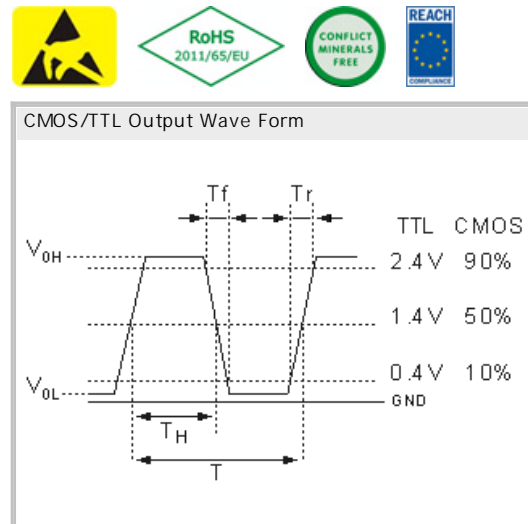




## EMI Reducing Spread Spectrum Clock Oscillator CSS7050TR3.3 3.3V

- SMD in ceramic case (7.0 x 5.0 x 1.8) mm
- Tri-State Enable / Disable
- CMOS/TTL Square Wave
- on Tape & Reel (Tape 16mm, 1000pcs per 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



## Specifications

|   |   |
|---|---|
| Holder Type:                            | CSS7050TR3.3 Tri-State 3.3V (Voltage code is " 3.3 ")   |
| Frequency:                              | 32.768000 MHz   |
| Frequency Stability at 25°C:            | ± 50.0 ppm  |
| Operating Temperature Range:            | ± 50.0 ppm, -40°C to +85°C  |
| Storage Temperature:                    | -55°C to +125°C   |
| Spread Type/EMI Reduction:              | C = ± 1.50% / -15 dBc (min.), 100MHz at C1.5  |
| Power Supply Voltage (Vdd):             | + 3.3V D.C. ± 5%  |
| Maximum Supply Current:                 | 10.0 mA typ.  |
| Modulation Carrier Freq. (Dither rate): | 6.9 kHz min.; 55.5kHz max. Frequency dependent  |
| Output Load:                            | 15 pF CMOS / 10LS TTL gates max.  |
| Output Symmetry (Duty Cycle):           | 45/55% CL=15pF; 50% Vdd   |
| Output Voltage (VOH) (VOL):             | 2.4V min; 3.2V typical 90% of Vdd min.<br>0.5V max; 0.2V typical 10% of Vdd max.  |
| Rise/Fall Time (10% to 90% Vdd):        | 4 ns max.   |
| Start Up Time:                          | 2 ms typical; 5 ms max.   |
| Cycle-to-Cycle Jitter:                  | ± 250 ps typical; ± 300 ps max.   |
| Tri-state Function Pin 1:               | Pin 1 = H or open.... Output active at pin 3<br>Pin 1 = L.... high impedance at pin 3; Output enable/disable time: 100ns max. |
| Aging:                                  | < ± 5ppm max. / year (max.)   |
| Reflow Condition:                       | 260°C max for 10 sec.   |
| See also ....:                          | <a href="http://www.comtec-crystals.com/docs/G/GFG2.htm">http://www.comtec-crystals.com/docs/G/GFG2.htm</a>                   |

### GERMANY:

COMTEC CRYSTALS GmbH · Sultenstrasse 12-14  
8 5 5 8 6 P o i n g / G E R M A N Y  
Phone +49 8121 778160 · Fax +49 8121 778177  
e-Mail [info@comtec-crystals.com](mailto:info@comtec-crystals.com)  
Internet: <http://www.comtec-crystals.com>  
Subject to change without prior notice.



Technical Data and Graphics are all under  
Copyright (c) of Comtec Crystals Group.

### FRANCE:

COMTEC CRYSTALS SARL · 23, rue du Faucon  
6 7 5 0 0 H a g u e n a u / F R A N C E  
Phone +33 388 732162 · Fax +33 388 730118  
e-Mail [sales@comtec-crystals.com](mailto:sales@comtec-crystals.com)  
Internet: <http://www.comtec-crystals.com>  
Sous réserve de modifications.