



ULS316

Features

- Better short-term stability, up to $5.0E-13/1s$ (60MHz)
- Low phase noise $\leq -102dBc/Hz@1Hz$ (60MHz)
- Ultra low phase noise $\leq -175dBc/Hz@10kHz$ (60MHz)

Applications

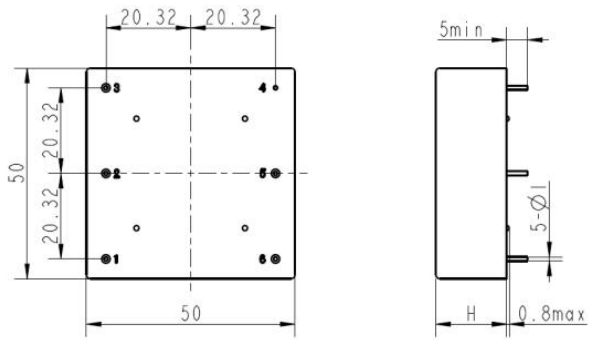
- Frequency standards and sources
- Measuring and calibration equipment
- Navigation

Technical Specifications

Standard Frequency	10 MHz	60 MHz	10 MHz	60 MHz	10 MHz	60 MHz	10 MHz	60 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	-84	-105	-89	-110	-94	-115	-99
10 Hz	-125	-105	-130	-110	-135	-115	-140	-120
100 Hz	-145	-130	-145	-135	-145	-140	-145	-143
1 KHz	-150	-160	-150	-163	-150	-165	-150	-168
10 KHz	-155	-170	-155	-173	-155	-175	-155	-175
100 KHz	-155	-175	-155	-175	-155	-178	-155	-178
Aging (after 30 days of continuous operation)	$\leq 5 \times 10^{-8}$ / year							
Input voltage range	12 VDC \pm 5%							
Power consumption (at 25°C)	7W / 3W							
Warm up time (at 25°C to 2×10^{-7})	≤ 5 min							
Output specifications								
	10 MHz				60 MHz			
Wave form	HCMOS				Sine wave			
Power	$\leq 0.5V(L), \geq 4.0V(H)$				9 \pm 2 dBm			
Harmonics	-				≤ -30 dBc			
Spurious	-				≤ -75 dBc			
Load	10k Ω /30pF				50 Ω \pm 5%			
Frequency stability vs Temperature (-40°C to 70°C)	$\leq 2 \times 10^{-8}$							
g sensitivity	$\leq 5 \times 10^{-10}$ / g							
Vibration	MIL-STD-202G							
Frequency control	$\geq \pm 2 \times 10^{-7}$ (0 ~ 5 V, Positive)							
Size (L×W×H)	50×50×19.05 mm ³							
	Option: 50×50×16 mm³							



Outline drawing and Electrical connections (mm)



1	V _C
2	V _{REF}
3	60MHz
4	GND
5	10MHz
6	V _s

