 17, 2012  
 Tester Temperature: 25°C

Notes: Add text comments here.

| Parameters              | Measured Data | Lower Limit | Upper Limit | Pass/Fail |
|-------------------------|---------------|-------------|-------------|-----------|
| 406 Freq (Hz) (INT REF) | 406027474     | 406019575   | 406045425   | Pass      |
| 406 Power (dBm)         | 37.0          | 34          | 40          | Pass      |
| 406 Power Rise (ms)     | < 5.5 ms      | -           | 5.5         | Pass      |
| 406 +Mod (rad)          | 0.89          | 0.96        | 1.24        | Fail      |
| 406 -Mod (rad)          | -1.32         | -0.96       | -1.24       | Fail      |
| 406 Mod Rise (us)       | 165           | 40          | 260         | Pass      |
| 406 Mod Fall (us)       | 188           | 40          | 260         | Pass      |
| 406 Bit Rate (bps)      | 400.4         | 395.8       | 404.2       | Pass      |
| 406 Preamble (ms)       | 160.2         | 157.6       | 162.4       | Pass      |
| 406 Spectrum C1 (dB)    | <             | -20         | 3           | Pass      |
| 406 Spectrum C2 (dB)    | <             | -30         | 7           | Pass      |
| 406 Spectrum C3 (dB)    | <             | -35         | 12          | Pass      |
| 406 Spectrum C4 (dB)    | <             | -40         | 24          | Pass      |
| 406 BCH                 | Valid         | -           | -           | Pass      |

*The LTS100 LimitTester BASIC is a cost effective solution for aiding in BT100 Beacon Testing. For those that need a more advanced testing solution check out the more detailed LTS200 LimitTester ADVANCED.*

*For a LTS100 demonstration contact us for your free activation code.*

# LTS100 Specifications

| PARAMETER                   | UNITS                             | C/S T.001 Limits | BT100 Uncert | DEFAULT LIMITS (including BT100 Uncert) |              |       |
|-----------------------------|-----------------------------------|------------------|--------------|---|--------------|-------|
| <b>406 MHz</b>              |                                   |                  |              | <b>Lower</b>                            | <b>Upper</b> |       |
| 406 Frequency (Int Ref)     | Hz                                | ±5000            | ±425         | 406019575                               | 406045425    |       |
| 406 Frequency (Ext Ref)     | Hz                                | ±5000            | ±1           | 406019999                               | 406081001    |       |
| 406 Power Level             | 5 WATT                            | dBm              | 35 to 39     | ±1                                      | 34           | 40    |
|                             | INT ANT*                          | %                | n/a          |   | 5            | 105   |
|                             | EXT COAX*                         | %                | n/a          |   | 5            | 105   |
| 406 Power Rise Time         | ms                                | <5               | 0.5          | -                                       | -            | 5.5   |
| 406 PM +ve Phase Deviation  | rad                               | 1.0 to 1.2       | ±0.04        | 0.96                                    | -            | 1.24  |
| 406 PM -ve Phase Deviation  | rad                               | -1.0 to -1.2     | ±0.04        | -0.96                                   | -            | -1.24 |
| 406 PM Rise Time            | µs                                | 50 to 250        | ±10          | 40                                      | -            | 260   |
| 406 PM Fall Time            | µs                                | 50 to 250        | ±10          | 40                                      | -            | 260   |
| 406 PM Symmetry             | -                                 | ≤0.05            | ±0.005       | -                                       | -            | 0.055 |
| 406 PM Bit Rate             | Hz                                | 396 to 404       | ±0.2         | 395.8                                   | -            | 404.2 |
| 406 CW Preamble             | ms                                | 158.4 to 161.6   | ±0.8         | 157.6                                   | -            | 162.4 |
| 406 Spectral Mask           | Corner 1                          |                  | dBC   ±kHz   | -20                                     | -            | 3     |
|                             | Corner 2                          |                  | dBC   ±kHz   | -30                                     | -            | 7     |
|                             | Corner 3                          |                  | dBC   ±kHz   | -35                                     | -            | 12    |
|                             | Corner 4                          |                  | dBC   ±kHz   | -40                                     | -            | 24    |
| 406 Digital Message         | -                                 |                  |              | Verification of BCH1 & BCH2             |              |       |
| <b>121 &amp;/or 243 MHz</b> |                                   |                  |              | <b>Lower</b>                            | <b>Upper</b> |       |
| 121 Frequency (Int Ref)     | Hz                                | ±50 ppm          | ±150         | 121493825                               | 121506175    |       |
| 121 Frequency (Ext Ref)     | Hz                                | ±50 ppm          | ±30          | 121493895                               | 121506105    |       |
| 121 Power Level             | 5 WATT                            | dBm              | 14 to 30     | ±1.5                                    | 12.5         | 31.5  |
|                             | INT ANT*                          | %                | n/a          |   | 5            | 105   |
|                             | EXT COAX*                         | %                | n/a          |   | 5            | 105   |
| 243 Frequency (Int Ref)     | Hz                                | ±50 ppm          | ±300         | 242987650                               | 243012350    |       |
| 243 Frequency (Ext Ref)     | Hz                                | ±50 ppm          | ±30          | 242987820                               | 243012180    |       |
| 243 Power Level             | 5 WATT                            | dBm              | 14 to 30     | ±1.5                                    | 12.5         | 28.5  |
|                             | INT ANT*                          | %                | n/a          |   | 5            | 105   |
|                             | EXT COAX*                         | %                | n/a          |   | 5            | 105   |
| Sweep Direction             | UPWARDS, DOWNWARDS, or DON'T CARE |                  |              |   |              |       |
| Audio Freq - lower          | Hz                                | 300              | ±30          | 270                                     | -            |       |
| Audio Freq - upper          | Hz                                | 1600             | ±30          | -                                       | 1630         |       |
| Audio Sweep Range           | Hz                                | ≥700             | ±60          | 640                                     | 1360         |       |
| AM Sweep Rep Rate           | Hz                                | 2 to 4           | ±0.1         | 1.9                                     | 4.1          |       |
| AM Mod'n Factor             | %                                 | 85 to 100        | ±5           | 84.5                                    | 100          |       |
| AM Duty Cycle               | %                                 | 33 to 55         | ±2           | 31                                      | 57           |       |

\* Measurements made in the INT ANT or EXT COAX mode cannot determine the absolute output power of the beacon. The resulting measurement is a measure of the signal strength determined from the RSSI output from the receiver. A calibrated setup must be used in order to determine the absolute beacon power.

Developed and Manufactured in Canada by:

### Minimum Requirements:

- BT100 Series Beacon Tester
- BT100 software version 3.0 or greater
- Capability to transfer files from PC to PDA (ActiveSync™ or SD memory card)



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