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August 28, 2008

FAA Office of Spectrum Policy and Management AJW-6
800 Independence Avenue SW (Room 715)
Washington, DC 20591
Attn: Mr Oscar Alvarez
Cc: Mr. Michael Richmond

Subject: FAA Notification of Thales ATM, Inc. Application for FCC Certification of ILS420

Mr. Alvarez,

Thales ATM, Inc. is currently developing an Instrument Landing System (ILS) in accordance with FAA and ICAO requirements as specified in FAA-E-2970. The ILS420, when certified, will be used as a navigation aid in the National Air Space (NAS) System.

As required by CFR47 paragraph 87.147(d), Thales ATM, Inc. hereby submits notification of FCC Certification application for the ILS420. The equipment consists of two subsystem equipment. Characteristics for each are as follows:

Localizer:

- FCC Identification: BOJILS420LOC
- Manufacturer and Model number: Thales ATM, Inc. model ILS420-LOC
- Rated Transmitter Output Power: Carrier :15W nominal, software adjustable from 0 to 20.0 Watts
Sideband: 0.5W nominal, software adjustable from 0 to 0.8 Watts.
- Frequency range (capable of tuning): Operable across band of 108.1 to 111.95 MHz
- Method of tuning: Digital frequency synthesizer
- Channeling capability: Supports the standard ICAO specified channels over stated frequency range
selectable in 50 kHz increments.
- Frequency stability (transmitter): +/-5ppm
- Emission bandwidth (s): 9.5 kHz
- Emission Type: 9K50A3N
- Spectral emission plots(s): Refer to figures 1, 2, and 3 excerpt out of Garwood Laboratories, Inc test report (FR2900ASC) for occupied bandwidth. Refer also to section 6.3 from same report for spurious emissions data and harmonic levels. Note that the plot shows emission levels out to 1.5 GHz which is beyond the 13th harmonic.
- Equipment use: The equipment submitted is ground based – it is not airborne avionics
- Antenna Characteristics: LPD array, horizontally polarized.
- Emission Characteristic: Continuous Amplitude Modulation, tones of 90, 150, and 1024 Hz
- Receiver RF characteristics: The equipment submitted is a transmitter only.

Glide Slope:

- FCC Identification: BOJILS420GS
- Manufacturer and Model number: Thales ATM, Inc. model ILS420-GS
- Rated Transmitter Output Power: Carrier : 3W nominal, software adjustable from 0 to 1.0 Watt
Sideband : 0.1W nominal, software adjustable from 0 to 0.5 Watts.
- Frequency range (capable of tuning): Operable across band of 329.15 to 335.00 MHz
- Method of tuning: Digital frequency synthesizer
- Channeling capability: Supports the standard ICAO specified channels over stated frequency range
selectable in 50 kHz increments.
- Frequency stability (transmitter): +/-5ppm
- Emission bandwidth (s): 10 kHz
- Emission Type: 10K0A3N
- Spectral emission plots(s): Refer to figures 4, 5, and 6 excerpt out of Garwood Laboratories, Inc test report (FR2900BSC) for occupied bandwidth. Refer also to section 6.3 from same report for spurious emissions data and harmonic levels. Note that the plot shows emission levels out to 5.0 GHz which is beyond the 14th harmonic.
- Equipment use: The equipment submitted is ground based – it is not airborne avionics
- Antenna Characteristics: Dipole array, horizontally polarized.
- Emission Characteristic: Continuous Amplitude Modulation, tones of 90, and 150 Hz
- Receiver RF characteristics: The equipment submitted is a transmitter only.

If you require any additional information, please contact myself (Mr. Steve Woelfle) via telephone at (913) 422-2600 x5495 or email at steve.woelfle@us.thalesatm.com.

As you know, the FCC will not act on the grant of certification until it receives the FAA's determination regarding whether it objects to the application for equipment authorization. Please proceed with your review process and issue a letter of concurrence so we may complete the FCC certification process.

Thank you for your prompt attention to this notification.



Steve Woelfle
ILS420 Systems Engineer



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GARWOOD LABORATORIES, INC.

7829 Industry Avenue, Pico Rivera, CA 90660

Phone: 888-427-4111 Fax: 562-949-8757

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Report No: FR2900ASC

Revision No: 2

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FCC TEST REPORT FOR THALES ATM, INC.

Section 2.1049: Occupied Bandwidth

Figure 1: Occupied Bandwidth Combined @ 111.5MHz

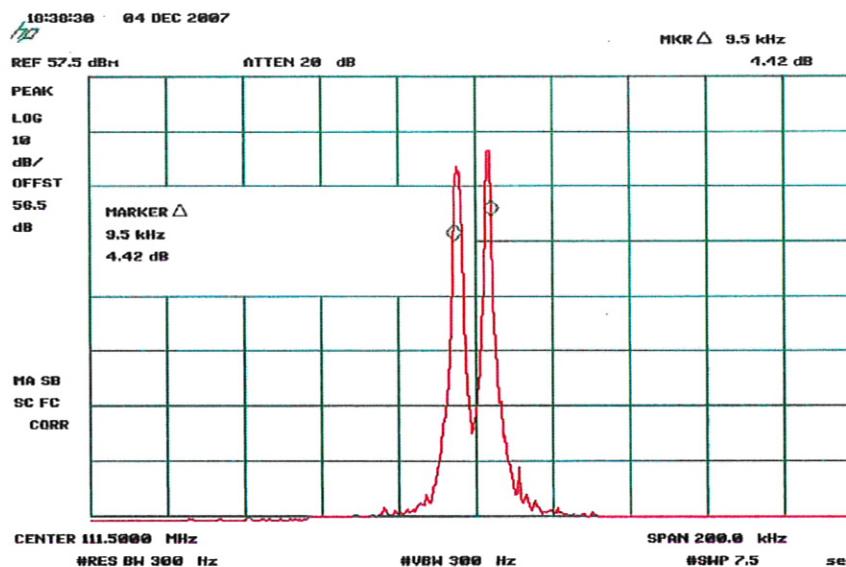
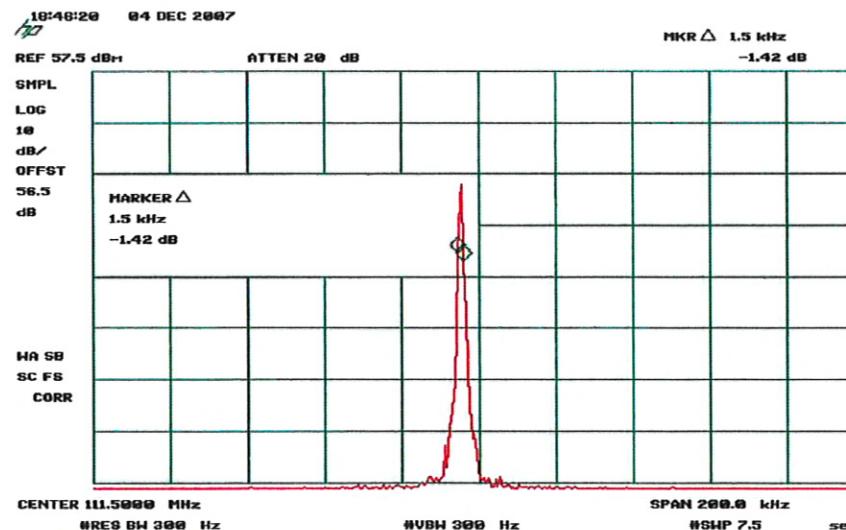


Figure 2: Occupied Bandwidth CLR @ 111.5MHz





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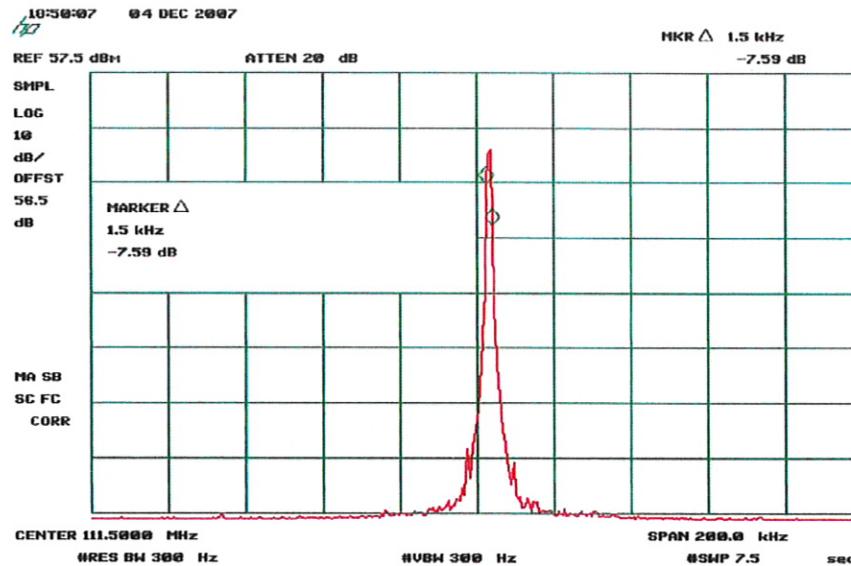
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Figure 3: Occupied Bandwidth CRS @ 111.5MHz





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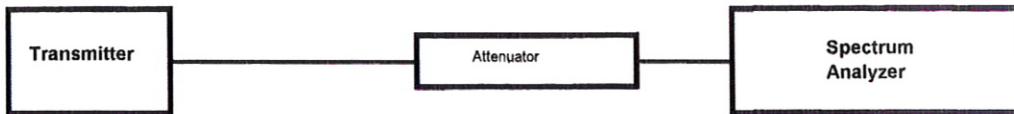
6.3 Spurious Emissions At Antenna Terminals Test Results

Part 2.1051 Spurious Emissions

EUT: Localizer

Frequency (MHz)	Spurious Frequency (MHz)	Level Below Carrier (dB)
111.5	223	64.48
	334.5	64.06
	446	64.08
	557.5	63.92
	669	63.55
	780.5	62.88
	892	62.48
	1003.5	63.15
	1115	62.57

Test Configuration:





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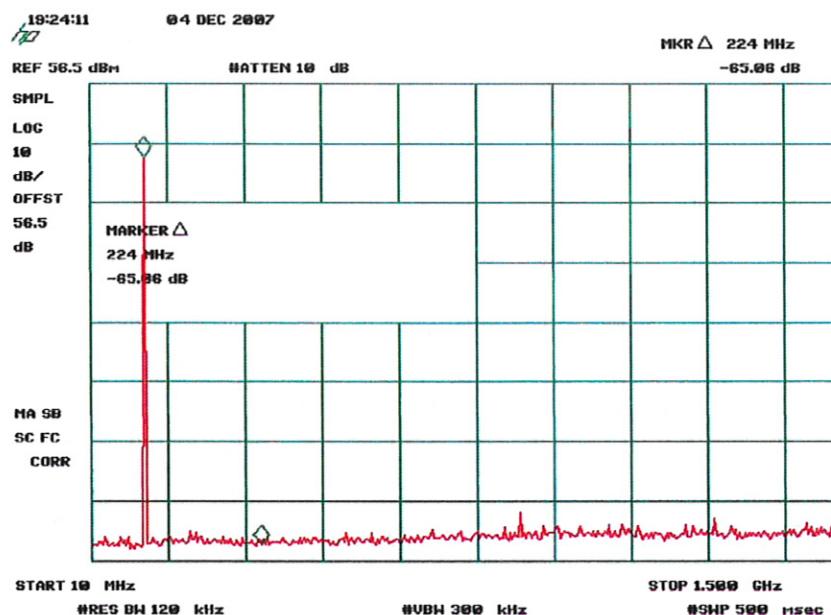
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FCC TEST REPORT FOR THALES ATM, INC.

Section 2.1051: Spurious Response at Antenna Terminals

Spurious Response @ 111.5MHz



Range: 10MHz to 1.5GHz



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Figure 4: Occupied Bandwidth Combined @ 334.4MHz

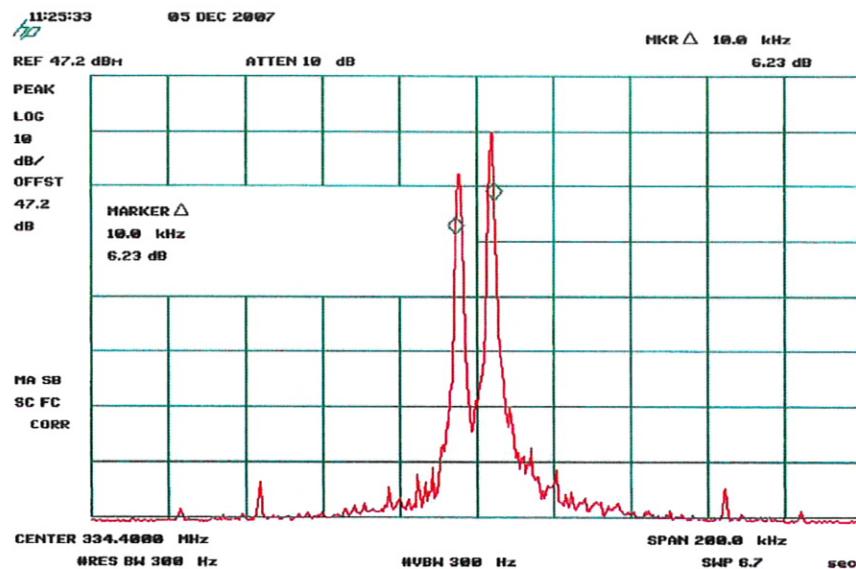
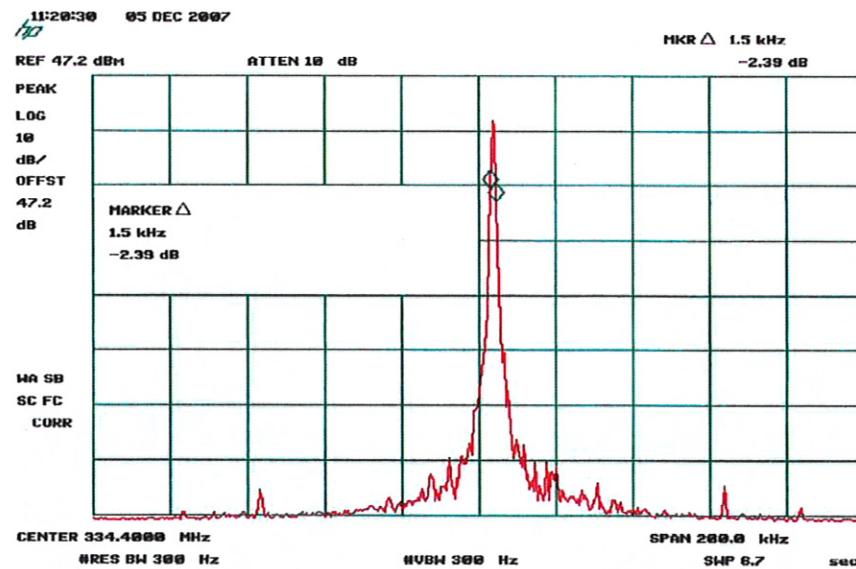


Figure 5: Occupied Bandwidth CRS @ 334.4MHz





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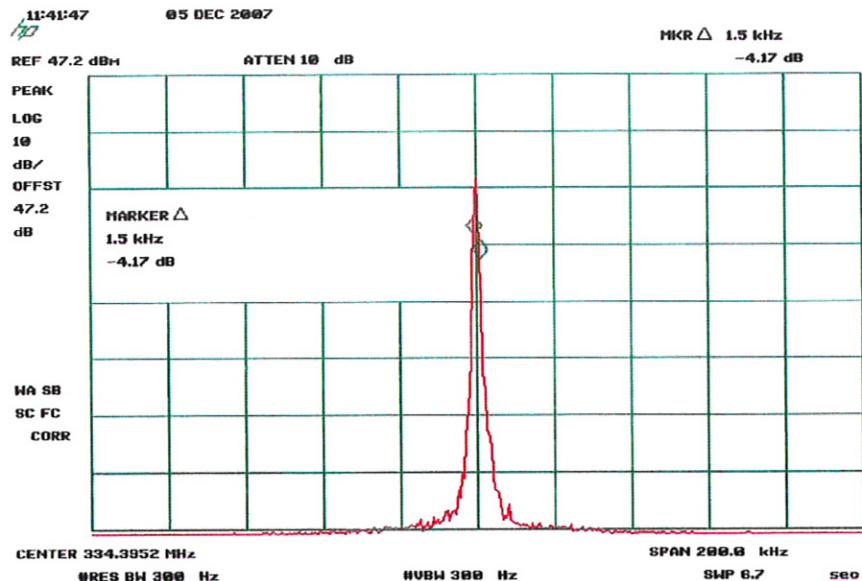
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Figure 6: Occupied Bandwidth CLR @ 334.4MHz





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6.3 Spurious Emissions At Antenna Terminals Test Results

Glideslope

Part 2.1051 Spurious Emissions

EUT: Glide Slope

Frequency (MHz)	Spurious Frequency (MHz)	Level Below Carrier (dB)
334.4	668.8	60.27
	1003.2	66.1
	1337.6	65.83
	1672	65.35
	2006.4	64.85
	2340.8	64.55
	2675.2	64.69
	3009.6	64.33
	3344	64.99

Test Configuration:





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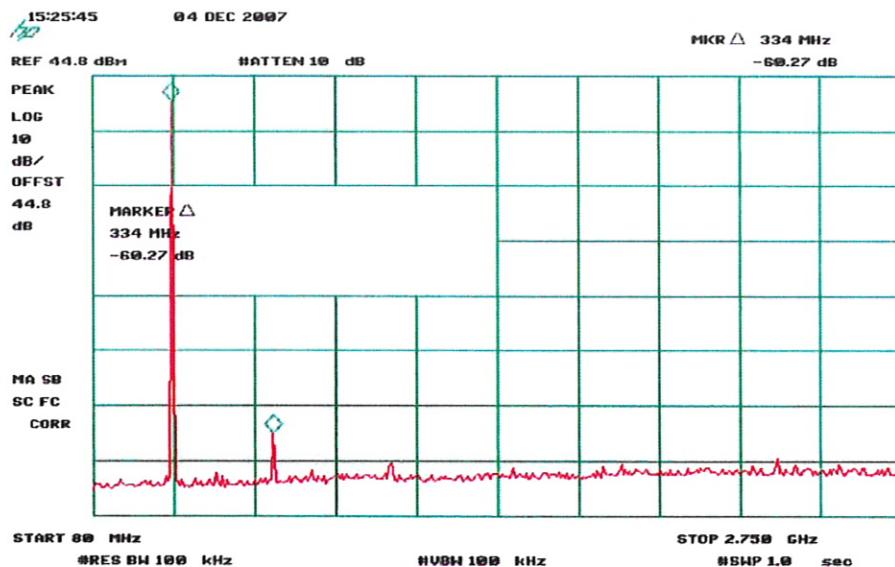
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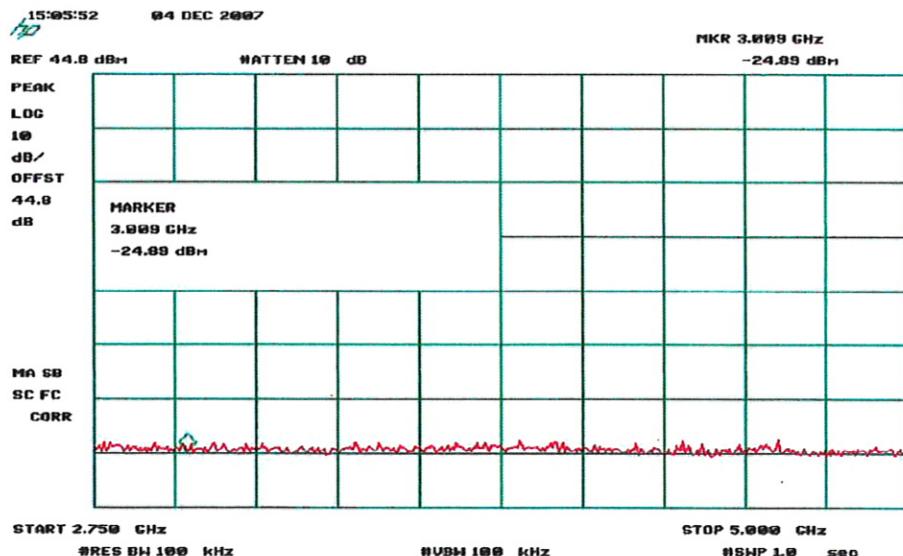
FCC TEST REPORT FOR THALES ATM, INC.

Section 2.1051: Spurious Response @ Antenna Terminals

Spurious Response @ 334.4MHz



Range 1: 80MHz to 2.75GHz



Range 2: 2.75GHz to 5GHz