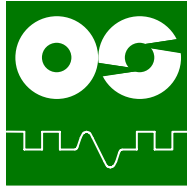


# OnSpec Oscillators



## OSO-00353-01 100k series LVPECL VCXO

Positive Low Voltage Emitter Coupled Logic (LVPECL), 100k series  
Voltage Controlled Oscillators up to 500 MHz  
Containing PLL multipliers

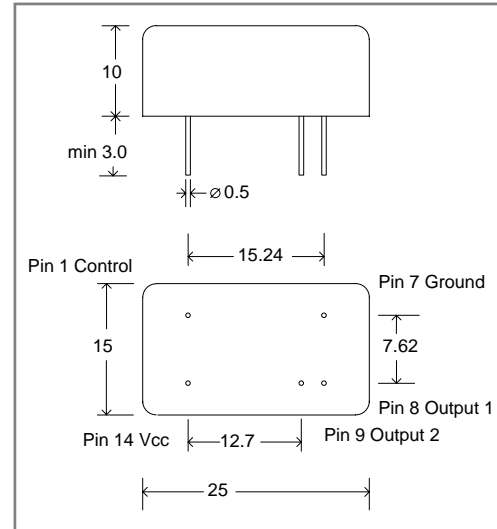
**100k Series LVPECL Output**  
**(10kHz series available)**

Positive supply, Dual Output  
3.3 V supply

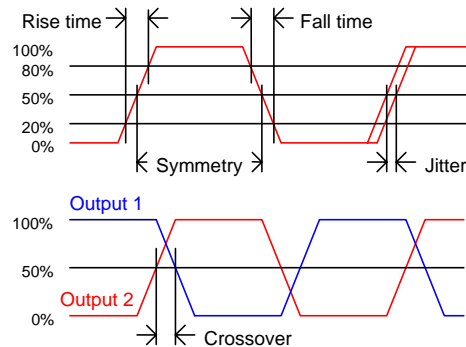
Frequency	50 - 500 MHz
Pulling Range	$\pm 100$ ppm
Control Voltage	+0 V to +3 V (0 - 5 V optional)
Overall Stability	$\pm 30$ ppm
Output	100k series PECL
$V_{OH}$	2.265 V .. 2.430 V *
$V_{OL}$	1.470 V .. 1.680 V *
Temperature	0 .. +70°C
Rise & Fall times	700 ps max
20%..80% Symmetry	55/45..45/55%
Crossover	500 ps max
Cycle-to-Cycle Jitter	30 ps max
Supply Voltage ( $V_{CC}$ )	3.3 V $\pm 10\%$
Supply Current	200mA max

These oscillators use Phase Locked Loop (PLL) frequency multipliers, where the output comes from a Voltage Controlled Oscillator (VCO) that is not a crystal oscillator. The VCO is corrected by comparing its frequency to that of the crystal oscillator.

As the output comes from a VCO, the phase noise is not as good as for oscillators with no multipliers or other types of multipliers.



### Timing Waveforms



The oscillator characteristics are specified with the output terminated with  $50\Omega$  to 1.3 V \*.

\* Output and termination voltages are quoted with a 3.3 V supply and will vary 1:1 with supply voltage.

All voltages are referred to the ground pin

The ground pin is connected to the case.

## OnSpec Oscillators Limited