



ULS522

Features

- PLL LOOP Bandwidth as low as $\leq 50\text{mHz}$
- Better short-term stability, up to $5.0E-13/1s$
- Ultra low phase noise $\leq -175\text{dBc/Hz}@10\text{kHz}$

Applications

- Frequency standards and sources
- Measuring and calibration equipment
- Navigation

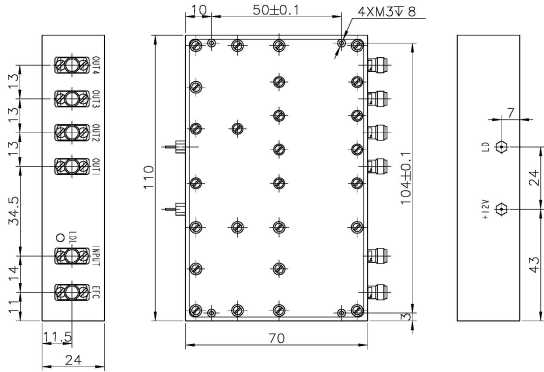
Technical Specifications

Standard Frequency	10 MHz	120 MHz	10 MHz	120 MHz	10 MHz	120 MHz	10 MHz	120 MHz
Short-term stability	$\leq 5 \times 10^{-12}/1s$		$\leq 3 \times 10^{-12}/1s$		$\leq 1.5 \times 10^{-12}/1s$		$\leq 8 \times 10^{-13}/1s$	
Phase Noise (dBc/Hz, free-running)	Option: S		Option: H		Option: L		Option: U	
1 Hz	-100	-78	-105	-83	-110	-88	-115	-93
10 Hz	-125	-98	-130	-103	-135	-108	-140	-113
100 Hz	-150	-130	-150	-133	-155	-135	-155	-138
1 KHz	-158	-160	-158	-163	-158	-165	-158	-168
10 KHz	-160	-171	-160	-172	-160	-173	-160	-173
100 KHz	-160	-173	-160	-173	-160	-175	-160	-175
Aging (after 30 days of continuous operation)	$\leq 1 \times 10^{-7} / \text{year}$							
Input voltage range	12 VDC \pm 5%							
Power consumption (at 25°C)	8W / 5W							
Warm up time (at 25°C to 2×10^{-7})	≤ 5 min							
Input External Reference								
Frequency range	10MHz \pm 2Hz							
Power	10 \pm 3 dBm							
PLL LOOP Bandwidth	50mHz \sim 10Hz							
Input EFC								
Tuning range	$\geq \pm 2 \times 10^{-7}$ (0 ~ 10 V, Positive)							
Output specifications								
Wave form	Sine wave							
Number of outputs	4							
Port to port isolation (Same frequency)	≥ 50 dB							
Power	10 \pm 3 dBm							
Harmonics	≤ -30 dBc							
Spurious	≤ -100 dBc							
Frequency stability vs Temperature (-40°C to 70°C)	$\leq 2 \times 10^{-8}$							
Load	50 Ω \pm 5%							
g sensitivity	$\leq 5 \times 10^{-10} / g$							



Vibration	MIL-STD-202G
Size (L×W×H)	110×70×24mm ³

Outline drawing and Electrical connections (mm)



- EFC: Electronic Frequency Control (SMA-F)
- INPUT: 10MHz (SMA-F)
- OUTPUT1: 10MHz (SMA-F)
- OUTPUT2: 10MHz (SMA-F)
- OUTPUT3: 120MHz (SMA-F)
- OUTPUT4: 120MHz (SMA-F)
- +12V: +12V Power supply
- LD: TTL Level:L- lock,H-unlock
- LDL: LD Lamp

