

SEFRAM 4466-4468

Sefram
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Function/arbitrary generators

SPECIFICATIONS

OPERATING MODES

- Continuous :** Output continuous at programmed parameters.
- Triggered :** Output quiescent until triggered by an internal, external, GPIB or manual trigger, then one waveform period is generated at the programmed point rate, amplitude and offset. Up to 20MHz trig rate for ARB waveform and 10 MHz in DDS mode.
- Gated :** Same as triggered mode except waveform is executed for the duration of the gated signal. The last waveform period started is completed.
- Burst :** Same as triggered mode for programmed number of waveform from 1 to 999,999.
- Phase :** Variable from -360° to $+360^\circ$ with 0.1° resolution.

ARBITRARY CHARACTERISTICS

- Horizontal Resolution :**
4,000,000 points for 4468 and 1,000,000 points for 4466.
- Vertical Resolution :**
14 bits (-8191 to +8191).
- Point Execution Rate :**
8ns to 100s (125MHz) for 4468 and 12,5ns to 100s for 4466 with 4 digits resolution (limited to 1ps) and 0.001% accuracy.

FREQUENCY CHARACTERISTICS

- Sine :** 1uHz to 50 MHz (40MHz for 4466).
- Square :** 1 μ Hz to 50 MHz (40MHz for 4466).
- Triangle :** 1 μ Hz to 5 MHz.
- Pulse :** 0.5 mHz to 5MHz.
- Accuracy :** 10 ppm.
- Resolution :** 12 digits.

OUTPUT CHARACTERISTICS

- Amplitude Range :**
10mV-10Vp-p into 50W.
- Resolution :** 3 digits (1000 counts).
- Accuracy :** $\pm 1\%$ ± 20 mV of the programmed output from 1V-10V.
- Flatness :** 0.1dB to 10MHz.

- 1dB to 40 MHz (4466),
50MHz (4468).
- Offset Range :** ± 5 V into 50 W. Offset.
- Resolution :** 3 digits, 10 mV.
- Offset Accuracy :** $\pm 1\%$ ± 10 mV.
- Output Impedance :** 50W.
- Filters :** 9 pole Elliptic and 5 pole Bessel filters.
- Protection :** The instrument is protected against short circuit to ground or to any voltage practically available in electronics laboratories.

WAVEFORM CHARACTERISTICS

- Harmonic Distortion :**
DC -20KHz-65dBc
20KHz-100KHz-60dBc
100KHz-5MHz-45dBc
5MHz-50MHz-30dBc.
- Spurious :** DC-1MHz, < -60dBc.
- Square Rise/Fall Time :**
< 6 ns(10% to 90%) at full amplitude into 50 W.
- Variable Duty Cycle :**
20% to 80% to 20MHz
40% to 60% to 50MHz.
- Symmetry :** at 50% < 0.5%.
- Overshoot :** < 3% of p-p ± 50 mV.

MODULATION CHARACTERISTICS

- Amplitude Modulation :**
Internal : 0.01Hz-20KHz
sine wave, square or triangle, variable depth from 0% to 100%.
- External : 5 Vp-p for 100% modulation.
- Frequency Modulation :**
Internal : 0.01Hz-20KHz sine wave, square or triangle.
- External : 5 Vp-p for 100% deviation.

FSK :

- Internal rate : 0.01Hz-1MHz.
- External : 1MHz max.

SWEEP CHARACTERISTICS

- Sweep Shape :** Linear and Log.
- Sweep Time :** 10 ms to 500 s.
- Sweep trigger :** internal, external, continuous or burst.

INPUTS AND OUTPUTS

- Sync Output :** Positive TTL pulse at selected frequency, 50W impedance.
- Trigger Input :** TTL compatible, 10KW nominal impedance. Max. rate 20MHz, Minimum width 20ns.

Modulation Input :

- 5 Vp-p for 100% modulation, 10 KW input impedance, DC to >50 KHz bandwidth.

Clock Input : 10MHz, TTL compatible.

Ref Output : 10MHz or ARB clock, TTL levels.

INTERNAL TRIGGER

- Repetition :** 0.01Hz - 1MHz.
- Resolution :** 4 digits.
- Accuracy :** $\pm 0.002\%$.

INTERFACE

- IEEE488.2 (GPIB) SCPI compatible.
RS-232 GENERAL.
- Store memory :** 50 full panel settings at power-off.
- Arbitrary memory :**
1 Mpoints in internal flash memory (4466),
4 Mpoints (4468).

GENERAL

- Power Requirements :**
85-265V, 40 VA max.
- Dimensions :** 88 x 213 x 275 mm
- Weight :** 3 Kg net.
- Operating Temperature :**
0°C to 50°C.
- Humidity :** to 95% RH, 0°C to 30°C.
- EMC :** EN55011, EN55082.
- Safety :** EN61010.
CE Labeled.

Specifications subject to change without notice - FT 4468A00

For assistance and ordering

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