

# VIAVI

## ATB-7300NG

### Avionics NAV Bench Test Set

<b>Signal Generator</b>	
Frequency Range	100 kHz to 6 GHz 1 Hz resolution
Frequency Accuracy	±0.1 ppm
<b>RF Level</b>	
RF Output Port	1 MHz to 400 MHz ±1.2 dB (-125 dBm to +4 dBm) 400 MHz to 3 GHz ±0.9 dB (-125 dBm to +4 dBm) 3 GHz to 6 GHz ±1.6 dB (-125 dBm to +4 dBm)
<b>Spurious</b>	
Phase Noise	-114 dBc/Hz at 10kHz offset
Harmonics	< -33 dBc
Non-Harmonics	< -50 dBc

<b>MKR Generator</b>	
<b>Tone Settings</b>	
Frequency Range	30 Hz to 7,400 Hz
Resolution	1 Hz
<b>Default</b>	
Outer	400 Hz
Middle	1.300 kHz
Inner	3.000 kHz
<b>% Modulation</b>	
Range	0-99%
Resolution	1%
Default	95%
<b>IDENT</b>	
<b>Outer</b>	
Dot Time	0 ms, fixed
<b>Gap Time</b>	
Range	50 ms to 250 ms
<b>Resolution</b>	
Default	125 ms
<b>Dash Time</b>	
Range	150 ms to 750 ms
Resolution	1 ms
Default	375 ms
<b>MIDDLE</b>	
Dot Time	125 ms, fixed
Gap Time	125 ms, fixed
Dash Time	375 ms, fixed
<b>INNER</b>	
Dot Time	83 ms, fixed



**MKR Generator continued**

Gap Time	83 ms, fixed
Dash Time	0 ms, fixed

**ILS Generator****Settings****Phase Shift**

Range	0.0 to 359.9°
Resolution	0.1°
Default	0.0°
Total MOD	Not to exceed 99% LOC includes 1,020 Hz IDENT modulation See *IDENT SPECIFIC DATA*

**DDM Settings****Range**

(Glideslope)	0.000 to 0.800 DDM
(Localizer)	0.000 to 0.400 DDM
Resolution	0.001 DDM
Default	0.000 DDM

**Total System Error**

(Glideslope)	±0.001 DDM from 0.000 to 0.045 DDM ±2% of setting from 0.045 to 0.400 DDM
(Localizer)	±0.001 DDM from 0.000 to 0.045 DDM ±2% of setting from 0.045 to 0.200 DDM

**Glideslope and Localizer Tone Settings****Frequency**

Range	90 Hz setting range: 72 Hz to 108 Hz 150 Hz setting range: 120 Hz to 180 Hz
Resolution	1 Hz
Accuracy	±0.01%
Distortion	<0.40% THD
Modulation	90 and 150 Hz Total MOD not to exceed 99%
Default	20%
Overall Accuracy	±2% for 5% to 90% AM

**VOR Generator****Direction****Bearing**

Range	000.0° to 359.9°
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Resolution	0.1°
Radial Accuracy	±0.05°

**Tone Settings**

Frequencies	30 VAR and 30 REF Freq
Range	20 Hz to 40 Hz
Resolution	1 Hz
Default	30 Hz

**9960 Frequency**

Range	9 kHz to 11 kHz
Resolution	1 Hz
Default	9,960 Hz
Accuracy	±2% of setting
Distortion	<0.40% THD
Modulation	30 VAR and 9,960 MOD
Range	Total % MOD not to exceed 99% Includes 1,020 Hz IDENT modulation See *IDENT SPECIFIC DATA*
Default	30%
Overall Accuracy	±2% for 5% to 90% AM

**Frequency Deviation**

Range	240 Hz to 540 Hz
Resolution	1 Hz
Default	480 Hz

**IDENT (ADF, ILS LOC AND VOR)****IDENT Code**

Valid Characters	A-Z, 0-9
Length	1 to 5 characters
Default	IDENT

**Word Rate**

Range	1 sec. to 65 sec.
Default	10 sec.
Resolution	1 sec.

**Frequency**

Range	10 Hz to 18 kHz
Resolution	1 Hz
Default	1,020 Hz
Accuracy	±0.01%

**Modulation**

Range	Total % MOD not to exceed 99%
Resolution	0.01%
Default	0.00%
Overall Accuracy	±2% for 5% to 90% AM
Distortion	<0.40% THD

**IDENT (ADF, ILS LOC AND VOR) continued****Dot Time**

Range	50 ms to 250 ms
Default	150 ms
Resolution	1 ms

**Gap (Dot/Dash) Time**

Range	50 ms to 250 ms
Default	150 ms
Resolution	1 ms

**Dash Time**

Range	150 ms to 750 ms
Default	450 ms
Resolution	1 ms

**Character Spacing**

Range	150 ms to 750 ms
Default	450 ms
Resolution	1 ms

**VHF COMM GENERATOR****MODES****AM Mode**

Modulation	
Frequency Range (per Tone)	30 Hz to 18 kHz
Default	1 kHz
Resolution	1 Hz
Accuracy	±1% from 10% to 90%
Range	Total % MOD not to exceed 99%
Default (Per Tone)	30%
Distortion	<0.40% THD

**SELCAL Mode user selectable tone set with programmable tone periods.****SELCAL Settings**

P1 and P2 Codes	
Range	2 characters
Valid Characters	A through H, J through M, P through S

**VHF COMM GENERATOR continued**

P1 and P2 Tones	
<i>Frequencies</i>	
Range	Set from code, 312.6 Hz to 1,479.1 Hz

**Pulse MOD**

Range	0.00% to 99%
	Applies to ALL pulses including test tone

Resolution	0.01%
Default	90.00%

**Timing**

P1 and P2 Time	
Range	0.000 to 2.000 sec.
Resolution	0.001 sec.
Default	1.000 sec.

**Gap Time**

Range	0 to 999 ms
Resolution	1 ms
Default	200 ms

**Test Tone**

Frequency	
Range	10 Hz to 18 kHz
Resolution	1 ms
Default	1020 Hz

**Test Tone MOD**

Range	0.00% to 99%
Resolution	0.01%
Default	30.00%
Enable	ON (Checked) or OFF (Unchecked)

**General Information****Environmental**

Operating temperature	0° - 50° C
Storage temperature	-40° - 71° C
Humidity	95% to 40° C (in accordance with MIL-PRF-28800F)
Altitude	4,600 m
Functional shock	30 G (in accordance with MILPRF-28800F)
Random vibration	5 Hz - 500 Hz (in accordance with MIL-PRF-28800F)

**Remote Control Interface**

Ethernet
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**Regulatory**

Safety compliance	IEC / EN 61010-1
EMC compliance	IEC / EN 61326-1
	IEC / EN 61000-3-2
	IEC / EN 61000-3-3
	MIL-PRF-28800F Class 3

**Mechanical**

Rack units	mA-1302: 2U x 19"
Dimensions	mA-1302: 432 mm (W) x 88 mm (H) x 435 mm (D)

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**General Information continued**

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Weight mA-1302: 10.5 kg (23.1 lbs)

Acoustic emissions 78 LWA dB (max),  
63 LWA dB (typical)

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**Ports and Connections - Front\***

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RF OUTPUT - SMA female (1 total)

USB 3.0 Type A (4 total)

Gigabit Ethernet (1 total)

DisplayPort(1 total)

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**Ports and Connections - Rear\***

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1588v2 (1 total)

\* These are the connectors currently available for use.

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**Calibration**

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A small, green, rectangular electronic device with two SMA connectors on the top and bottom, and a small display screen on the front.

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