

ISSUE 5; April 2016

Description

- LVPECL output Voltage Controlled Crystal Oscillator
Using PPL technology to give a very wide frequency range
Pulling range of $\pm 80\text{ppm}$ min
Ceramic package with a seam sealed metal lid, hermetically sealed
For a wider pulling range please see our CFPV-55



Frequency Parameters

- Frequency 50.0MHz to 700.0MHz
- Frequency Stability $\pm 25.00\text{ppm}$ to $\pm 50.00\text{ppm}$

Electrical Parameters

- Supply Voltage 3.3V $\pm 5\%$
- Input Impedance (voltage control, pad 1) 60k Ω min
- Voltage Control (pad 1): +1.65V $\pm 1.5\text{V}$ (positive sense)

Frequency Adjustment

- Pulling $\pm 80\text{ppm}$ min
- Control Voltage +1.65V $\pm 1.5\text{V}$
- Input Impedance 60k Ω

Operating Temperature Ranges

- 10 to 70°C
- 40 to 85°C

Output Details

- Output Compatibility LVPECL
- Drive Capability Output load 50 Ω terminated to +1.3
- '0' Level VoL +1.7V max
- '1' Level VoH +2.2V min

Output Control

- Logic '1' to pad 1 disables oscillator output; when disabled the oscillator goes to the high impedance state ($>V_S - 1.10\text{V}$)
Logic '0' to pad 1 enables oscillator output ($<V_S - 1.60\text{V}$)
No connection to pad 1 enables oscillator output

Noise Parameters

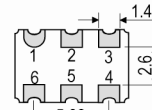
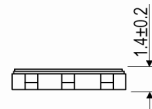
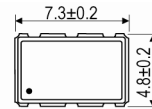
- Phase Noise (max)
 - 37dBc/Hz @ 10Hz
 - 75dBc/Hz @ 100Hz
 - 105dBc/Hz @ 1kHz
 - 107dBc/Hz @ 10kHz
 - 145dBc/Hz @ 100kHz
 - 145dBc/Hz @ 1MHz
- 1ps rms max (12kHz to 20MHz)

Environmental Parameters

- Shock: MIL-STD-202F, Method 213B (1000G, 0.5ms, 1/2 sine)
- Vibration: MIL-STD-202F, Method 204D, Test Condition D 20G, frequency range 10-2000Hz, 4 hrs in X, Y & Z axes (total 12hrs)
- Storage Temperature Range: -40 to 85°C



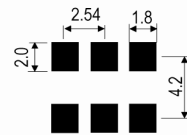
Outline (mm)



Underside View

- Pad Connections
1. Voltage Control
 2. Tri-State Operation
 3. GND
 4. Output +
 5. Output -
 6. +V_S

Solder Pad Layout



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Ordering Information

- Frequency*
Model*
Output
Frequency Stability*
Operating Temperature Range*
Supply Voltage
Pullability
- Example
200.0MHz CFPV-32
LVPECL ± 50 ppm -40 to 85 C 3.3 V ± 80 ppm min

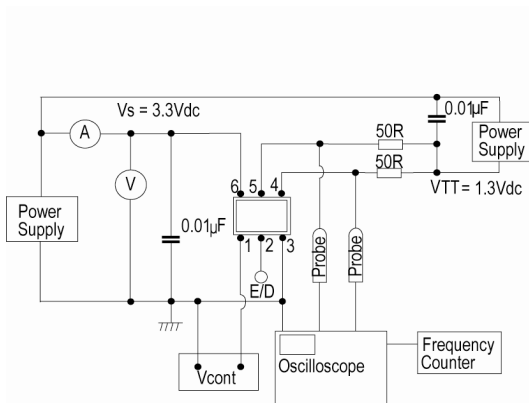
Compliance

- RoHS Status (2011/65/EU) Compliant
- REACh Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

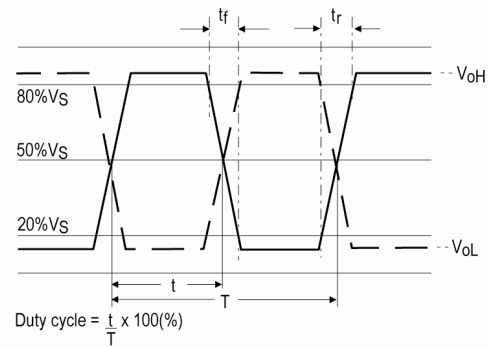
Packaging Details

- Pack Style: Bulk Loose in bulk pack
Pack Size: 100
- Pack Style: Cutt In tape, cut from a reel
Pack Size: 1
- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000

Test Circuit



Wave Form



Electrical Specification - maximum limiting values 3.3V $\pm 5\%$

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
50.0MHz	700.0MHz	-10 to 70	± 25.0	120	0.5	40/60%
		-40 to 85	± 50.0	120	0.5	40/60%

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