BT200 Beacon Tester
Technical Specification
Revision 2.10

Description	BT200	add ELT	add AIS (Rx)	add AIS (Rx&Tx)	add SGB	Uncertainty
406 MHz First Generation Beacon (FGB)						
Measure all Cospas-Sarsat Frequency Channels	•					-
15 HEX ID and Full HEX ID	•					-
Decode Message – EPIRB & PLB	•					-
Decode Message – ELT		•				-
Frequency Leaving Factory Long Term	•					 ± 50 Hz ± 1.0 ppm/yr
Power Output	•					± 0.25 dB*
Power Rise Time	•					± 0.5 ms
Pre-Burst Level	•					± 1 dB
Pulse Repetition Period	•					± 10 ms
Bit Rate	•					± 0.1 bps
CW Preamble Time	•					± 0.8 ms
Total Transmission Time	•					± 0.8 ms
Rise Time	•					± 10 µs
Fall Time	•					± 10 µs
Phase Deviation: Positive	•					± 0.02 rad
Phase Deviation: Negative	•					± 0.02 rad
Modulation Phase Symmetry	•					± 0.005
406 MHz Second Generation Beacon (SGB)						
Decode Message SGB EPIRB & PLB					•	-
Decode Message SGB ELT (ELT & SGB Options Required)		•			•	-
23 HEX ID and Full HEX ID					•	-
Power Output					•	± 0.25 dB*
Power Rise/Fall Time					•	± 0.1 ms
Pre-Burst and Post-Burst Level					•	± 1.0 dB
Total Transmission Time					•	± 0.25 ms
Nominal Frequency Leaving Factory Long Term					•	 ± 50 Hz ± 1.0 ppm/yr
Chip Rate Average					•	± 0.05 cps
Chip Rate Variation					•	± 0.05 cps²
I, Q Relative Offset					•	± 0.5 %
I, Q Peak to Peak Amplitude					•	± 0.5 %
Out-of-Band Emissions					•	± 0.1 %
Error Vector Magnitude (EVM)					•	± 1.0 %
Graphic Measurements						
-406 Spectrum Mask Graphics Data	•				•	-
-406 Output Power During Burst Graphic Data	•				•	-
-406 Phase Modulation Graphics Data	•					-
121.5 MHz Measurements						
Frequency Leaving Factory Long Term	•					 ± 60 Hz ± 1.0 ppm/yr
Peak Power	•					± 1.0 dB
Sweep Direction	•					-
Audio Frequency – Upper and Lower	•					± 30 Hz
Audio Sweep Range	•					± 60 Hz
Modulation Index	•					± 5%
Sweep Rep Rate	•					± 0.1 Hz
Duty Cycle	•					± 2%
243 MHz Measurements						
Frequency Leaving Factory Long Term		•				 ± 60 Hz ± 1.0 ppm/yr
Peak Power		•				± 1.0 dB
Sweep Direction		•				-
Audio Frequency – Upper and Lower		•				± 30 Hz
Sweep Range		•				± 60 Hz
Modulation Index		•				± 5%
Sweep Rep Rate		•				± 0.1 Hz
Duty Cycle		•				± 2%

***Between 35-39 dBm**

AIS Measurements	BT200	add ELT	add AIS (Rx)	add AIS (Rx&Tx)	add SGB	Uncertainty
Frequency (AIS1 & AIS2) Leaving Factory Long Term			•	•		 ± 60 Hz ± 1.0 ppm/yr
Power			•	•		± 1.0 dB
AIS Messages Decode			•	•		-
Tx AIS Transceiver (Class A & B)				•		-

Miscellaneous Parameters		
RF Range (Antenna mode)		
406 MHz 121.5 MHz/243 MHz AIS		>5 m >1 m >5 m
RF Input VSWR		1.20:1
Dynamic Range		
Direct Mode	121.5 MHz	+5 dBm to +35 dBm
	243 MHz	+5 dBm to +35 dBm
	406 MHz	+20 dBm to +40 dBm
	AIS	+20 dBm to +43 dBm
Screen Box Mode	121.5 MHz	-16 dBm to +20 dBm
	243 MHz	-17 dBm to +24 dBm
	406 MHz	-4 dBm to +30 dBm
	AIS	+10 dBm to +30 dBm
Maximum Input Power (Continuous RF)		+34.8 dBm
Maximum Input Power (406, 121.5, 243)		+40 dBm, Max 1 s @ ≤ 20% Duty Cycle
Maximum Input Power (AIS)		+43 dBm, Max 27 mS @ ≤ 2% Duty Cycle
Operating Temperature Range		+5°C to +50°C
Storage Temperature Range		-20°C to +60°C
Ingress Rating		IP67
RF Input Cable Termination		BNC-female
Dimensions and Weight BT200: w x l x h mm (inches) Weight		 135 (5.31) x 70 (2.76) x 20.0 (0.79) 222 g (0.49 lbs)
Hard Case: w x l x h mm (inches) Weight		363 (14.29) x 284 (11.18) x 124 (4.88) 1.90 kg (4.2 lbs)

Certified System ISO 9001:2015

Developed and manufactured in Canada

WS Technologies Inc.

Kelowna, BC CANADA

Preliminary - Subject to change

AIRCRAFT ELECTRONICS ASSOCIATION MEMBER

RTCM

RTCA

Patent Pending

wst.ca