

**10MHz REFERENCE**

Level : 12dbm +/- 2dbm into 50ohms  
 Harmonics : <-50dbc  
 Accuracy :  $1 \times 10^{-12}$  Long term

**Short Term Stability**

tau	Allan Variance (typ)
1s	$2 \times 10^{-12}$
10s	$< 4 \times 10^{-13}$
100s	$< 5 \times 10^{-12}$
1000s	$< 2 \times 10^{-12}$

**Phase noise (typ)**

1Hz	-110dbc
10Hz	-136dbc
100Hz	-145dbc
1kHz	-155dbc
10kHz	-157dbc

**Frequency Divider Outputs**

1Hz • 2Hz • 5Hz • 10Hz • 20Hz • 50Hz • 100Hz  
 200Hz • 500Hz • 1kHz • 2kHz • 10kHz • 20kHz • 50kHz  
 100kHz • 200kHz • 500kHz • 1MHz • 2MHz • 5MHz

Level into 1Mohm : 1V pk-pk  $\pm$  50mV Square wave  
 Level into 50ohms : 500mV pk-pk  $\pm$  30mV Square wave

Accuracy :  $1 \times 10^{-12}$  Long term

**LF MEASURE**

Range : 1Hz to 10MHz  
 Accuracy :  $1 \times 10^{-12}$  +/- 1 count  
 Resolution : 0.01ppm or 1uHz, which ever is greater  
 Min input level High Sensitivity : 0.3V  
 Low Sensitivity : 200mV  
 Gate times : 0.1s, 1s or 10s  
 Trigger level : 0 to 2V in 10mV steps  
 Period measurement  
 HF Filter

**HF MEASURE**

Accuracy :  $1 \times 10^{-12}$  +/- 1 count  
 Resoultion : 10Hz

Min input level : 10MHz to 30MHz (700mV pk to pk)  
 30MHz to 100MHz (300mV pk to pk)  
 100MHz to 1000MHz (200mV pk to pk)

**ORDERING INFORMATION**

MODEL 8700 SOURCE / MEASURE GPS FREQUENCY STANDARD (BASE)  
 UKAS 8700 UKAS CERTIFICATION

INTERNAL OPTIONS OPTION GPS GPS REFERENCE MODULE

**VARIABLE FREQUENCY AND LEVEL OUTPUT****Sinewave**

Frequency : 10Hz to 2MHz (1Hz steps)  
 Accuracy : 0.8ppm

**Level into 1MOhm**

High range Level : 250mV to 5V RMS (10mV steps)  
 Accuracy : 2%.

Low range Level : 0mV to 250mV RMS (1mV steps)  
 Accuracy : 2%  $\pm$  100uV.

**Level into 50Ohms**

High range Level : 125mV to 2.50V RMS (5mV steps)  
 Accuracy : 2%

Low range Level : 0mV to 125mV RMS (0.5mV steps)  
 Accuracy : 2%  $\pm$  100uV.

**Square Wave**

Frequency : 10Hz to 2MHz (1Hz steps)  
 Accuracy : 0.8ppm  
 Level : 5V pk-pk  $\pm$  0.5V

**HF Output**

5MHz to 1.05GHz (100kHz steps)  
 Level : 600mV  $\pm$  150mV pk-pk. into 50 Ohms  
 Accuracy :  $1 \times 10^{-12}$  Long term

**A-B Outputs****Frequency points**

1Hz, 2Hz, 5Hz, 10Hz, 20Hz, 50Hz, 100Hz, 200Hz,  
 500Hz, 1000Hz, 2000Hz, 5000Hz

Level into 1 MOhm : 1V pk-pk  $\pm$  50mV Square wave

Level into 50 Ohms : 500mV pk-pk  $\pm$  30mV Square wave

Phase range 0 to 359° (1° steps)

Phase accuracy : 0.0000072° x Frequency (in Hz)