



# ULS318

## Features

- Better short-term stability, up to  $5.0E-13/1s$  (80MHz)
- Low phase noise  $\leq -100dBc/Hz@1Hz$  (80MHz)
- Ultra low phase noise  $\leq -175dBc/Hz@10kHz$  (80MHz)

## Applications

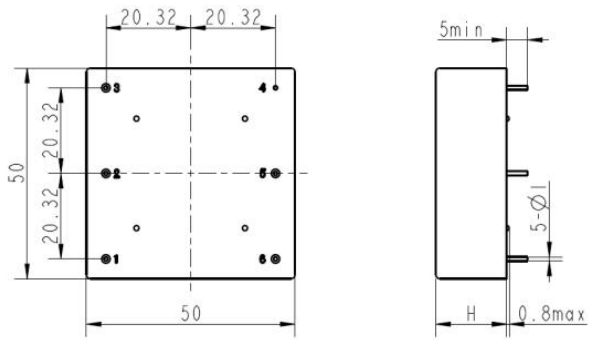
- Frequency standards and sources
- Measuring and calibration equipment
- Navigation

## Technical Specifications

Standard Frequency	10 MHz	80 MHz	10 MHz	80 MHz	10 MHz	80 MHz	10 MHz	80 MHz
<b>Short-term stability</b>	$\leq 5 \times 10^{-12}/1s$		$\leq 3 \times 10^{-12}/1s$		$\leq 1.5 \times 10^{-12}/1s$		$\leq 8 \times 10^{-13}/1s$	
<b>Phase Noise</b> ( dBc/Hz, free-running)	<b>Option: S</b>		<b>Option: H</b>		<b>Option: L</b>		<b>Option: U</b>	
1 Hz	-100	-82	-105	-88	-110	-92	-115	-97
10 Hz	-125	-103	-130	-108	-135	-113	-140	-118
100 Hz	-145	-130	-145	-135	-145	-138	-145	-142
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
<b>Aging</b> (after 30 days of continuous operation)	$\leq 5 \times 10^{-8}$ / year							
<b>Input voltage range</b>	12 VDC $\pm$ 5%							
Power consumption (at 25°C)	7W / 3W							
Warm up time (at 25°C to $2 \times 10^{-7}$ )	$\leq 5$ min							
<b>Output specifications</b>								
	10 MHz				80 MHz			
Wave form	HCMOS				Sine wave			
Power	$\leq 0.5V(L), \geq 4.0V(H)$				9 $\pm$ 2 dBm			
Harmonics	-				$\leq -30$ dBc			
Spurious	-				$\leq -75$ dBc			
Load	10k $\Omega$ /30pF				50 $\Omega$ $\pm$ 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							
<b>Frequency control</b>	$\geq \pm 2 \times 10^{-7}$ (0 ~ 5 V, Positive)							
<b>Size</b> (L×W×H)	50×50×19.05 mm <sup>3</sup>							
	<b>Option: 50×50×16 mm<sup>3</sup></b>							



**Outline drawing and Electrical connections (mm)**



1	V <sub>C</sub>
2	V <sub>REF</sub>
3	80MHz
4	GND
5	10MHz
6	V <sub>s</sub>

