

Figure 1-1. Model 8616A Signal Generator (The Model 8614A is exactly the same in physical construction)

Table 1-1. Specifications

FREQUENCY RANGE: direct reading within 2 Mc Model 8614A: 800 to 2400 Mc.

Model 8616A: 1800 to 2400 Mc.

VERNIER: ΔF control has range of approximately 2 Mc for fine tuning.

FREQUENCY CALIBRATION ACCURACY:

Model 8614A: ± 5 Mc Model 8616A: ± 10 Mc

FREQUENCY STABILITY: Approx 0.005%/°C change in ambient temperature, less than 2500 cps peak residual FM, negligible incidental FM in pulse and AM operation for attenuator settings below-10 db. 0.003% change for line voltage variation of ±10%.

RF OUTPUT POWER: +10 dbm (10mw) for 8614A; +3 dbm (2mw) for 8616A into a 50-ohm load. Output attenuation dial directly calibrated in dbm from 0 to -127dbm. A second uncalibrated output (approximately 0.5 mw) is provided on the front panel.

RF OUTPUT POWER ACCURACY (with respect to attenuation dial):

Model 8614A: ±0.75 db + attenuator accuracy (-10 to -127 dbm); +0.00, -3.0 db (0 to -10 dbm) Model 8616A: ±1.0 db + attenuator accuracy (0 to -127 dbm)

ATTENUATOR ACCURACY: for attenuation dial settings of -10 to -127 dbm:

Model 8614A: ± 0.06 db/10 db Model 8616A: ± 0.07 db/10 db

LEVELED OUTPUT: over entire frequency range at any attenuation setting below 0 db:

Model 8614A: ±0.5 db Model 8616A: ±0.75 db

INTERNAL IMPEDANCE: 50 ohms; SWR less than 2.0

MODULATION: On-off ratio at least 20 db for

square wave, pulse

INTERNAL SQUARE WAVE: 950 to 1050 cps. Other frequencies available on special order.

EXTERNAL PULSE:

50 cps to 50 kc; $2\mu \sec$ rise time, +20 to +100 volt peak input

EXTERNAL AM: DC to 1 Mc

EXTERNAL FM:

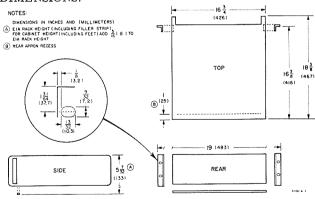
- a. Front panel connector capacity-coupled to repeller of klystron.
- b. Four terminal rear panel connector (Cinch-Jones type S304AB) is DC-coupled to repeller of klystron.

Mode width between 3-db points varies as follows:
Model 8614A: from minimum of about 4 Mc at
800 Mc to a maximum of about 15 Mc at 2000
Mc; klystron sensitivity is about 100 kc/volt
between 800 to 1600 Mc (1-3/4 mode), and 200
kc/volt between 1600 to 2400 Mc (2-3/4 mode).

Model 8616A: from minimum of about 4 Mc to 5.5 Mc between 1800 and 3000 Mc to a maximum of about 8.5 Mc between 3000 and 4500 Mc; klystron sensitivities are about 100, 50, 200, and 100 kc/volt, respectively.

POWER SOURCE: 115 or 230 volts ±10%, 50 to 60 cps, approximately 125 watts

DIMENSIONS:



WEIGHT: Net 48 lb (22 kg); shipping approximately 52 lb 11 oz (24 kg)