7200 Configurable Automated Test Set

AEROFLEX
A passion for performance.

A complete software-defined radio automated test platform with options for production testing of Ground and Portable Radio systems

Flexible Configuration

- Micro ATE configurations with built-in signal switching for total test automation
- General purpose instrument configurations with high performance front panel oscilloscope and DMM connections
- Multiple signal generation and measurement channels available

Broadband Frequency Coverage

- DC to 2.6 GHz standard
- 90 MHz instantaneous bandwidth standard

Software Defined Radio Ready

- SCA compatible architecture
- Powerful and expandable real-time baseband processing power

Robust Packaging

- MIL-PRF-28800F Class 3
- Rack mount option

Advanced Software Capabilities

- State-of-the-art and highly intuitive touch-screen based user interface
- Built-in test executive with breakthrough automatic test execution optimization for reduced test times

The Aeroflex 7200 Configurable Automated Test Set provides software defined radio (SDR) manufacturers and users with the premier synthetic instrument platform for production test available today, while providing future-proof support for next generation radio systems. The 7200 is a powerful communication radio production test platform, capable of testing advanced current and future radio systems.

Baseline standard features like very wide, high performance, 90 MHz instantaneous digitization and signal generation bandwidths, excellent phase noise performance across a 2.6 GHz range of operation with fast hopping capability, coupled with impressive real-time processing power and state-of-the-art data transport mechanisms make the 7200 platform truly unique. The 7200 is the result of applying decades of experience in developing test instrumentation for both military and commercial products. It combines innovative design and Aeroflex patented technologies with valued feedback from our customers to remain their test solution provider of choice.

The 7200 belongs to our 7000 Series product family and is based on the new Aeroflex Common Platform (CP). The Common Platform provides the most capable, flexible and scalable synthetic test instrumentation architecture in the industry. If our standard 7200 configurations do not fully match certain requirements then our state-of-the-art modular hardware and software components, leveraging open industry standards, allow Aeroflex to configure a 7200 to meet customer needs today while providing unmatched upgrade and obsolescence protection in the future.

One box that does the work of many

Figure 1: The 7200 takes the place of an entire suite of test equipment

Comprehensive "ATE-in-a-Box" Test Solution

The 7200 is a complete radio test system in one small and portable package and even includes a MicroATE option with built-in signal switching capabilities for fully automated testing. The 7200 provides the functionality of many traditional instruments in a dramatically reduced footprint, and for a fraction of the cost. Standard instrumentation functions include:

RF Signal Generator	Tracking Generator
RF Measurement Receiver	Power Meter
Spectrum Analyzer	Digital Oscilloscope
Audio Generator	Digital Multimeter
Audio Analyzer	Distortion Meter
SINAD Meter	Frequency Counter
Bit Error Rate (BER) Analyzer	Frequency Reference

Signal Switching Matrix (MicroATE configuration)

The 7200 platform also includes many options not normally found in Commercial-Off-The-Shelf (COTS) test instrumentation.

See your Aeroflex representative for custom configurations and option availability. Generally, the only external equipment required for fully automated testing are power supplies for the Device Under Test (DUT) and amplifiers or attenuators for high power applications. Even these external elements can be integrated under the control of the 7200 via several standard interfaces to maintain fully automated test capabilities.

Industry Standards

Unless they add significant value for our customers, we don't like proprietary components and interfaces any more than you do. That is why the 7200 and all of our CP based products were developed to leverage a tremendous number of open industry standards for both hardware and software components.

Figure 2 -LXI Class B compliant with IEEE 1588 synchronization of better than 50 ns over Ethernet

Future-Proof Design

Aeroflex incorporated both current and anticipated future technology requirements from the very beginnings of our Common Platform and 7200 development. This includes the ability to configure support for advanced communications systems like JTRS, JTRS-compliant/SCA systems and several emerging commercial standards for 4th generation wireless communications. Aeroflex surveyed and analyzed the future of these technologies and developed the CP architecture to handle the necessary upgrades and growth that would be required of instrumentation for the next 5-10 years. All CP based products share the same software architecture, and many of the hardware building blocks are compatible from the hand-held platform all the way up to integrated systems. Since they share common hardware and software building blocks, Aeroflex can start with any of the standard product configurations and add on functionality from many of the others. The resulting products provide Aeroflex customers with the most comprehensive and future-proof instrumentation available that can be tailored to suit their specific needs.

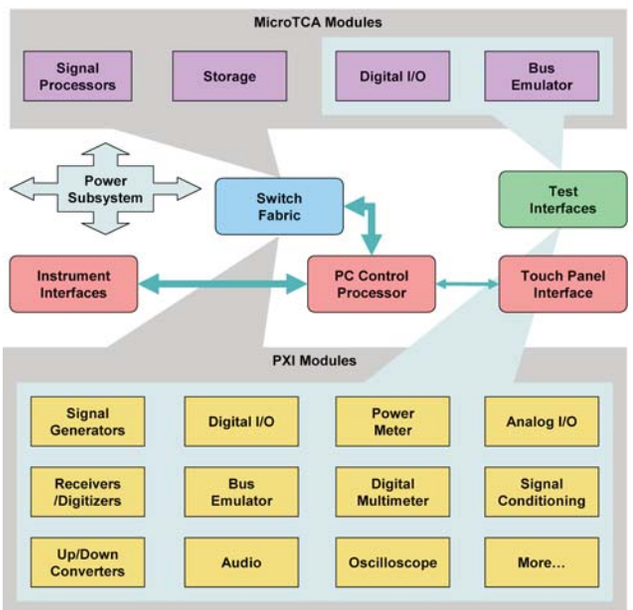

Figure 3 – 7200 Hardware Architecture

Automatic Test Capabilities

The Aeroflex 7200 includes an advanced real-time control system that works in conjunction with a built-in test executive to provide unequalled levels of test automation. The full-featured test sequencer is based on the Python interpretive programming language with a control system operating in State Space. It allows easy definition of test sequences using the library of extended test commands provided, as well as providing an ideal environment for the development of new signal processing or test sequencing algorithms in the powerful Python language, using either interpreted or compiled modules. This is combined with the State Space control system to allow full automation of tests of arbitrary complexity.

User Interface

With a 12.1 inch high resolution touch screen based user interface, the 7200 provides the most advanced and user friendly operator interface in the industry. It's highly intuitive design is a result of 1000's of research and development hours focused on user experience, graphical design and content depiction, and modern user interface techniques applied to the unique needs of test instrumentation and its operating environments.

Figure 4 – State-of-the-Art Touch Screen User Interface

The modern and highly intuitive Graphical User Interface (GUI) provides access to all stimulus and measurement capabilities of the hardware and software. This functionality includes tester configuration, test automation programming, data analysis and archiving, calibration, system diagnostics and manual operations.

Signal Modulation and Demodulation

Over many years Aeroflex has developed and refined its powerful software package called IQ Creator™, which allows users to define arbitrary waveforms and load them into our various RF signal generators, whether they are standalone instruments or radio test sets. The software offers a wide variety of predefined waveforms such as FDMA, TDMA, CDMA, and OFDM standards, or the user can build his or her own from scratch, including Spread Spectrum and Frequency Hopping waveforms. This IQ Creator™ software has been integrated into the 7200 and is directly available through the user interface.

Digital Modulation Types Available through the Embedded IQ Creator™ Software Include*

User Defined

Arbitrary Waveforms

General

AM, FM, PM, PSK, FSK, MSK, QAM modulation; User defined PSK and QAM mapping; Tones; Nyquist, Root Nyquist, Low Pass, Gaussian and user defined filters; PRBS, fixed pattern and user-defined data sources; Generic frame editor; 4 markers; Multi-carrier

TDMA Digital Standards

GSM 900, 1800, 1900; EDGE; Combined GSM/EDGE; TETRA DECT; VDL-Modes 2, 3, 4; Generic frame editor; RF burst or IQ profile; Automatic burst control (marker); Multi-carrier

Impairments

I/Q skew, carrier leak and gain imbalance, Gaussian noise (AWGN)

WiMAX

802.16 (2004 & 2005) OFDMA

WLAN

802.11a,b,g, Multi-carrier

CDMA Digital Standards

CDMAone (IS-95), 3GPP TDD-LCR, CDMA2000 (release C) TD-SCDMA (TSM) (v3.0.0), 1 xEVDO, Clipping, 3GPP FDD (release 6), Multi-carrier, HSDPA

Graphics

FFT, Amplitude v time, Vector, Phase v time, Constellation, Frequency v time, CCDF, Zoom mode, Code domain power, 2 markers, I/Q v time, Save or print, I/Q wrap v time

*Note that some of the modulation types listed are optional upgrades.

Calibration

The 7200 hosts its own calibration software that controls externally connected instrumentation to perform its entire system calibration in a semi-automated manner. Hook-up diagrams are displayed on the screen once the operator has decided to run a particular system calibration, allowing the operator to follow the instructions and then walk away while the unit performs its automated system calibration. The calibration techniques are state-of-the-art and very fast and accurate. No more large ATE stations, with their racks of equipment, are required. The 7200 can be calibrated anywhere in the world by technicians with very little training since the 7200 does most of the work. Calibration data can be saved or restored easily.

Ask your Aeroflex sales representative for more information about option availability or custom configurations of the 7200 - the most advanced synthetic test platform available.

SPECIFICATIONS

(Standard General Purpose Configuration)

RF GENERATOR

RF Frequency

Frequency Range

1.0 MHz to 2.6 GHz

Frequency Accuracy

Same as timebase

Frequency Resolution

1 Hz

RF Output Level

T/R Port

-30 dBm to -130 dBm

GEN Port

+10 dBm to -110 dBm

Accuracy

Gen Port

±1.0 dB (>-110 dBm)

±3.0 dB (≤-110 dBm)

T/R Port

±1.0 dB (>-120 dBm)

±2.5 dB (≤-120 dBm, >-130 dBm)

Resolution

Display Resolution

0.1 dB

Step Size

0.1 dB

Port VSWR 50 Ohm

T/R Port

<1.2:1 *<1.05 GHz*

<1.3:1 *>1.05 GHz to 2.6 GHz*

Gen Port

<1.5:1 *1.0 MHz to 1.0 GHz*

<1.9:1 *1.0 GHz to 2.6 GHz (with attenuation)*

SSB Phase Noise

Typical Phase Noise (Normal mode)

RF Frequency	*dBc/Hz @ 20 kHz offset*
1 MHz	-131
100 MHz	-102
500 MHz	-102
800 MHz	-100
1200 MHz	-98
1700 MHz	-100
2000 MHz	-97
2350 MHz	-96
2600 MHz	-99

RF Generator Spurious

Harmonics

<-30 dBc

Non-harmonics

<-55 dBc

RF Generator Residual

FM Residual

<15 Hz rms in 300 Hz to 3 kHz BW

AM Residual

<0.1% rms in 300 Hz to 3 kHz BW

RF Generator Modulations

Selections

NONE, FM, AM, PM, SSB USB, SSB LSB, AM NRZ, FM NRZ, PM NRZ, SSB USB NRZ, SSB LSB NRZ, I/Q File, I/Q Python

FM Deviation

Range

±1.0 Hz to ±150 kHz

Accuracy

±3% of setting (from ±1 kHz to ±100 kHz deviation, 20 Hz to 15 kHz rate)

Rate

0 Hz to 40 kHz

FM Deviation Resolution

.1 Hz

Waveform

Sine, square, triangle, ramp

THD (Total Harmonic Distortion)

<1% (1 kHz rate, 6 kHz deviation, 300 Hz to 3 KHz, Sine)

AM Modulation

Range

0.1% to 100%

Accuracy

±1% modulation from 10% to 90%

Rate

0 Hz to 40 kHz

AM Modulation Resolution

0.1%

Waveform

Sine, square, triangle, ramp

THD (Total Harmonic Distortion)

<1% (1 kHz rate, 30 to 70% AM, 300 Hz to 3 kHz, Sine)

PM Deviation

Range

0.1 radians to 10 radians

Rate

10 Hz to 40 kHz

Accuracy

±5% of setting

PM Deviation Resolution

<0.1 radians

Waveform

Sine, square, triangle, ramp

THD (Total Harmonic Distortion)

<1.0%

Internal Single-Sideband (SSB)

Modulation Selection

Upper-Sideband (USB) or Lower-Sideband (LSB)

Modulation Range

0% to 100%

Resolution

0.1%

Rate

300 Hz to 3 kHz

Waveform

Sine, square, triangle and ramp

I/Q FILE

Modulation Capability

Allows user to "RUN" arbitrary waveforms as modulation source

Types

Browse and load I/Q creator file

RF Generator Modulation (External Input)

Types

AM, FM, PM

Sources

Audio 1

Accuracy

Audio In: With 1 Vrms, AM/FM/PM have same characteristics as internal sources, ±10% of indicated setting. [Audio 1, Input from 20 Hz to 15 kHz (300 Hz to 3 kHz SSB), unbalanced].

RF RECEIVER

RF Frequency

Frequency Range

1.0 MHz to 2.6 GHz

Resolution

1 Hz

Accuracy

Same as timebase

Input Reference Level Scale

Ant Port

10, 0, -10, -20, -40, -50, -70 dBm

T/R Port

+50, +40, +30, +20, 0, -10 dBm

RF Input Level

Max Input Level

ANT Port

+10 dBm, (damage will occur > +13 dBm)

T/R Port

T/R RF Input Power ON/OFF times:

Peak RF Power	*Max Time ON*	*Min Time OFF*
100 W	*90 seconds*	*3 minutes*
150 W	*30 seconds*	*3 minutes*
200 W	*15 seconds*	*3 minutes*

T/R Input Over Temp Screen activation:

Alarm	*Temperature*
ON	*>100°C*
OFF	*<100°C*

Note 1: Remove RF input power any time the Over temp indicator appears on screen.

Sensitivity

ANT Port

-113 dBm (>10 dB SINAD, FM, 1 kHz rate, 6 kHz Deviation, 25 kHz BW, 300 Hz to 3.4 kHz AF Filter)

Port VSWR 50 Ohm

ANT Port

<1.5:1 (RF freq. <1.05 GHz) < 1.9:1 (RF freq. >1.05 GHz to <2.6 GHz)

T/R Port

See Section 3.1.3 Generator T/R port VSWR

RF Receiver Demodulation

Selections

None, AM, FM, PM, USB, LSB and all digital formats in section 3.1.12 I/Q Gen

IF and Demod audio bandwidths / filters

Selectivity

AM/FM IF bandwidths

250 Hz, 3, 6.25, 12.5, 25, 50, 100 kHz

FM IF bandwidths

300 kHz, 500 kHz, 5 MHz

Other bandwidths available based on I/Q modulation scheme

DEMOD Audio Filters Selections

Filter	*Type*
NONE	No Filter
300 Hz	Low-Pass
5 kHz	Low-Pass
3 kHz	Low-Pass
15 kHz	Low-Pass
20 kHz	Low-Pass
0.3 to 3.0 kHz	Band-Pass
0.3 to 3.4 kHz	Band-Pass
0.3 to 5 kHz	Band-Pass
0.3 to 15 kHz	Band Pass
0.3 to 20 kHz	Band-Pass
300 Hz	High-Pass
40 kHz	Low-Pass

AUDIO ROUTING AND DEFINITION

Audio 1

Audio In

Audio In Balanced 600Ω

Audio 2

AF Gen Out

Demod Out

DD Gen Out

Audio in Balanced 600Ω

Audio Input Definition

Audio Input Characteristics for the following meters:

AF Counter, AF Level Meter, SINAD Meter, Distortion Meter, BER

Front Panel Audio Inputs

Audio 1, unbalanced, chassis reference

Audio 1 and Audio 2, balanced, 600Ω differential input

Audio Input Impedance Audio 1

Hi-Z (>50 kΩ) – unbalanced input

300 Ω - unbalanced input

150 Ω - unbalanced input

Audio Input Range

Frequency

0 to 40 kHz

Level

0.15 Vrms to 30 Vrms with Hi-Z Input Impedance and 600Ω balanced

Level

0.15 Vrms to 7 Vrms with 300Ω or 150Ω Input Impedance

Input Audio Filters Selections

Filter	*Type*
NONE	No Filter
300 Hz	Low-Pass
5 kHz	Low-Pass
3 kHz	Low-Pass
15 kHz	Low-Pass
20 kHz	Low-Pass
0.3 to 3.0 kHz	Band-Pass
0.3 to 3.4 kHz	Band-Pass
0.3 to 5 kHz	Band-Pass
0.3 to 15 kHz	Band Pass
0.3 to 20 kHz	Band-Pass
300 Hz	High-Pass
40 kHz	Low-Pass

METERS

RF Power Meter (Power measured in Receiver IF BW)

Measurement Port

T/R port and ANT port

Frequency Range

1.0 MHz to 2.6 GHz

Input Range

ANT Port

-100 dBm to +10 dBm

T/R Port

-60 dBm to +53 dBm (see duty cycle table in 3.2.2)

Resolution

4 digits for watts measurement or .01 dB for dBm measurement

Accuracy

TR Port

>.02 mW levels, ±10% power, ±1 count

ANT Port

>-100 dBm ±1.0 dB ±1 count (After Normalize Function)

Unit of Measure

Watts, mWatts and dBm (absolute and relative)

Span

5 kHz to 90 MHz

Receive RF Error Meter

Frequency Range

1 MHz to 2.6 GHz

Error Meter Range

0 to ±5 MHz from displayed receiver frequency

Resolution

1 Hz

Accuracy

Same as timebase, ±1 count

Sensitivity

ANT and T/R port, S/N >15 dB

AF Counter Meter

Range

0 to ±100 kHz

Accuracy

±1 Hz

Resolution

.1Hz

Meter Source

Audio Input

Audio 1 Input

DEMOD

AF Level Meter (Source: Audio Input)

Input Level Range

0 to 30 Vrms

Resolution

1 mV

Frequency Range

20 Hz to 40 kHz

Accuracy

5% (Unbalanced, Hi-Z, 300 Hz to 3 kHz, 0.1 to 30 Vrms)

AF Level Meter (Source: DEMOD)

Receive FM Deviation

Deviation Range

0 Hz to 150 kHz

Modulation Rate Range

20 Hz to 40 kHz

Accuracy

±5% plus source residual, ±1 count (1 to 150 kHz FM deviation, Modulation rate 1 kHz to 20 kHz). IF BW set appropriately for the received modulation BW)

Resolution

1 Hz

Sensitivity

ANT and T/R port, S/N >15 dB

Receive AM Modulation

Depth

0% to 100%

Modulation Rate Range

20 Hz to 40 kHz

Accuracy

±3.0% of reading from 30% to 90%

Resolution

1%

Sensitivity

ANT port, S/N >15 dB

Receive PM Modulation

Range

0.1 to 10 radians

Rate

100 Hz to 1 kHz

Accuracy

±5.0% of reading

Resolution

0.01 radians

Sensitivity

ANT port, S/N >15 dB

SINAD Meter

Range

0 to 60 dB

Accuracy

±1 dB ±1 count

Resolution

0.01 dB

Notch Frequency

10 Hz to 10 kHz

Meter Source

Audio Input

Audio 1 Input

DEMOD

Distortion Meter

Range

0.0% to 100.0%

Accuracy

<±0.5% (Distortion 1% to 10%, 5 kHz LP AF filter)

<±1.0% (Distortion 10% to 20%, 5 kHz LP AF filter)

Resolution

0.1%

Notch Frequency

10 Hz to 10 kHz

Meter Source

Audio Input

Audio 1 Input

DEMOD

Bit Error Rate (BER) Meter

Style

Decodes Non Return to Zero (NRZ) style data.

Range

1×10^{-1} to 1×10^{-5}

Data Rates

75, 150, 300, 600, 1200, 2400, 4800 bps and 16 kbps

Data Pattern Size

100 to 100000 bits

Data Pattern Type

Random, fixed and user defined

Accuracy

1×10^{-6}

Meter Source

Audio Input

Audio 1 input

DEMOD

AUDIO OUTPUT

Audio Frequency Generators

Output Ports

Audio 2

Range

0 Hz to 40 kHz (Sine only)

Resolution

0.1 Hz

Frequency Accuracy

Same as timebase

Output Level

1 mV to 7 Vrms into a 10 kΩ load

Level Accuracy

1% of setting (10 kΩ load)

Total Harmonic Distortion

<0.5% (1 kHz, 5 Vrms, 80 kHz BW, 10 k load, Sine)

<1.0% (Typical, 20 Hz to 20 kHz, 100 mV to 5 Vrms, 80 kHz BW, 10 k load, Sine)

Waveforms

Sine, square, triangle, ramp (10 Hz to 4 kHz, usable to 20 kHz)

Digital Data Generator

Style

Generates Non Return to Zero (NRZ) style data

Data Rates

75, 150, 300, 600, 1200, 2400, 4800 bps and 16 kbps

Data Production Rates

100 to 100000 bits

Data Pattern Type

Random, fixed and user defined

Pattern

PN9, PN10, PN11 PN12, PN15 sequence

Accuracy

1×10^{-8}

Source

Modulation output

Audio output

Level Accuracy

Range

0.1 V to 5.0 V (digital)

Resolution

0.1 V

Accuracy

+3%

SPECTRUM ANALYZER

Frequency

Range

1 MHz to 2.6 GHz (usable from 100 kHz)

Resolution

1 Hz

Frequency Accuracy

Same as frequency standard

Span

Span mode: Center/Span and Zero Span

Display/marker Accuracy

Span accuracy + frequency accuracy

Span Range

Selection list is 5 kHz to full, plus zero span

Span Accuracy

±1% of span width

Horizontal Resolution

Span/(sweep points-1)

LEVEL

Input Level Range

Ant port Selected: See 3.2.1 and 3.2.2 for Input Level Range

T/R port Selected: See 3.2.1 and 3.2.2 for Input Level Range

Reference Level Resolution

1 dB

Ref Level Units

dBm

Level Accuracy

±1 dB (Input Level Scale must be set and Normalize Function: See 3.2.1)

Residual Response

≤110 dBm input terminated with 50 ohm load

Harmonic Spurious

-55 dBc (Input Level of -30 dBm, Ref Level at -20 dBm)

Non-Harmonic Spurious

-60 dBc (Input Level of -30 dBm, Ref Level at -20 dBm)

3rd Order Intermodulation

-60 dBc (Input Level of -30 dBm, Ref Level at -20 dBm)

Displayed Average Noise Level (DANL)

dBm/Hz, 0 dB RF attenuation, 1 Hz RBW, averaging on, 50Ω termination from 100 MHz to 2.6 GHz: -147 dBm, (-150 dBm typical)

Vertical Scales

Logarithmic, 1 to 50 dB/division

Digitizer Dynamic Range

85 dB (maximum analysis BW 90 MHz, digitizer AGC resolution 14 bits

Bandwidth Switching Error

≤±0.1 dB 5 k reference RBW, (After Normalize)

Display Range

200 dB

Resolution Bandwidths

1 Hz to 500 kHz in 1, 2, 5 Sequence based on Analyzer span

FFT WINDOW

Rectangle, Blackman, Hanning, Hamming, Triangle, Kaiser, Flattop

OSCILLOSCOPE

Number of Channels

2

Bandwidth (-3 dB)

All Ranges expect 0.04 Vpp DC to 125 MHz

Range 0.04 Vpp DC to 100 MHz

Input Impedance

50Ω and 1 MΩ || 26 pF

Full-Scale Range and Programmable Vertical Offset

50 Ω		1 MΩ	
Range	**Vertical off-**	**Range**	**Vertical off-**
Vpp	**Range V**	**Vpp**	**Range V**
0.04	±0.8	0.04	±0.8
0.1	±0.8	0.1	±0.8
0.2	±0.8	0.2	±0.8
0.4	±0.8	0.4	±0.8
1.0	±6.5	1.0	±8.0
2.0	±6.0	2.0	±8.0
4.0	±5.0	4.0	±8.0
10	±2.0	10	±30
-	-	20	±25
-	-	40	±15

Accuracy

DC (0V offset)

±(1.5% of input +0.3% of FS + 200 µV)

AC

±2.5% Full Scale (1 MHz to 20 MHz)

Internal

Internal Sample Clock Frequency

250 MS/s sampling rate with decimation by n, 1 ≤n ≤65,535

Timebase Accuracy

±25 ppm (±0.0025%)

Input Coupling

AC, DC, GND AC coupling available on 1 MΩ only

Memory/Channel

64 MB

Trigger Modes

Auto, Normal, Single Shot

Trigger Sources

CH1, CH2, External

Timebase System

Internal sample clock: Freq 250 MS/s sampling rate

Internal accuracy: ±25 ppm (0.0025%)

DIGITAL MULTI-METER

DC Functions

DC Voltage Accuracy

±0.1% of full scale

DC Voltage Ranges

100 mV, 1 V, 10, 100 V, 300 V

DC Current Accuracy

±0.35% of full scale

DC Current Ranges

20 mA, 200 mA, 1 A, (10A with external shunt)

Resistance Accuracy

100Ω thru 1 MΩ: ±0.05% of full scale

10 MΩ ±0.2% of full scale

100 MΩ: <30 MΩ ±1.0%, >30 MΩ ±1.5% of full scale

Resistance Ranges

100Ω, 1 kΩ, 10 kΩ, 100 kΩ, 1 MΩ, 10 MΩ, 100 MΩ

Resolution

61/2 digits

AC Functions

AC Voltage Ranges

50 mV, 500 mV, 5 V, 50 V, 300 mV

AC Voltage Accuracy

50 mV, 500 mV scales: ±0.2% of full scale

5 V, 50 V, 300 V scales: ±0.8% of full scale

10 Hz to 20 kHz, usable to 300 kHz

AC Current Ranges

10 mA, 100 mA, 1 A, (10 A with external shunt)

AC Current Accuracy

10 mA and 100 mA scales: ±0.7% of full scale, 10 Hz to 30 kHz, 1A scale: ±0.7% of full scale, 10 Hz to 10 kHz

Resolution

61/2 digits

TIMEBASE

Standard Oscillator

Temperature Range

0°C To 50°C

Temperature Stability

Typically better than ±.01 ppm

Aging

0.001 ppm per day, 0.01 ppm per year

Warm-up Time

10 Minutes

DIMENSIONS AND WEIGHT

	cm	in
Height	20.32	8
Width	44.45	17.5
Depth	60.96	24
	kg	**lbs**
Weight	20.41	45

ENVIRONMENTAL

Operating Temperature

0 to 50°C (Tested in accordance with MIL-PRF-28800F Class 3)

Warm-up Time

15 minutes

Storage Temperature

-40 to 71°C (Tested in accordance with MIL-PRF-28800F Class 3)

Relative Humidity

80% up to 31 ºC decreasing linearly to 50% at 40ºC. (Tested in accordance with MIL-PRF-28800F Class 3)

Altitude

4,600 m (15,092 ft) (Tested in accordance with MIL-PRF-28800F Class 3)

Shock and Vibrations

30 G Shock (Functional Shock) 5-500 Hz random vibrations (Tested in accordance with MIL-PRF-28800F Class 3)

Use

Pollution degree 2

EMC

Mil-PRF-28800F EN61326-1: Class A EN61000-3-2 EN61000-3-3

Reliability

>2500 hours

SAFETY

Power Requirement

AC Voltage

100 to 250 VAC, 47 to 63 Hz

Mains Supply Voltage Fluctuations

≤10% of the nominal voltage

Fuse Requirements

10 A, 250 V, Type F

CHINA Beijing
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Fax: [+852] 2834 5364

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AEROFLEX
A passion for performance.

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Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.

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