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Advanced Test Equipment Rentals
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6080A/AN

SYNTHESIZED SIGNAL GENERATOR

Operator Manual

P/N 357748
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ACCESSORIES 1-4.

The accessories and manuals included with each signal generator are listed in Table 1-1.

The optional accessories available are listed in Table 1-2.

SIGNAL GENERATOR SPECIFICATIONS 1-5.

Table 1-3 lists the 6080A/AN specifications. Table 1-4 lists typical performance characteristics.

Table 1-1. Accessories Included with each Signal Generator

DESCRIPTION	PART NUMBER	QUANTITY
Operator Manual	857748	1
Service Manual	868906	1
Line Power Cord	284174	1
BNC Dust Cap	478982	2

Table 1-2. Optional Accessories

DESCRIPTION		ACCESSORY NO.
Rack Mount Kit	Includes M05-205-600 (5 1/4-inch Rack Mount Ears) and M00-280-610 (24-inch Rack Slides)	Y6001
IEEE-488 Shielded Cable, 1 meter		Y8021
IEEE-488 Shielded Cable, 2 meters		Y8022
IEEE-488 Shielded Cable, 4 meters		Y8023
Coaxial Cable, 50 ohms, 3 feet, BNC (m) both ends		Y9111
Coaxial Cable, 50 ohms, 6 feet, BNC (m) both ends		Y9112

Table 1-3. 6080A/AN Specifications

NOTE

Unless otherwise noted, the following performance is guaranteed over the specified environmental and AC power line conditions two hours after turn-on.

FREQUENCY (10-DIGIT DISPLAY)	
RANGE	0.50 to 1024 MHz in 7 bands:
BAND .50-15 MHz	0.50 to 14.999999 MHz,
BAND 15-32 MHz	15 to 31.999999 MHz,
BAND 32-64 MHz	32 to 63.999999 MHz,
BAND 64-128 MHz	64 to 127.999999 MHz,
BAND 128-256 MHz	128 to 255.999999 MHz,
BAND 256-512 MHz	256 to 511.999999 MHz,
BAND 512-1024 MHz	512 to 1024 MHz.
RESOLUTION	1 Hz
ACCURACY	Same as reference (See REFERENCE).
REFERENCE (Internal)	The unit operates on an internal 10 MHz Temperature Compensated Crystal Oscillator (TCXO). The frequency variation will be < 10 ppm peak to peak over the temperature range of 0 to +50°C. Internal reference signal (10 MHz) available at rear panel REF OUT connector, level > 0 dBm, terminated into 50 ohms. Frequency stability after 2 hour warmup is < ± 0.05 ppm/hour at +25°C ± 5°C.
REFERENCE (External)	Accepts 5 or 10 MHz signal. Level required is 0.5 to 2.0V RMS into 50 ohms termination.
AMPLITUDE (3 1/2-DIGIT DISPLAY)	
RANGE	+13 to −137 dBm
RESOLUTION	0.1 dB (< 1% or 1 nV in Volts). Annunciators for dB, dBm, V, mV, µV, dB mV, dB µV, dBf, and EMF.
ACCURACY	± 0.5 dB from +13 to −117 dBm ± 3 dB from −117 to −137 dBm
SOURCE VSWR	< 1.5:1 for levels below −10 dBm, < 2.5:1 elsewhere.
FLATNESS	± 1.0 dB @ +10 dBm.

Table 1-3. 6080A/AN Specifications (cont)

SPECTRAL PURITY (CW ONLY)	
NON-HARMONIC SPURIOUS	< −100 dBc for offsets greater than 15 kHz.
	NOTE *Fixed frequency spurs are < −100 dBc or < −140 dBm, whichever is larger.*
	NOTE *dBc refers to decibels relative to the carrier frequency, or in this case, relative to the signal level.*
HARMONICS / SUBHARMONICS	< −30 dBc for levels < +7 dBm.
POWER LINE SPURIOUS	< −40 dBc within ± 15 kHz of carrier.
RESIDUAL FM (RMS in 0.05- to 15-kHz band)	< 20 Hz
SSB PHASE NOISE	< −130 dBc/Hz @ 20 kHz offset for Frequency < 512 MHz < −124 dBc/Hz @ 20 kHz offset for Frequency > 512 MHz
RESIDUAL AM (in 0.05- to 15-kHz Band)	< −80 dBc. (.01%)
AMPLITUDE MODULATION (3-DIGIT DISPLAY) (Amplitude < 0 dBm)	
INDICATED DEPTH RANGE	0 to 99.9%.
RESOLUTION	0.1%.
ACCURACY (0 to 90%)	± 7% AM at 1 kHz rate
DISTORTION	< 5% Total Harmonic Distortion (THD) @ 50% AM (rates = 0.1, 1, 10 kHz)
BANDWIDTH (3 dB)	10 Hz to 100 kHz
INCIDENTAL FM	< 200 Hz at 1 kHz rate, 50% AM.
FREQUENCY MODULATION (3-DIGIT DISPLAY)	
DEVIATION RANGES	0 to 999 Hz 1 to 9.99 kHz 10 to 99.9 kHz 100 to 999 kHz 1 to 4 MHz
EXT RATES	DC to 100 kHz

Table 1-3. 6080A/AN Specifications (cont)

DEVIATION ..... (rates = .1, 1, 50 kHz)	DEV	RF Frequency
	0 to 1 kHz min	Frequency < 1 MHz
	0 to 10 kHz min	1 MHz < Frequency < 32 MHz
	0 to 100 kHz min	32 MHz < Frequency < 128 MHz
	0 to 1 MHz min	Frequency > 128 MHz
RESOLUTION	3 digits.	
ACCURACY ..... (measured vs. indicated deviation, 1 kHz rate)	± (5% + 10 Hz)	
DISTORTION ..... (does not include effects of residual FM)	< 5% THD for rates of 0.1, 1, and 50 kHz	
	< 2% THD for deviation < 20 kHz and 1 kHz rate	
INCIDENTAL AM	< 1% AM at 1-kHz rate, for peak deviation < 100 kHz	
PULSE MODULATION (RF Frequencies from 10 to 1024 MHz)		
ON/OFF RATIO	35 dB minimum	
RISE & FALL TIMES	< 1 µs	
PULSE WIDTH	Minimum at least 5 µs	
REP RATE	Minimum at least 50 Hz to 50 kHz	
EXTERNAL PULSE MODULATION	The pulse input is TTL compatible and 50 ohm terminated with an internal active pull-up. It can be modeled as 1.2V in series with 50 ohms at the pulse modulation input connector. The signal generator senses input terminal voltage and turns the RF off when the terminal voltage drops below 1 ± 0.1V. Max allowable applied voltage, ± 10V.	
NON-VOLATILE MEMORY	50 instrument states are retained for typically 2 years, even with the power mains disconnected.	
REVERSE POWER PROTECTION		
PROTECTION LEVEL	Up to 50 watts from a 50 ohm source. Up to 50V DC. Signal generator output is AC coupled. Protection is provided when the signal generator is off.	
TRIP/RESET	Flashing RF OFF annunciator indicates a tripped condition. Pushing RF ON/OFF button will reset signal generator.	

Table 1-3. 6080A/AN Specifications (cont)

IEEE-488	
INTERFACE FUNCTIONS	SH1, AH1, T5, TE0, L3, LE0, SR1, RL1, PP0, DC1, DT1, C0, and E2. Complies with IEEE Std. 488.1-1987 and 488.2-1987.
INTERNAL MODULATION SOURCE	
SINE WAVE	10 Hz to 100 kHz synthesized sine wave.
DISPLAY RANGES	00.1 to 99.9 Hz 100 to 999 Hz 1.00 to 9.99 kHz 10.0 to 99.9 kHz 100 to 200 kHz
FREQUENCY RESOLUTION	0.1 Hz or 3 digits
OUTPUT LEVEL RANGE	0 to 1V RMS into 600 ohms
DISTORTION	< 2% THD
OUTPUT IMPEDANCE	600 ohms ±10%
EXTERNAL MODULATION	
1V peak provides indicated modulation index. Nominal input impedance is 600 ohms. Maximum input level is ± 5 V peak.	
MODULATION MODES	
Any combination of AM, PULSE, and FM, internal or external, may be used.	
GENERAL	
TEMPERATURE	
Operating	0 to +50°C (+32 to +122°F).
Non-Operating	–40 to +75°C (–40 to +167°F).
HUMIDITY RANGE	
Operating	95% to +30°C, 75% to +40°C, and 45% to +50°C.
ALTITUDE	
Operating	Up to 10,000 ft.
VIBRATION	
Non-Operating	5 to 15 Hz at 0.06 inch, 15 to 25 Hz at 0.04 inch, and 25 to 55 Hz at 0.02 inch, double amplitude (DA).
SHOCK	
Non-Operating	MIL T 28800D Class 5, Style E.

Table 1-3. 6080A/AN Specifications (cont)

ELECTROMAGNETIC COMPATIBILITY..	The radiated emissions induce < 1 μV into a 1-inch diameter, 2-turn loop, 1-inch from any surface as measured into a 50-ohm receiver.
COMPLIES WITH THE FOLLOWING STANDARDS:	
CE03 of MIL-STD-461B (Power and interconnecting leads), 0.015 to 50 MHz.	
RE02 of MIL-STD-461B (14 kHz to 10 GHz).	
FCC Part 15 (J), class A.	
CISPR 11.	

SIZE	Width	Height	Depth
	43 cm	13.3 cm	59.7 cm
	17 in	5.25 in	23.5 in

POWER	115/230 VAC, ± 10% 50, 60, and 400 Hz ± 10% 250 VA maximum
WEIGHT	< 27 kg (60 lbs).

Table 1-4. Typical Signal Generator Performance

FREQUENCY (10-DIGIT DISPLAY)	
RANGE	0.01 to 1056 MHz in 7 bands:
BAND .01-15 MHz	0.01 to 14.999999 MHz,
BAND 15-32 MHz	15 to 31.999999 MHz,
BAND 32-64 MHz	32 to 63.999999 MHz,
BAND 64-128 MHz	64 to 127.999999 MHz,
BAND 128-256 MHz	128 to 255.999999 MHz,
BAND 256-512 MHz	256 to 511.999999 MHz,
BAND 512-1056 MHz	512 to 1056 MHz.
RESOLUTION	1 Hz
ACCURACY	Same as reference (See REFERENCE).
REFERENCE (Internal)	The unit operates on an internal 10 MHz TCXO. The Frequency variation will be < 2 ppm peak to peak over the temperature range of 0 to +50°C. Aging rate of < ± 1 ppm/year typical. Internal reference signal (10 MHz) available at rear panel REF OUT connector, level > 0 dBm, terminated in 50 ohms. Frequency stability after 2 hour warmup is < ± 0.05 ppm/hour at +25°C ± 5°C.
REFERENCE (External)	Accepts (1, 2, or 5) or 10 MHz signal. Level required is 0.2 to 2.0 Vrms into 50-ohms termination. *NOTE* *Choice is internal switch selectable (1, 2, or 5 MHz).*
AMPLITUDE (3 1/2-DIGIT DISPLAY)	
RANGE	+19 to −140 dBm for Frequency < 512 MHz. +16 to −140 dBm for Frequency > 512 MHz.
RESOLUTION	0.1 dB (< 1% or 1 nV in volts). Annunciators for dB, dBm, dBf, V, mV, µV, dB mV, dB µV, and EMF.
ACCURACY (+23 ± 50°C)	± 1 dB from +19 to −127 dBm and for F from 0.4 to 512 MHz. ± 1 dB from +16 to −127 dBm and for F > 512 MHz.
ACCURACY (0 to +50°C)	± 1.5 dB from +19 to −127 dBm and for from 0.4 to 512 MHz. ± 1.5 dB from +16 to −127 dBm and for F > 512 MHz.

Table 1-4. Typical Signal Generator Performance (cont)

	± 2 dB from +19 to −100 dBm and for F from 0.01 to 0.4 MHz.
	± 3 dB from −100 to −127 dBm and for F from 0.01 to 0.4 MHz.
SOURCE VSWR	< 1.5:1 for levels below +1 dBm, < 2.0:1 elsewhere.
FLATNESS (+23 ± 5°C)	± 0.5 dB @ +10 dBm. F > 0.1 MHz.
FLATNESS (0 to + 50°C)	± 0.75 dB @ +10 dBm. F > 0.1 MHz.
SPECTRAL PURITY (CW ONLY)	
NON-HARMONIC SPURIOUS	< −100 dBc for offsets greater than 10 kHz.
NOTE *Fixed frequency spurs are < −100 dBc or < −140 dBm whichever is larger.*	
NOTE *dBc refers to decibels relative to the carrier frequency, or in this case, relative to the signal level.*	
HARMONICS	< −30 dBc for levels < +13 dBm. < −25 dBc for levels < +16 dBm.
SUBHARMONICS	None
POWER LINE SPURIOUS	< −50 dBc within ± 10 kHz of carrier.
RESIDUAL FM (RMS in 0.3- to 3-kHz band)	< 0.2 Hz for .01 to 15 MHz Band < 0.2 Hz for 15 to 32 MHz Band < 0.2 Hz for 32 to 64 MHz Band < 0.2 Hz for 64 to 128 MHz Band < 0.2 Hz for 128 to 256 MHz Band < 0.5 Hz for 256 to 512 MHz Band < 1 Hz for 512 to 1056 MHz Band
RESIDUAL FM (RMS in 0.05- to 15-kHz band)	< 0.5 Hz for .01 to 15 MHz Band < 0.5 Hz for 15 to 32 MHz Band < 0.5 Hz for 32 to 64 MHz Band < 0.5 Hz for 64 to 128 MHz Band < 0.5 Hz for 128 to 256 MHz Band < 1 Hz for 256 to 512 MHz Band < 2 Hz for 512 to 1056 MHz Band
SSB PHASE NOISE	< −131 dBc/Hz @ 20 kHz offset @ Frequency = 250 MHz

Table 1-4. Typical Signal Generator Performance (cont)

	< –136 dBc/Hz @ 20 kHz offset @ Frequency = 1 GHz
	< –140 dBc/Hz @ 20 kHz offset @ Frequency = 500 MHz
BROADBAND SSB PHASE NOISE FLOOR	< –140 dBc/Hz @ 100 kHz offset @ +13 dBm.
RESIDUAL AM (in 0.05- to 15-kHz Band)	< –80 dBc.

AMPLITUDE MODULATION (3-DIGIT DISPLAY)
(Amplitude < +10 dBm)

INDICATED DEPTH RANGE	0 to 99.9%.
RESOLUTION	0.1%.
ACCURACY (0 to 90%)	±(2% AM + 4% of setting) at 1 kHz rate
DISTORTION (rate = 1 kHz)	< 1.5% THD to 30% AM < 3% THD to 70% AM < 5% THD to 90% AM
BANDWIDTH (3 dB)	10 Hz to 100 kHz DC to 100 kHz (external only)
INCIDENTAL FM	< 200 Hz at 1 kHz rate, 50% AM.

NOTE

AM specifications apply where RF frequency - Modulation Frequency is greater than 150 kHz

FREQUENCY MODULATION (3-DIGIT DISPLAY)

DEVIATION RANGES
0 to 999 Hz
1 to 9.99 kHz
10 to 99.9 kHz
100 to 999 kHz
1 to 4 MHz

MAXIMUM DEVIATION

DEV	RF Frequency
500 kHz	.01 to 15 MHz
125 kHz	15 to 32 MHz
250 kHz	32 to 64 MHz
500 kHz	64 to 128 MHz
1 MHz	128 to 256 MHz
2 MHz	256 to 512 MHz
4 MHz	512 to 1056 MHz

Table 1-4. Typical Signal Generator Performance (cont)

	Minimum FM rate at max deviation in any band, ACFM mode is 60 Hz. @ 1/2 max deviation....30 Hz @ 1/4 max deviation....15 Hz from 1/4 to 1/64 max deviation.... 15 Hz @ 1/64 max deviation.... 60 Hz @ 1/128 max deviation.... 40 Hz @ 1/256 or less max deviation.... 15 Hz No limit in DCFM mode.
RESOLUTION	3 digits.
ACCURACY	±(5% of setting + 10 Hz) for rates of .05 to 50 kHz.
DISTORTION (does not include effects of residual noise)	< 2% THD for rates from .05 to 50 kHz < 1% THD at 1/2 or less max deviation and rates from 0.1 to 50 kHz.
LOW DISTORTION MODE (SPCL 731)	< 0.3% THD + noise @ 3.5 kHz deviation and @ rates from 0.3 to 3 kHz
BANDWIDTH (1.5 dB)	ACFM 20 Hz to 100 kHz subject to low frequency max deviation limits DCFM DC to 100 kHz
INCIDENTAL AM	< 1% AM at 1 kHz rate, for the maximum deviation or 100 kHz, whichever is less. Valid for RF frequency > 0.5 MHz
DCFM CENTER FREQUENCY ERROR	< (0.1% of dev + 500 Hz) @ F = 1 GHz

NOTE
After DCFM Cal and without any FM range changes

	RF Band	MAX DEV @ 10 Hz Rate sine wave	square wave
LOW RATE EXTERNAL FM (Access by SPCL 711)			
MAX DEVIATION	.01 to 15 MHz	80 kHz	40 kHz
	15 to 32 MHz	20 kHz	10 kHz
	32 to 64 MHz	40 kHz	20 kHz
	64 to 128 MHz	80 kHz	40 kHz
	128 to 256 MHz	160 kHz	80 kHz
	256 to 512 MHz	320 kHz	160 kHz
	512 to 1056 MHz	640 kHz	320 kHz
DROOP	< 30% on a 5 Hz square wave		
BANDWIDTH (3 dB)	0.5 Hz to 100 kHz (typical)		

Table 1-4. Typical Signal Generator Performance (cont)

MAX DC INPUT	± 10 mV
INCIDENTAL AM	< 1% AM @ 1 kHz rate and < 10 kHz dev

NOTE
FM specifications apply where:
RF Frequency - Deviation > 150 kHz
RF Frequency - Mod Rate > 150 kHz

PHASE MODULATION (3 DIGIT DISPLAY)

DEVIATION RANGES	0 to .999 rad 1 to 9.99 rad 10 to 99.9 rad 100 to 400 rad

MAXIMUM DEVIATION

DEV	RF FREQUENCY
50 rad	.01 to 15 MHz
12.5 rad	15 to 32 MHz
25 rad	32 to 64 MHz
50 rad	64 to 128 MHz
100 rad	128 to 256 MHz
200 rad	256 to 512 MHz
400 rad	512 to 1056 MHz

RESOLUTION	3 digits
ACCURACY	±(5% + 0.1 rad) at 1 kHz rate.
DISTORTION (does not include effects of residual Phase noise)	< 2% THD for 1 kHz rate. < 1% THD for 1/2 or less max deviation for 1 kHz rate
BANDWIDTH (3 dB)	ACPM 20 Hz to 15 kHz DCPM DC to 15 kHz
INCIDENTAL AM	< 1% AM at 1 kHz rate for peak dev < 10 rad. Valid for F > 1 MHz.

HIGH RATE PHASE MODULATION (Access by SPCL 721)

MAX DEV	RF FREQUENCY
5 rad	.01 to 15 MHz
1.25 rad	15 to 32 MHz
2.5 rad	32 to 64 MHz
5 rad	64 to 128 MHz
10 rad	128 to 256 MHz
20 rad	256 to 512 MHz
40 rad	512 to 1056 MHz

Table 1-4. Typical Signal Generator Performance (cont)

HIGH RATE PHASE MODULATION ..... BANDWIDTH (3 dB) (Access by SPCL 721)	ACPM 20 Hz to 100 kHz DCPM DC to 100 kHz

NOTE

Phase Modulation specs are valid where RF Frequency – Modulation Frequency > 150 kHz

PULSE MODULATION (RF FREQUENCIES FROM 10 TO 1056 MHz)

ON/OFF RATIO	40 dB minimum for frequencies from 100 to 1056 MHz 60 dB minimum for frequencies less than 100 MHz
RISE & FALL TIMES	< 15 ns
LEVEL ERROR	For pulse widths > 50 ns, power in the pulse will be within ±0.7 dB of the measured CW level.
DUTY CYCLE (ext mod)	0-100%
REP RATE (ext mod)	DC-16 MHz
INTERNAL MODULATION	Internal rates, approx 50% duty cycle.
EXTERNAL PULSE MODULATION	The pulse input is TTL compatible and 50 ohm terminated with an internal active pull-up. It can be modeled as 1.2V in series with 50 ohms at the pulse modulation input connector. The signal generator senses input terminal voltage and turns the RF off when the terminal voltage drops below 1 ± 0.1V. Max allowable applied voltage, ±10V.

PULSE MODULATION (RF FREQUENCIES < 10 MHz)

RISE & FALL TIMES	< 2 X period of RF Frequency.
LEVEL ERROR	For pulse widths >10 X period of RF Frequency, power in the pulse will be within ±0.7 dB of the measured CW level.

Other specifications are the same as for the 10 to 1056 MHz range.

NON-VOLATILE MEMORY

50 instrument states are retained for typically 2 years, even with the power mains disconnected.

REVERSE POWER PROTECTION

PROTECTION LEVEL	Up to 50 watts from a 50 ohm source, up to 50V DC. Signal generator output is AC coupled. Protection is provided when the signal generator is off.

Table 1-4. Typical Signal Generator Performance (cont)

TRIP/RESET	Flashing RF OFF annunciator indicates a tripped condition. Pushing RF ON/OFF button will reset signal generator.
IEEE-488	
INTERFACE FUNCTIONS	SH1, AH1, T5, TE0, L3, LE0, SR1, RL1, PP0, DC1, DT1, C0, and E2.
INTERNAL MODULATION SOURCE	
SINE WAVE	0.1 Hz to 200 kHz synthesized sine wave.
FREQUENCY ACCURACY	Same as reference ±7 mHz
DISPLAY RANGES	00.1 to 99.9 Hz 100 to 999 Hz 1.00 to 9.99 kHz 10.0 to 99.9 kHz 100 to 200 kHz
FREQUENCY RESOLUTION	0.1 Hz or 3 digits
OUTPUT LEVEL RANGE	0 to 4V peak into 600 ohms
OUTPUT LEVEL RESOLUTION	3 digits or 4 mv peak, whichever is larger
DISTORTION	< 0.15% THD for output levels > 2V peak and mod frequency < 20 kHz
OUTPUT LEVEL ACCURACY	±(4% + 15 mV) for mod frequency < 100 kHz
OUTPUT IMPEDANCE	600 ohms ±2%
OTHER WAVEFORMS AVAILABLE BY SPECIAL FUNCTION	Square Wave (Fmod < 2 kHz) Triangle Wave (Fmod < 5 kHz)
EXTERNAL MODULATION INPUTS	
1V peak provides indicated modulation index. Nominal input impedance is 600 ohms. Maximum input level is ± 5 V peak.	
MODULATION MODES	
Any combination of AM, PULSE, and FM or ØM, internal or external, may be used.	
DIGITAL FREQUENCY SWEEP	
SWEEP MODES	Auto, single, or manual

Table 1-4. Typical Signal Generator Performance (cont)

SWEEP FUNCTIONS	Symmetrical sweep, Asymmetrical sweep, Sweep speed
DATA ENTRY PARAMETERS	Sweep width and sweep increment
SWEEP SPEED	Minimum 40 ms per increment selectable as (minimum + dwell time) where dwell time can be 0, 20, 50, 100, 200, or 500 ms at each increment.
SWEEP OUTPUT	0 to +10 (± 10%) V. Up to 4096 points in a stepped ramp. Load > 2 kΩ.
PENLIFT	TTL, high for retrace. Load > 2 kΩ.
DIGITAL AMPLITUDE SWEEP	
SWEEP MODES	Auto, single, or manual Linear (Volts) or Log (dB)
SWEEP FUNCTIONS	Symmetrical sweep, Asymmetrical sweep, Sweep speed
DATA ENTRY PARAMETERS	Sweep width and sweep increment
SWEEP SPEED	Minimum 30 ms per increment selectable as (minimum + dwell time) where dwell time can be 0, 20, 50, 100, 200, or 500 ms at each increment.
SWEEP OUTPUT	0 to +10 (± 10%) V. Up to 4096 points in a stepped ramp. Load > 2 kΩ.
PENLIFT	TTL, high for retrace. Load > 2 kΩ.
GENERAL	
TEMPERATURE	
Operating	0 to +50°C (+32 to +122°F).
Non-Operating	–40 to +75°C (–40 to +167°F).
HUMIDITY RANGE	
Operating	95% to +30°C, 75% to +40 °C, and 45% to +50°C.
ALTITUDE	
Operating	Up to 10,000 ft.
VIBRATION	
Non-Operating	5 to 15 Hz at 0.06 inch, 15 to 25 Hz at 0.04 inch, and 25 to 55 Hz at 0.02 inch, double amplitude (DA).
SHOCK	
Non-Operating	Per MIL T 28800D Class 5, Style E.

Table 1-4. Typical Signal Generator Performance (cont)

ELECTROMAGNETIC COMPATIBILITY..	The radiated emissions induce < 1 µV into a 1-inch diameter, 2-turn loop, 1-inch from any surface as measured into a 50-ohm receiver.		
COMPLIES WITH THE FOLLOWING STANDARDS:			
CE03 of MIL-STD-461B (Power and interconnecting leads), 0.015 to 50 MHz.			
RE02 of MIL-STD-461B (14 kHz to 10 GHz).			
FCC Part 15 (J), class A.			
CISPR 11.			
SIZE	Width	Height	Depth
	43 cm	13.3 cm	59.7 cm
	17 in	5.25 in	23.5 in
POWER	115/230 VAC, ±10% 50, 60, & 400 Hz ±10% < 250 VA		
WEIGHT	< 27 kg (60 lbs).		
SUPPLEMENTAL CHARACTERISTICS			
The following characteristics are provided to assist in the application of the signal generator and to describe the typical performance that can be expected.			
FREQUENCY SWITCHING SPEED.....	< 100 ms to be within 100 Hz.		
AMPLITUDE SWITCHING SPEED.....	< 100 ms to be within 0.1 dB.		
AMPLITUDE RANGE	Programmable from +20 to −147.4 dBm. Fixed-range, selected by special function, allows for more than 12 dB of vernier without switching the attenuator.		
EXTERNAL MODULATION	Annunciators indicate when a 1V peak signal is applied, ±2%, over a 0.02- to 100-kHz band.		
IEEE	All controls except the power switch and the internal/external reference switch are remotely programmable via IEEE-488 Interface (Std 488.2-1987). All status including the option complement are available remotely.		
EXTERNAL REFERENCE LOCK RANGE	± 10 ppm		
PULSE MODULATION			
PULSE DELAY.....	OFF/ON		80 ns typ
	ON/OFF		65 ns typ

Table 1-4. Typical Signal Generator Performance (cont)

DCFM DRIFT	3 ppm/hr for < 1/16 max deviation
(after 2 hour warmup and at constant temperature)	8 ppm/hr for > 1/16 max deviation