

# VCTCXO

## PC112A Series

### HCMOS/TTL

### 4PAD SMD PACKAGE

#### \* PART NUMBERING GUIDE

<b>PC112A - 3 H 10 3 D 5 - 20.000M</b>			
PC112A : without Trimmer	↑	↑	Frequency M : MHz
PC112AH : with Trimmer	↑	↑	
Supply Voltage 5 : 5.0V 3 : 3.3V	↑	↑	Pulling Range 5 : ± 5 ppm min 10 : ±10 ppm min
Output H : HCMOS/TTL	↑	↑	
Stability vs. Temperature See Table1	↑	↑	Temperature Range Table2

MECHANICAL DIMENSIONS	ELECTRICAL SPECIFICATION																																																
<p><b>PIN CONNECTION</b></p> <ul style="list-style-type: none"> <li>#1 V.C</li> <li>#2 GND</li> <li>#3 OUTPUT</li> <li>#4 Vcc</li> </ul> <p>Recommended Soldering Pattern</p>	<table border="1"> <tr> <td>Frequency range</td> <td>1.000KHz to 250.000MHz All combination of Frequency range Vs. Package type might not be available ,please contact factory.</td> </tr> <tr> <td>Frequency Stability vs. Temperature vs. Supply Voltage vs. Load vs. Aging</td> <td>±1.0 ppm to ±5.0ppm ±0.2 ppm max / Vdd ± 5% ±0.2 ppm max /15pF ±10% ±1.0 ppm max/ year</td> </tr> <tr> <td>Temperature Range Operating Storage</td> <td>See Table 2 -55°C to 125°C</td> </tr> <tr> <td>Supply Voltage</td> <td>3.3V ± 5% 5.0V ± 5%</td> </tr> <tr> <td>Input Current 3.3 V , 5V</td> <td>1.000KHz ~ 40.000MHz ~ 250.000MHz 15mA max ~ 30mA max ~ 50mA max</td> </tr> <tr> <td>Output characteristics</td> <td> <table border="1"> <thead> <tr> <th></th> <th>HCMOS</th> <th>TTL</th> </tr> </thead> <tbody> <tr> <td>Logic "1"</td> <td>90% Vdd min</td> <td>2.4V min</td> </tr> <tr> <td>Logic "1"</td> <td>10% Vdd max</td> <td>0.4V min</td> </tr> <tr> <td>Load</td> <td>15pF</td> <td>10TTL</td> </tr> <tr> <td>Duty Cycle</td> <td>40/60</td> <td>40/60</td> </tr> <tr> <td>Rise &amp; Fall</td> <td>10nS max</td> <td>10nS max</td> </tr> </tbody> </table> </td> </tr> <tr> <td>Phase Noise (typical) 20MHz offset</td> <td>-80 dBc / Hz @ 10Hz -120 dBc / Hz @ 100Hz -135 dBc / Hz @ 1KHz -140 dBc / Hz @ 10KHz -145 dBc / Hz @100KHz</td> </tr> <tr> <td>Frequency Adjustment</td> <td>±3ppm min by internal trimmer (OPTION)</td> </tr> <tr> <td colspan="2"><b>Voltage Control Characteristics</b></td> </tr> <tr> <td>Output Pulling Range (ΔF/ΔV)</td> <td>±5.0ppm or ±10ppm min (ΔF/ΔV &gt;±20ppm is available, please contact us)</td> </tr> <tr> <td>Control Voltage Range</td> <td>1.65V ± 1.5V ( Vdd : 3.3V ) , 2.5V ± 2.0V ( Vdd : 5.0V )</td> </tr> </table>	Frequency range	1.000KHz to 250.000MHz All combination of Frequency range Vs. Package type might not be available ,please contact factory.	Frequency Stability vs. Temperature vs. Supply Voltage vs. Load vs. Aging	±1.0 ppm to ±5.0ppm ±0.2 ppm max / Vdd ± 5% ±0.2 ppm max /15pF ±10% ±1.0 ppm max/ year	Temperature Range Operating Storage	See Table 2 -55°C to 125°C	Supply Voltage	3.3V ± 5% 5.0V ± 5%	Input Current 3.3 V , 5V	1.000KHz ~ 40.000MHz ~ 250.000MHz 15mA max ~ 30mA max ~ 50mA max	Output characteristics	<table border="1"> <thead> <tr> <th></th> <th>HCMOS</th> <th>TTL</th> </tr> </thead> <tbody> <tr> <td>Logic "1"</td> <td>90% Vdd min</td> <td>2.4V min</td> </tr> <tr> <td>Logic "1"</td> <td>10% Vdd max</td> <td>0.4V min</td> </tr> <tr> <td>Load</td> <td>15pF</td> <td>10TTL</td> </tr> <tr> <td>Duty Cycle</td> <td>40/60</td> <td>40/60</td> </tr> <tr> <td>Rise &amp; Fall</td> <td>10nS max</td> <td>10nS max</td> </tr> </tbody> </table>		HCMOS	TTL	Logic "1"	90% Vdd min	2.4V min	Logic "1"	10% Vdd max	0.4V min	Load	15pF	10TTL	Duty Cycle	40/60	40/60	Rise & Fall	10nS max	10nS max	Phase Noise (typical) 20MHz offset	-80 dBc / Hz @ 10Hz -120 dBc / Hz @ 100Hz -135 dBc / Hz @ 1KHz -140 dBc / Hz @ 10KHz -145 dBc / Hz @100KHz	Frequency Adjustment	±3ppm min by internal trimmer (OPTION)	<b>Voltage Control Characteristics</b>		Output Pulling Range (ΔF/ΔV)	±5.0ppm or ±10ppm min (ΔF/ΔV >±20ppm is available, please contact us)	Control Voltage Range	1.65V ± 1.5V ( Vdd : 3.3V ) , 2.5V ± 2.0V ( Vdd : 5.0V )								
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