

Data Sheet

# VIAVI

Specifications for the

## ALT-8000

FMCW/Pulse Radio Altimeter Test Set

### General

#### User Interface

Display	12" color LCD, sun light readable with back light
Controls	Touch-screen
Antenna Couplers	TX and RX
Coupler Loss Compensation	0 to 19.9 dB

#### TX/RX Direct Connection Ports

Impedance	50 $\Omega$
SWR	TX 2.5:1 RX 3:1
Connector	TNC x 2 (single TX/RX channel)

#### Receiver

RF Input Frequency	Range: 4.20 to 4.40 GHz (ITAR Limited)
--------------------	--

#### FMCW/CDF FMCW

Frequency Measurement	Range: 4.20 to 4.40 GHz (ITAR Limited) Accuracy: $\pm 5$ MHz
-----------------------	---

RF TX Power Input Tracking	Range: 10 mW (+10 dBm) to 2 W (+33 dBm)
RF TX Power Measurement	Range: 4 mW (+6 dBm) to 2 W (+33 dBm) Accuracy: $\pm 2$ dB
FM Sweep Rate Measurement	Range: 50 to 400 Hz Accuracy: $\pm 5$ Hz
FM Deviation	Range: 20 to 100 MHz

#### Pulse

Frequency Measurement	Range: 4.20 to 4.40 GHz (ITAR Limited) Accuracy: $\pm 10$ MHz
Power Measurement	Range: 1 W (+30 dBm) to 300 W (+54 dBm) peak Accuracy: $\pm 2$ dB
TX Pulse Width Measurement	Range: 20 ns to 400 ns Accuracy: $\pm 10$ ns
TX Pulse PRF Measurement	Range: 2 to 30 KHz Accuracy: $\pm 5\%$

#### Generator

##### FMCW

Linear Altitude Simulation	Range: -20 to 5,500 ft Resolution: 1 ft. increments Accuracy: (-20 to 5,500 ft) $\pm 1.5$ ft or 2% RMS, (whichever is greater)
----------------------------	--

##### Pulse

Linear Altitude Simulation	Range: 50 to 5,500 ft* Resolution: 1 ft increments Accuracy: $\pm 1.5$ ft or 2% RMS, (whichever is greater)
----------------------------	---

\* Note: lower altitude limit determined by connecting RF coax cable length



Generator (continued)	
<b>Linear Altitude Rate</b>	Range: 1 to 10,000 fpm
	Resolution: 1 ft. increments
<b>Test Cable (automatic compensation)</b>	Test Cable Length: 1 to 100 ft
	Test Cable Loss: 0 to 9.9 dB
<b>AID (direct connect)</b>	Fixed Selectable: 0, 20, 40, 57 or 80 ft
	User Entered: 0 to 99 ft
<b>Altitude Offset</b>	-25 to 100 ft
RF Level	
Manual Mode (FM/CW)	Range: -84 to +9 dBm (varies with cable loss)
	Accuracy: ±4 dB
Manual Mode (Pulse)	Range: -76 to +17 dBm
	Accuracy: ±4 dB
Auto Mode	TX Power – Height Path Loss- Scattering Loss- Offset
RF Level Offset (auto)	-20 to +20 dB
<b>RF Path Loss Simulation</b>	0 to 5,500 ft
<b>Frequency Stability</b>	±1 ppm

## Environmental

Operational Temperature	-20° to 55°C (-4° to 131°F)
Storage Temperature	-30° to 71°C (-22° to 159.8°F)
Altitude	≤10,000 meters

## Physical Characteristics

Dimensions	Test set only	10.6 x 13.9x 3.4 in (H x W x D) (27.0 x 35.5 x 8.7 cm)
	w/standard accessories	12 x 30.5x 22.5 in (30.5 x 77.5 x 57.2 cm)
Weight	15.5 lbs (7.03 kg) test set only	
	62 lbs (28.12 kg) shipping weight	

## Certifications

Test Set	
Operational Humidity	MIL-PRF-28800F, Class 2
Storage Humidity	MIL-PRF-28800F, Class 2
Vibration Limits	MIL-PRF-28800F, Class 2
Shock, Functional	MIL-PRF-28800F, Class 2
Transit Drop	MIL-PRF-28800F, Class 2
Drip Proof	MIL-PRF-28800F, Class 2
Dust	MIL-PRF-28800F, Class 2
Salt	MIL-PRF-28800F, Class 2
Explosive Atmosphere	MIL-STD-810F, Method 511.4, Procedure 1
Safety Compliance	UL-61010:2001
	CSA 22.2 No 1010.1
WEEE	
RoHS	
EMC	
Emissions	MIL-PRF28800F Class 2
	EN 61326:1998 Class A
	EN 61000-3-2 EN 61000-3-3
Immunity	MIL-PRF28800F Class 2
	EN 61326:1998 Class A
External AC-DC Converter	
Safety Compliance	UL 1950 DS
	CSA 22.2 No. 234
	VDE EN 60 950
EMI/RFI Compliance	FCC Docket 20780 Curve "B" EMC EN 61326
Transit Case	
Drop Test	FED-STD-101C Method 5007.1 Paragraph 6.3, Procedure A, Level A
Falling Dart Impact	ATA 300 Category I
Vibration, Loose Cargo	FED-STD-101C Method 5019
Vibration, Sweep	ATA 300 Category I
Simulated Rainfall	MIL-STD-810F Method 506.4, Procedure II of 4.1.2
	FED-STD-101C Method 5009.1 Sec 6.7.1
	MIL-STD-810F Method 512.4
Immersion	MIL-STD-810F Method 512.4



**emitec**  
industrial

Emitec Messtechnik AG  
Birkenstrasse 47  
6343 Rotkreuz

+41 41 748 60 10  
info@emitec.ch  
www.emitec-industrial.ch



Emitec Group  
#1 in Test & Measurement, worldwide.

Contact Us +1 316 522 4981  
AvComm.Sales@viavisolutions.com

To reach the VIAVI office nearest you, visit  
viavisolutions.com/contact.

© 2024 VIAVI Solutions Inc.  
Product specifications and descriptions in this document are subject to change without notice.  
Patented as described at  
viavisolutions.com/patents  
ALT8000-ds-avi-nse-ae  
30187395 905 0424