

POLARAD
1107A / 1207A
1108A / 1208A

With compliments

Helmut Singer Elektronik

www.helmut-singer.de info@helmut-singer.de
fon +49 241 155 315 fax +49 241 152 066
Feldchen 16-24 D-52070 Aachen Germany

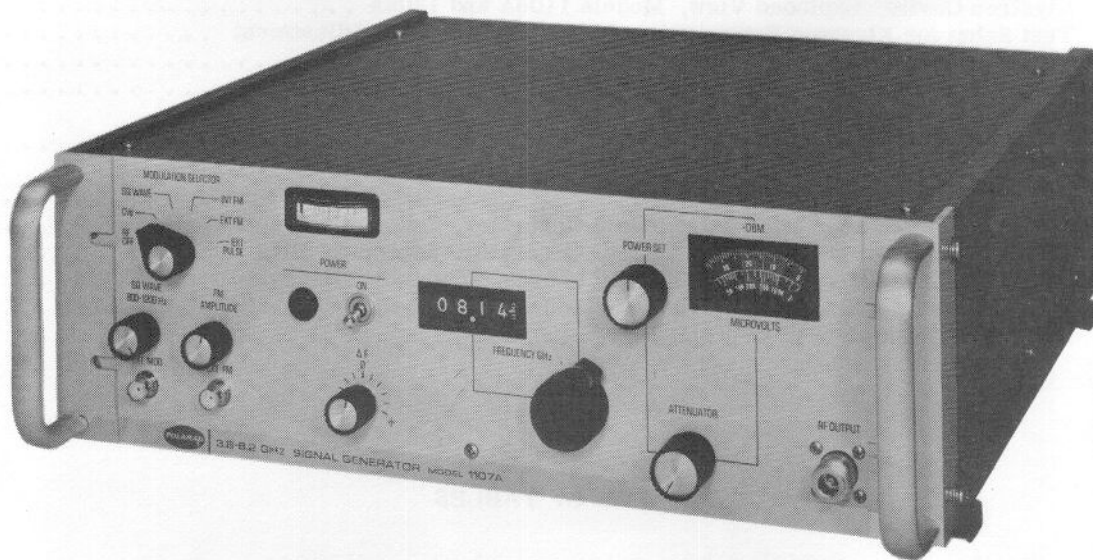


Figure 1-1. Modular Microwave Signal Generator

TABLE 1-2. EQUIPMENT SPECIFICATIONS

Characteristic	Specification
Frequency range	1107A/1207A: 3.70 to 8.40 GHz 1108A/1208A: 6.95 to 11.00 GHz
Frequency accuracy	±0.5% (digital readout)
Frequency stability	0.0008% volt change in line, 0.005%/°C ambient
ΔF Control	Range of 1.5 MHz minimum
Maximum uncalibrated power output	1107A: >10 milliwatts (+10 dbm), >15 milliwatts above 5.0 GHz, > 25 milliwatts below 4.3 GHz 1108A: >20 milliwatts (+13 dbm) minimum from 7.0 to 8.0 GHz, > 10 milliwatts (+10 dbm) minimum from 8.0 to 11.0 GHz 1207A: 3.7 - 4.3 GHz >60 mw, typically >100 mw 4.3 - 5.0 GHz >25 mw, typically >35 mw 5.0 - 6.6 GHz >55 mw, typically >200 mw (above 5.5 GHz) 6.6 - 8.4 GHz >35 mw, typically >100 mw 1208A: 6.95 - 8.0 GHz >75 mw, typically >100 mw 8.0 - 9.5 GHz >30 mw, typically >75 mw 9.5 - 11.0 GHz >40 mw, typically >50 mw
Attenuator dial range	1107A/1108A: +3 dbm (0.310 volts) to -127 dbm (0.1 microvolts)
Output power absolute accuracy	1107A/1108A: ±2 db (+3 dbm to -127 dbm), 3.7 to 8.2 GHz
Relative attenuator accuracy	1107A: ±0.8 db from -7 dbm to -127 dbm, 3.7 to 8.2 GHz 1108A: ±1.2 db from -7 to -127 dbm, 3.7 to 8.2 GHz
Output impedance	1107A/1108A: 50 ohms, nominal
Output VSWR	1107A/1108A: 2:1 maximum
Output Connector	Type N
Types of output available	CW, square wave, or sawtooth fm without external modulation
Internal square wave:	
Rate	800 to 1200 Hz typical
On-off ratio	100%
Synchronization	Internal

EQUIPMENT SPECIFICATIONS (Cont'd)

Characteristic	Specification
Internal fm:	
Rate	800 to 1200 sweeps per second typical
Sweep width	Continuously adjustable over 5.0 MHz throughout most of band
Synchronization	Internal
External pulse modulation:	(Polarad Model 1020A recommended)
Pulse requirements	Positive polarity, 15 to 50 volts peak
Rate	Single pulse to 1 MHz
Width of output pulses	0.2 to 2,500 microseconds
Rise time of output pulses	1107A/1207A: 0.15 microseconds, maximum 1108A/1208A: 0.10 microseconds, maximum
Decay time of output pulses	1107A/1207A: 0.15 microseconds, maximum 1108A/1208A: 0.10 microseconds, maximum
External fm modulation:	
Type and rate	Any waveshape having frequency components between 100 Hz and 0.5 MHz
Deviation	0 to ± 5.0 MHz
Power requirements	115 or 230 volts $\pm 10\%$, 50-60 Hz, 150 watts (50 to 400 Hz range optional, F modification)
Dimensions	5-1/4 in. high by 16-3/4 in. wide by 18-1/4 in. deep (see figure 2-1)
Weight	41 pounds

ELECTRON TUBE AND TRANSISTOR COMPLEMENT

Quantity	Type	Quantity	Type
4	0A2	1	EL34
1	5687	1	8068
3	12AX7	1*	A160011A
2	A713441	1**	A160034
		1***	A160035

* Used in Models 1107A and 1207A only.

** Used in Model 1108A only.

*** Used in Model 1208A only.