

Product Features

1. Output Frequency : 1 ~ 200MHz
2. Frequency Stability : ± 25 , ± 50 ppm
3. Supply Voltage : 1.8 , 2.5 , 3.3V
4. Operating Temperature : -40~105°C
5. Output Type : CMOS
6. Phase Jitter : 1ps (Max.) @100MHz , 3.3V
7. RoHS and REACH Compliant , Pb-free , Halogen-free
8. Fast Delivery
9. Industry Standard Package :
3.2 x 2.5 x 1.0 mm

Application :

- NB , PC , Tablet , Smartphone , PC peripherals , IPC , Server , Storage , Ethernet , USB , etc.
- Audio ADC , Video , AI Vision Processing Unit , CPLD , FPGA , CPU , GPU , MCU , BMC , etc.



Test condition

Ambient temperature : $25 \pm 5^\circ\text{C}$

Relative humidity : 40% ~ 70%

● Table 1 . Electrical Specifications

| Parameters | Symbol | Min. | Typ. | Max. | Units | Notes |
|---|---------|--------------------------------|------|--------|-------|----------------------|
| Frequency Range and Stability | | | | | | |
| Nominal Frequency | F | 1 ~ 156.25 | | | MHz | @ 2.5 V 、 3.3 V |
| | | 1 ~ 125 | | | | @ 1.8 V |
| Frequency Tolerance | FT | ± 25 | | | ppm | @ -40~85°C , Note 1 |
| | | ± 50 | | | | @ -40~105°C , Note 1 |
| Operating Temperature Range | | | | | | |
| Operating Temperature | Topr | -40 | 25 | 105 | °C | |
| Supply Voltage and Current Consumption | | | | | | |
| Supply Voltage | Vdd | 1.8 , 2.5 , 3.3 ($\pm 10\%$) | | | V | |
| Current Consumption | Icc | - | - | 25 | mA | |
| Standby Current | Icc(ST) | - | - | 10 | uA | OE = Low |
| CMOS Type Signal Characteristics | | | | | | |
| Output Load : CMOS | CL | 15 | | | pF | |
| Output Voltage High | VoH | 90%Vdd | - | - | V | Vdd @ 2.5 or 3.3 V |
| | | Vdd-0.4 | - | - | | Vdd @ 1.8 V |
| Output Voltage Low | VoL | - | - | 10%Vdd | V | Vdd @ 2.5 or 3.3 V |
| | | - | - | 0.4 | | Vdd @ 1.8 V |
| Rise Time | Tr | - | - | 5 | ns | 10% → 90% Vdd Level |
| | | - | - | 4 | | 20% → 80% Vdd Level |
| Fall Time | Tf | - | - | 5 | ns | 90% → 10% Vdd Level |
| | | - | - | 4 | | 80% → 20% Vdd Level |
| Symmetry (Duty ratio) | TH/T | 45 | ~ | 55 | % | |

Note 1: Inclusive of frequency tolerance at 25°C , variation over temperature, supply voltage variation, aging and vibration.

Test condition
Ambient temperature : $25 \pm 5^\circ\text{C}$
Relative humidity : 40% ~ 70%

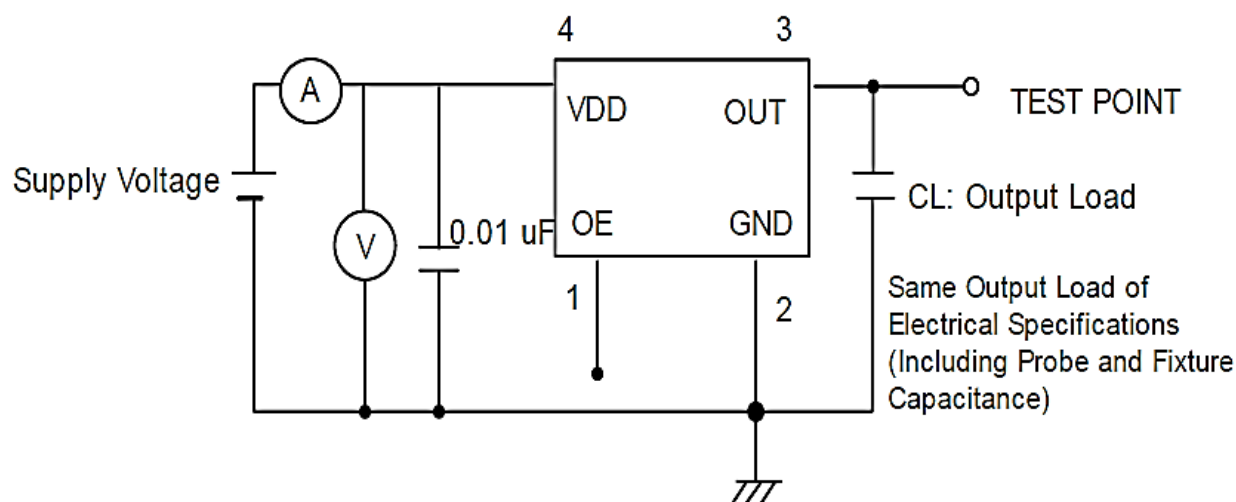
● **Table 1 . Electrical Specifications (continued)**

| Parameters | Symbol | Min. | Typ. | Max. | Units | Notes |
|---|--------|---------|------|--------|---------|---------------------------------|
| Startup and Resume time | | | | | | |
| Start-up Time | Tosc | - | - | 10 | ms | To 90% of Final Amplitude |
| Output Disable Delay Time | T off | - | - | 250 | us | |
| Output Enable Delay Time | T on | - | - | 300 | us | |
| Enable Pin Control and Input Characteristics | | | | | | |
| Enable Control | - | Yes | | | - | Pad 1 |
| Enable Voltage High | VIH | 70%Vdd | - | - | V | |
| Disable Voltage Low | VIL | - | - | 30%Vdd | V | |
| Aging Performance | | | | | | |
| Aging | - | ± 3 | | | ppm/yr. | 1st. Year at 25°C |
| Jitter Performance | | | | | | |
| RMS Phase Jitter Fout range : 10MHz~40MHz @ Integrated from 12KHz ~ 5MHz Note1 | PJ | - | - | 1.0 | ps | |
| RMS Phase Jitter Fout range : 40MHz~200MHz @ Integrated from 12KHz ~ 20MHz Note1 | PJ | - | - | 1.0 | ps | |

Note 1 : Phase Jitter will be slightly different according to output frequency and supply voltage.

● **Test Diagram**

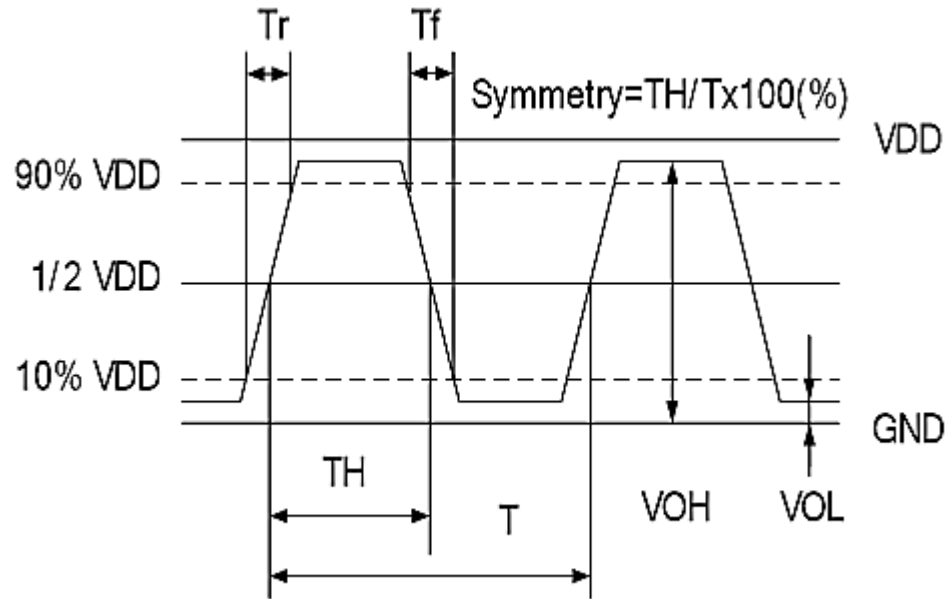
| Pad 1(OE) | Pad 3 (Output) | Oscillator |
|----------------|----------------|------------------|
| High (or open) | OSC out | Normal operation |
| Low | High impedance | Stop oscillation |



Note : TXC sets CL to 15pF for simulation IC load. Customer does not need to layout it in reality circuit.

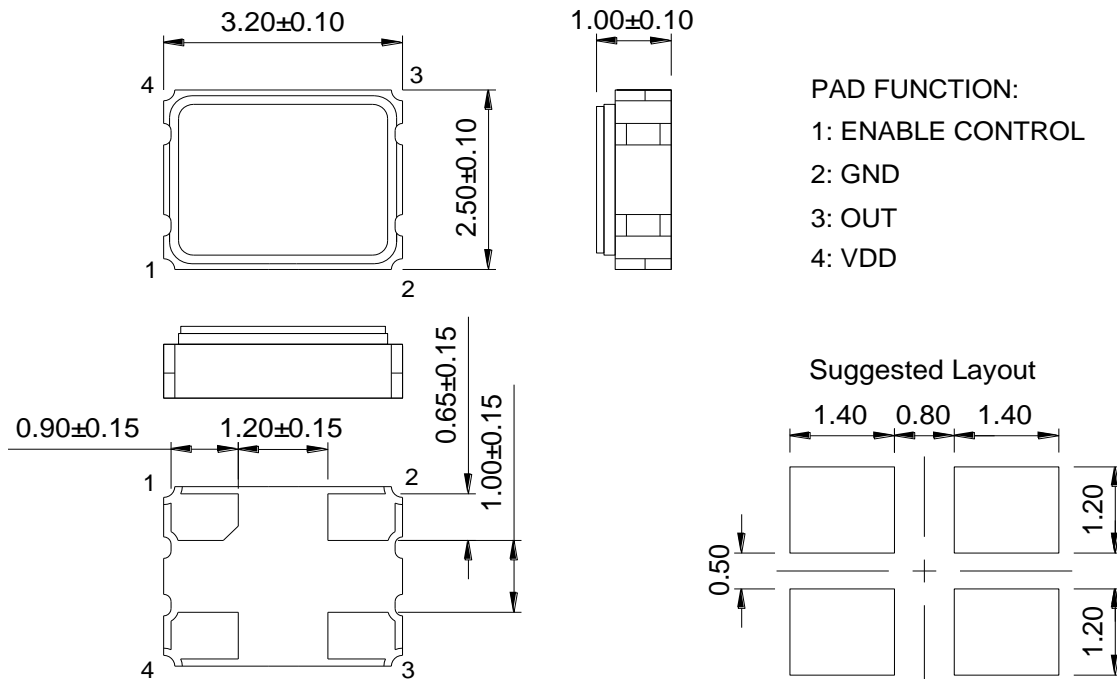
● **Waveform Conditions**

Waveform measurement system should have a min. bandwidth of 5 times the frequency being tested.



● **Dimensions & Footprint (Recommended)**

Unit : mm



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