

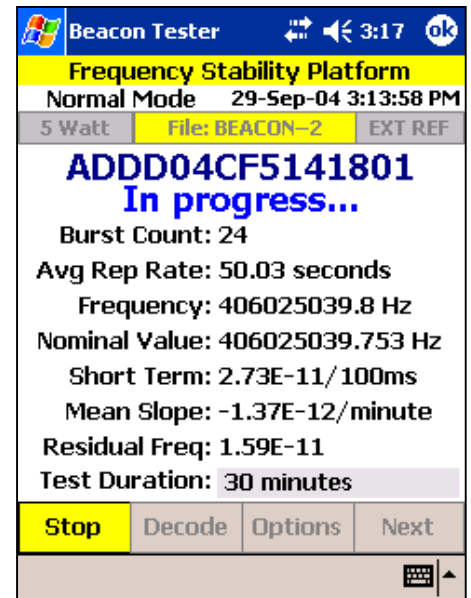
Introducing ... **BT100S**

**Beacon
Tester**

*with Frequency Stability
measurement capability!*

Take the very popular BT100A 406 Beacon Tester and add the capability to measure Frequency Stability and the result is the newest member of the BT100 family – the BT100S!

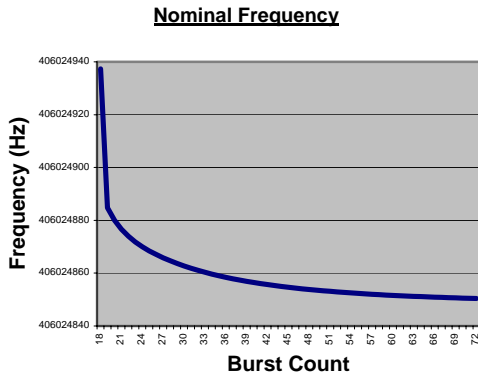
The BT100S is the smallest, most sophisticated, cost effective and easiest-to-use instrument available. Use it to measure frequency stability of any 406 MHz beacon. In addition to measuring all of the detailed parameters that the BT100A measures, the BT100S PDA screen displays Burst Count, Average Repetition Period, Frequency, Nominal Frequency, Short Term Stability, Medium Term – Mean Slope, Medium Term – Residual Frequency, and the user-determined test duration. The PDA screen is updated at every burst so you can monitor the progress of the test. In addition, a delimited text file is created for each measurement set, with details of each burst including Time & Date, Burst Count, UIN, Full HEX, 406 MHz Power, S1 S2 & S3 (this is the raw measured data as defined by C/S T.007), Repetition Period, Nominal Frequency, Short Term Stability, Medium Term – Mean Slope, Medium Term – Residual. Import this delimited text file into your favourite spreadsheet or database so you can select and graph only the data you want.



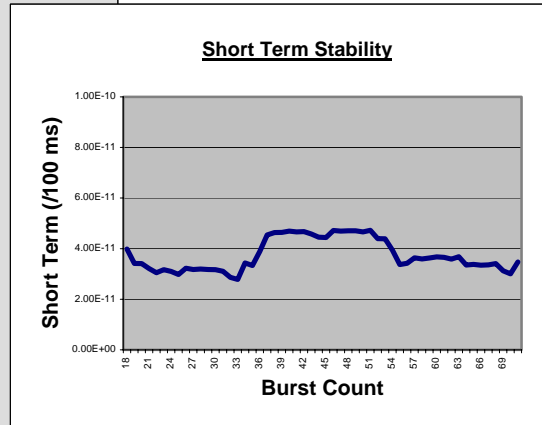
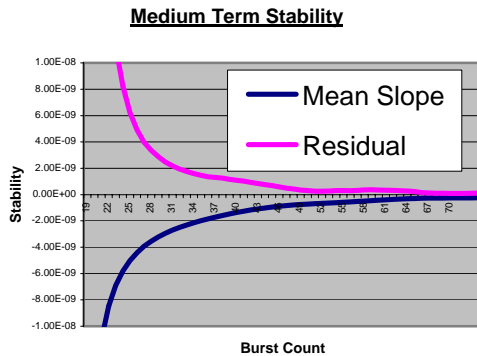
Why pay for and maintain another stable 10 MHz Reference. With the BT100S you use your own 10 MHz Reference. This is even more cost effective when you use more than one BT100S in your facility! This is the perfect instrument for your production facility to comply with the post-production test requirements of C/S T.007 Annex J. Furthermore, the delimited text file provides all information required in C/S T.007 for measuring Thermal Shock, Operating Lifetime, and Thermal Gradient – pre-qualify your designs before submitting to a test lab!

Example of delimited text file imported into Excel:

Date/Time	Burst	UIN	Full Hex	Power	S1	S2	S3	Rep Period	Nom Freq	Short Term	Mean Slope	Residual
				dBm	Hz	Hz	Hz	seconds	Hz	/100ms	/minute	
01-Oct-04 12:53:53 AM	1	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406025809.88	406025746.98	406025705.71	0				
01-Oct-04 12:54:43 AM	2	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024947.74	406024947.90	406024947.85	49.26				
01-Oct-04 12:55:33 AM	3	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024923.41	406024923.61	406024923.61	50.3				
01-Oct-04 12:56:21 AM	4	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024909.29	406024909.52	406024909.49	48.22				
01-Oct-04 12:57:09 AM	5	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024899.85	406024900.11	406024900.09	48.23				
01-Oct-04 12:57:59 AM	6	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024893.02	406024893.25	406024893.24	49.94				
01-Oct-04 12:58:51 AM	7	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024887.84	406024888.08	406024888.06	51.6				
01-Oct-04 12:59:42 AM	8	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024883.72	406024883.98	406024884.01	51.42				
01-Oct-04 1:00:33 AM	9	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024880.53	406024880.80	406024880.81	50.48				
01-Oct-04 1:01:22 AM	10	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024877.97	406024878.23	406024878.21	48.98				
01-Oct-04 1:02:13 AM	11	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024875.51	406024875.77	406024875.77	51.59				
01-Oct-04 1:03:04 AM	12	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024873.49	406024873.76	406024873.74	50.73				
01-Oct-04 1:03:53 AM	13	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024871.75	406024872.01	406024872.00	48.4				
01-Oct-04 1:04:42 AM	14	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024870.16	406024870.46	406024870.45	49.86				
01-Oct-04 1:05:34 AM	15	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024868.73	406024868.99	406024869.02	51.52				
01-Oct-04 1:06:26 AM	16	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024867.36	406024867.61	406024867.65	52.26				
01-Oct-04 1:07:17 AM	17	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.8	406024866.19	406024866.47	406024866.48	50.34				
01-Oct-04 1:08:05 AM	18	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024865.15	406024865.41	406024865.39	48.93	406024937.310	1.69E-08	-5.40E-08	4.28E-07
01-Oct-04 1:08:57 AM	19	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024864.16	406024864.42	406024864.43	51.23	406024884.770	3.99E-11	-1.10E-08	2.55E-08
01-Oct-04 1:09:45 AM	20	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024863.16	406024863.43	406024863.44	51.82	406024880.072	3.41E-11	-8.48E-09	1.62E-08
01-Oct-04 1:10:39 AM	21	ADDD04CF5141801	FFFE2F56EE8267A8A0C0086C56D0	36.3	406024862.27	406024862.54	406024862.54	50.65	406024876.675	3.41E-11	-6.90E-09	1.13E-08



Power	S1	S2	S3	Rep Period	Nom Freq	Short Term	Mean Slope	Residual
dBm	Hz	Hz	Hz	seconds	Hz	/100ms	/minute	
36.3	406024861.55	406024861.83	406024861.83	48.91	406024874.024	3.21E-11	-5.81E-09	8.22E-09
36.3	406024860.72	406024860.97	406024860.97	51.4	406024871.850	3.05E-11	-5.01E-09	6.23E-09
36.3	406024859.98	406024860.24	406024860.26	52.19	406024870.014	3.17E-11	-4.40E-09	4.90E-09
36.8	406024859.29	406024859.56	406024859.56	51.94	406024868.428	3.10E-11	-3.93E-09	3.97E-09
36.3	406024858.75	406024859.02	406024859.05	51.5	406024867.041	2.98E-11	-3.54E-09	3.35E-09
36.3	406024858.17	406024858.44	406024858.46	52.25	406024865.799	3.22E-11	-3.22E-09	2.88E-09
36.3	406024857.55	406024857.86	406024857.87	52.2	406024864.665	3.17E-11	-2.94E-09	2.47E-09
36.3	406024857.06	406024857.36	406024857.35	52.11	406024863.640	3.19E-11	-2.70E-09	2.18E-09
36.3	406024856.58	406024856.85	406024856.83	51.09	406024862.700	3.17E-11	-2.49E-09	1.94E-09
36.3	406024856.21	406024856.49	406024856.50	49.89	406024861.837	3.17E-11	-2.31E-09	1.75E-09
36.3	406024855.80	406024856.08	406024856.09	51.51	406024861.039	3.10E-11	-2.14E-09	1.59E-09
36.3	406024855.42	406024855.69	406024855.70	52.25	406024860.300	2.86E-11	-1.99E-09	1.46E-09
36.3	406024855.02	406024855.30	406024855.33	52.21	406024859.614	2.78E-11	-1.85E-09	1.36E-09
36.3	406024854.91	406024855.18	406024855.23	50.25	406024858.987	3.43E-11	-1.72E-09	1.30E-09
36.3	406024854.68	406024854.92	406024854.93	49.76	406024858.405	3.33E-11	-1.59E-09	1.25E-09
36.3	406024854.32	406024854.55	406024854.61	51.35	406024857.858	3.89E-11	-1.47E-09	1.16E-09
36.3	406024854.06	406024854.30	406024854.36	51.99	406024857.352	4.54E-11	-1.37E-09	1.09E-09
36.3	406024853.81	406024854.10	406024854.07	50.92	406024856.882	4.64E-11	-1.27E-09	1.03E-09
36.3	406024853.58	406024853.86	406024853.86	47.66	406024856.439	4.64E-11	-1.17E-09	9.26E-10
36.3	406024853.34	406024853.61	406024853.63	48.91	406024856.029	4.69E-11	-1.09E-09	8.41E-10
36.3	406024853.07	406024853.35	406024853.37	51.22	406024855.646	4.66E-11	-1.02E-09	7.54E-10
36.3	406024852.86	406024853.16	406024853.15	51.83	406024855.289	4.67E-11	-9.58E-10	6.86E-10
36.3	406024852.67	406024852.92	406024852.94	51.33	406024854.951	4.58E-11	-8.97E-10	5.87E-10
36.3	406024852.47	406024852.72	406024852.74	50.29	406024854.634	4.45E-11	-8.43E-10	4.91E-10
36.3	406024852.34	406024852.62	406024852.63	49.92	406024854.344	4.44E-11	-7.92E-10	4.29E-10
06024852.04	406024852.30	406024852.34	406024852.34	51.61	406024854.065	4.72E-11	-7.54E-10	3.42E-10
06024851.90	406024852.17	406024852.17	406024852.17	50.9	406024853.805	4.70E-11	-7.21E-10	3.06E-10
06024851.74	406024852.01	406024852.02	406024852.02	48.77	406024853.556	4.71E-11	-6.90E-10	2.61E-10
06024851.61	406024851.92	406024851.92	406024851.92	48.61	406024853.324	4.71E-11	-6.59E-10	2.56E-10
06024851.49	406024851.77	406024851.77	406024851.77	48.91	406024853.106	4.66E-11	-6.34E-10	2.70E-10
06024851.38	406024851.65	406024851.68	406024851.68	51.4	406024852.904	4.73E-11	-6.12E-10	3.08E-10
06024851.25	406024851.54	406024851.56	406024851.56	50.49	406024852.700	4.39E-11	-5.82E-10	3.14E-10



Examples of Excel graphs

Developed and manufactured by:

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BT100S Specifications

Parameter	Accuracy	
406 MHz Measurements		
Measure all Cospas-Sarsat Frequency Channels		
Decode all Cospas-Sarsat Protocols		
UIN & Full HEX		
Frequency (using INT REF) (resolution = 100 Hz)		
Leaving Factory	± 100 Hz	
Long Term	± 0.4 ppm/year	
Frequency (using EXT REF) (resolution = 1 Hz)	± 1 Hz	
Frequency * Stability	Nominal Frequency	
	Short Term	
	Medium Term - Mean Slope	± 2.5 x 10 ⁻¹¹
	Medium Term - Residual	
Power	± 1 dB	
Power Rise Time	± 0.5 ms	
Phase Modulation	± 0.04 rad	
Modulation Rise and Fall Times	± 10 µs	
Modulation Symmetry	± 0.005	
Modulation Bit Rate	± 0.2 bps	
121.5 MHz Measurements		
Frequency (using INT REF) (resolution = 100 Hz)		
Leaving Factory	± 100 Hz	
Long Term	± 0.4 ppm/year	
Frequency (using EXT REF) (resolution = 1 Hz)	± 11 Hz	
Peak Power	± 1.5 dB	
Sweep Direction	-	
Audio Frequency	± 30 Hz	
Sweep Range	± 60 Hz	
Duty Cycle	± 2%	
Modulation Factor	± 5%	
Sweep Repetition Rate	± 0.1 Hz	

* User must supply a stable 10 MHz Reference Signal