

Function Generators



4040A



4017A

Specifications

models

| | 4040A | 4017A |
|------------------------------------|---|---|
| Frequency Characteristics | | |
| Waveforms | Sine, Square, Triangle, \pm Pulse, \pm Ramp | |
| Range | 0.2 Hz to 20 MHz in 8 ranges | 0.1 Hz to 10 MHz in 8 ranges |
| Resolution | 5 digits | 5 digits |
| Tuning Range | 10:1 | 10:1 |
| Fine | $\pm 5\%$ of coarse setting | $\pm 5\%$ of coarse setting |
| Variable Duty Cycle | 15:85:15 cont variable | 15:85:15 cont variable |
| Operating Modes | Normal, sweep, VCG, AM, FM, burst | Normal, sweep, VCG |
| Output Characteristics | | |
| Impedance | 50 Ω $\pm 10\%$ | |
| Level | 20 V p-p Open circuit, 10V p-p into 50 Ω | |
| Amplitude | Variable, 20 dB range typical | |
| Attenuation | -20 dB ± 1 dB | |
| DC Offset | Preset ± 0.1 V typ Variable: ± 10 V open-circuit ± 5 into 50 Ω | |
| SINE Wave | | |
| Distortion | $\leq 3\%$ typical at 1 kHz | |
| Flatness | $\pm 5\% \pm (.45 \text{ dB})$ 0.1 Hz to 8 MHz | |
| | $\pm 20\% \pm (2.0 \text{ dB})$ 8 MHz to 20 MHz (10MHz 4017A) @3Vp-p | |
| Square wave | | |
| Symmetry | 0.2 Hz to 100 kHz $< 2\%$ | 0.1 Hz to 100 kHz $< 2\%$ |
| Rise time | ≤ 30 ns | |
| Triangle Wave | Linearity: $\geq 98\%$ to 100 kHz | |
| TTL Output | | |
| Level | 0.8V to 2.4V | |
| Rise time | ≤ 20 nS | |
| Duty Cycle | 50% typical | |
| CMOS Output | | |
| Max. Frequency | 2 MHz | |
| Level | 4V to 14V ± 0.5 p-p cont. variable | |
| Rise Time | ≤ 120 nS | |
| VCG (Voltage controlled generator) | | |
| Input Voltage | 0-10V ± 1 V causes a 100:1 frequency change | |
| Impedance | 10k Ω $\pm 5\%$ | |
| Sweep Operation | | |
| Mode | LIN/LOG | |
| Width | 100:1 continuously variable | |
| Rate | 20 ms to 2 s cont variable | 0.5 s to 30 s cont variable |
| Sweep Output | 0 to 2V | 0 to 10V |
| Start/Stop Frequencies | Adjustable | NA |
| Frequency Counter | | |
| Accuracy | Time base accuracy ± 1 count | |
| Time Base Accuracy | ± 10 ppm (23" $\pm 5^\circ$ C) | |
| Display | 5 digit LED | |
| Mode | INT or EXT | NA |
| External Input | | |
| Frequency | 5 Hz to 30 MHz | Does not apply |
| Resolution | 0.1, 1, 10, 100, 1 kHz | |
| Sensitivity | 25Vrms | |
| Power Source | 120/230 VAC $\pm 10\%$ 50/60 Hz, internal jumper selectable | |
| Dimensions | 5.5 x 11.75 x 10.575" (140 x 298 x 264mm) | 4.5x 11.75 x 10.575" (114 x 298 x 264mm) |
| Weight | 4.5 lbs. (2 kg) | 4 lbs. (1.8 kg) |

Model 4040A

20 MHz Sweep/Function Generator with Frequency Counter

- 0.2 Hz to 20 MHz
- AM & FM modulation
- Burst operation
- External frequency counter to 30 MHz
- 5 digit LED display
- All features of Model 4017A

Model 4017A

10 MHz Sweep/Function Generator with Digital Display

- 0.1 Hz to 10 MHz
- Linear and log sweep
- 5 digit LED display
- All features of Model 4011A

Specifications

model

| | 4040A |
|--------------------------------------|--|
| AM MODULATION CHARACTERISTICS | |
| Source | Internal, External |
| Modulation Ratio | 0 to 100% |
| Int modulation | 1 kHz |
| Ext Modulation | DC to 500 kHz |
| Ext Sensitivity | Less than 10V p-p for 100% modulation |
| FM MODULATION CHARACTERISTICS | |
| Source | Internal, External |
| Modulation Ratio | 0 to 100% |
| Deviation | 0 to 5% |
| INT Modulation | 1 kHz |
| Ext Modulation | DC to 500 kHz |
| Ext Sensitivity | Less than 10V p-p for 100% modulation |
| BURST CHARACTERISTIC | |
| Source | Internal, External |
| Burst Width | Cont. variable from 5% to 90% of internal gating frequency |
| Repetition Rate | 0.5 Hz to 50 Hz, internal |
| | DC to 500 kHz external |
| External Level | TTL levels |
| Burst Frequency | Determined by main generator frequency setting |

Accessories

Two Year Warranty

SUPPLIED: Output Cable with BNC to Alligator Clips, Instruction Manual
Carrying Case (not included): LC-40