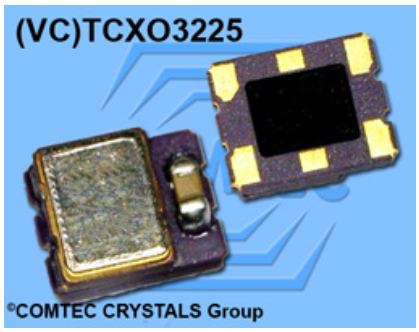
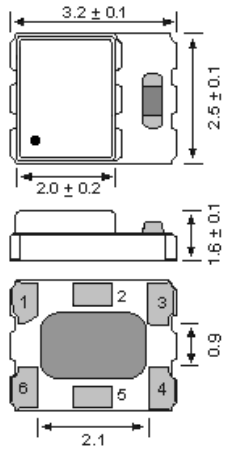
COMTEC CRYSTALS Group Data Sheet



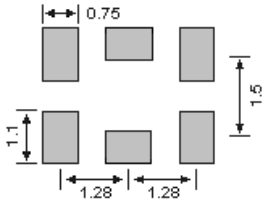
(VC)-Temperature Compensated Crystal Oscillator
(VC)-TCXP3225DQN3.3 LVDS 3.3V 0.8pS Phase Jitter

- SMD in ceramic case (3.2 x 2.5 x 1.6) mm
- Tri-State Enable / Disable
- LVDS Differential
- on Tape & Reel
- RoHS conform; Lead-free product
- Vibration: MIL-STD-202F method 204, 35G, 50 to 2000 Hz
- Shock: MIL-STD-202F method 213B, test cond. E, 1000GG 1/2 sine wave
- Available in many standard and special frequencies

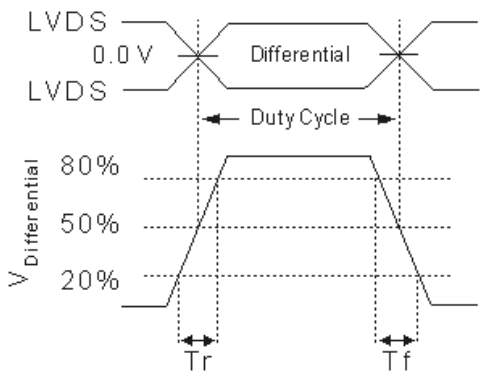
(VC)-TCXP3225DQN3.3 LVDS



1 No connection for TCXO
Voltage control for VCTCXO
2 Output enable
3 Ground
4 CMOS: Output
LVPECL /LVDS: Differential
5 CMOS: No connection
LVPECL / LVDS: Complementary
6 Supply Voltage



LVDS Square Wave Output Wave Form



Specifications - Product No. G016000000MHWUPN20JA

Holder Type:	Voltage Control Temperature Compensated Crystal Oscillator , Type (VC)-TCXP3225DQN3.3 LVDS 3.3V
Frequency:	16.000000 MHz
Frequency Stability at 25°C:	± 1.0 ppm
Operating Temperature Range:	± 1.0 ppm over -20°C to +70°C (incusive of 25°C tolerance, ±10% input voltage variation, load change, aging, shock and vibration)
Frequency Stability Codes (FSC):	
(FSC) Aging:	± 1.0 ppm max. / year (max.)
(FSC) Voltage Change:	± 0.2 ppm max. , for a ±5% input voltage change.
(FSC) Load Change:	± 0.2 ppm max. , for a ±10% load condition change.
(FSC) Reflow Condition:	± 1.0 ppm max. , 1 reflow and measured 24 hours afterwards. (260°C max. for 10 sec.)
Power Supply Voltage (Vdd):	+ 3.3V D.C. ± 5% (voltage code " 3.3 ")
Output Symmetry (Duty Cycle):	45/55%
Start Up Time:	5 ms max.
Storage Temperature:	-55°C to +150°C
Maximum Supply Current:	25.0 mA
Current with Output Disabled:	18 mA (typical)
Output Load:	Differential
SSB Phase Noise (Frequency 212.5 MHz):	-42dBc/Hz @ 10Hz, -87dBc/Hz @ 100Hz, -105dBc/Hz @ 1kHz -115dBc/Hz @ 10kHz, -118dBc/Hz @ 100kHz, -130dBc/Hz @ 1MHz, -151dBc/Hz @ 10MHz
Output Logic (V0H) (V0L):	1.4V typical, 1.6V max./ 1.1V typical, 0.9V min.
Control Voltage Function (CVF) Pad 1:	
(CVF) Linearity: ±1% typical ±10% max:	(CVF) Absolute Voltage: 4.0V max. // (CVF) Center+Range: +1.5V±1.0V
(CVF) Transfer Function: Positive Transfer	(CVF) Input Impedance: 770 KΩ typical // (CVF) Harmonics: -5.0 dBc max.
(CVF) Frequency Pulling Range:	± 8ppm min.
Output Enable Funktion (OEF) Pad 2:	Output Enable Time/ Disable Time: 200nS max. / 50nS max.
(OEF) Integrated Phase Jitter:	0.8 pS typical (12 KHz to 20 MHz) ; < 150 fS (1.875 KHz to 21 MHz)
Rise/Fall Time (20% to 80% Vdd):	0.2 ns typical < 0.4 ns max. ; Tr/Tf: 20%<->80% wave form
See also ...:	http://www.comtec-crystals.com/docs/G/GMx2.html

GERMANY:
COMTEC CRYSTALS GmbH · Sultenstrasse 12-14
85586 Poing / GERMANY
Phone +49 8121 778160 · Fax +49 8121 778177
e-Mail info@comtec-crystals.com
Internet: http://www.comtec-crystals.com
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FRANCE:
COMTEC CRYSTALS SARL · 23, rue du Faucon
67500 Haguenau / FRANCE
Phone +33 388 732162 · Fax +33 388 730118
e-Mail sales@comtec-crystals.com
Internet: http://www.comtec-crystals.com
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