



# SMD Temperature Compensated Crystal Oscillator

**TCXO 3222**

## Features

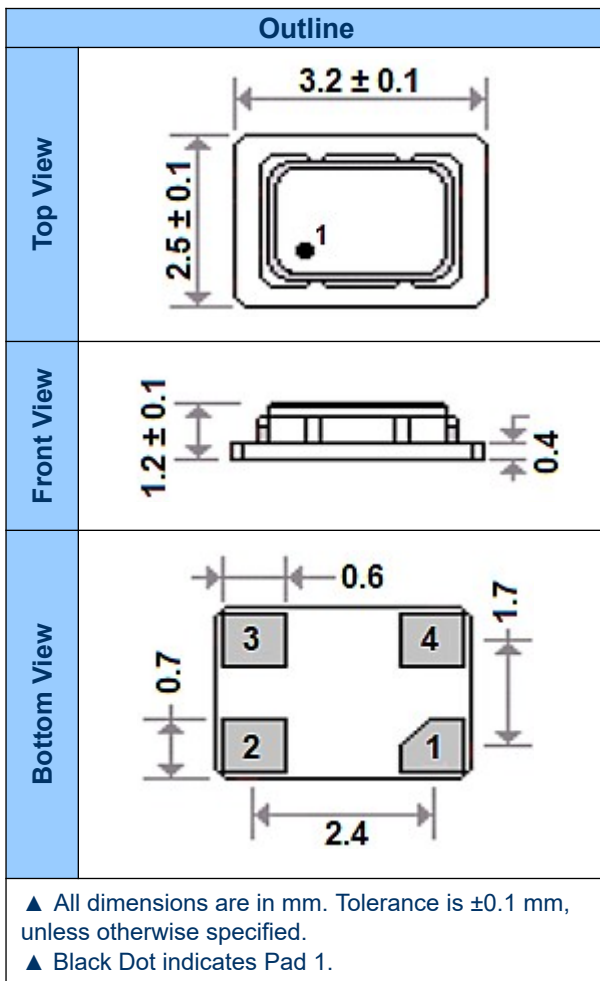
- SMD Package
- Wide Operating Temperature
- RoHS compliant

Specifications	Option Codes
<b>Nominal Frequency:</b> 10 MHz ~ 60.0 MHz	
<b>Supply Voltage, V<sub>dd</sub>:</b> +1.8 V ± 5% +2.5 V ± 5% +3.3 V ± 5%	1 2 3
<b>Current Consumption:</b> 6 mA (max.) @ +1.8 Volts 8 mA (max.) @ +2.5 Volts 9 mA (max.) @ +3.3 Volts	
<b>Output Signal:</b> HCMOS compatible, Square Wave	H
<b>Output Load:</b> 15 pF ± 10%	
<b>Output Levels:</b> V <sub>Low</sub> : 0.1 V <sub>dd</sub> (max.) V <sub>High</sub> : 0.9 V <sub>dd</sub> (min.)	
<b>Duty Cycle:</b> 50% ± 10%	
<b>Rise/ Fall Time:</b> 10 ns (max.) [10% to 90% of the waveform]	
<b>Start-up Time:</b> 5.0 ms (max.)	
<b>Frequency Tolerance @ 25°C:</b> ± 2 ppm (max.)	
<b>Operating Temperature Range (OTR):</b> Select from Table 1	
<b>Temperature Stability:</b> Select from Table 1	
<b>Supply Voltage Stability:</b> ± 0.3 ppm (max.)	
<b>Load Stability:</b> ± 0.3 ppm (max.)	
<b>Output Enable Voltage:</b> 0.7 V <sub>dd</sub> (min.)	
<b>Output Disable Voltage:</b> 0.3 V <sub>dd</sub> (max.)	
<b>RMS Jitter [12 KHz ~ 20 MHz]:</b> 0.3 ps (typ.), 1.0 ps (max.)	
<b>Aging @ 25°C:</b> ± 1 ppm (max.) per year	
<b>Storage Temperature Range:</b> -55°C to +125°C	



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## Mechanical Specifications



**Table 1**

OTR Codes	Stability Codes	Q	B	D
		Temperature Stability	± 2.5 ppm	± 5 ppm
I	-40°C to +85°C			
J5	-40°C to +105°C			

■ Denotes Available    □ Denotes not Available

**Table 2**

**SSB Phase Noise @ 50 MHz**

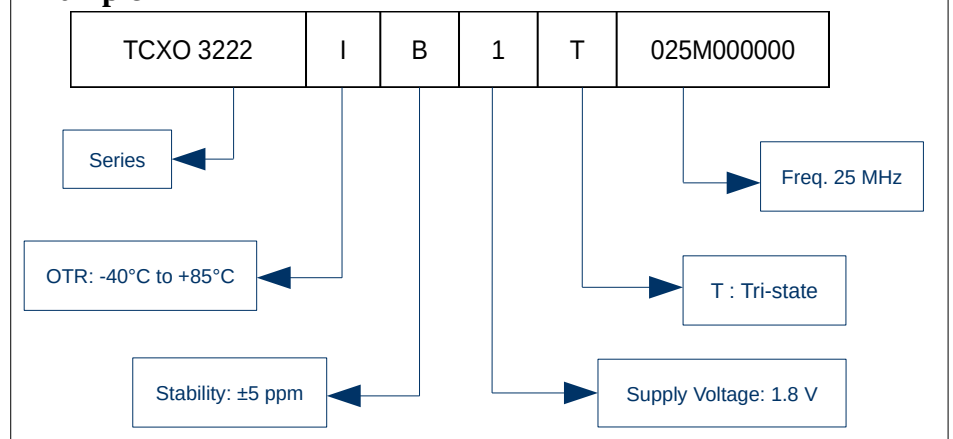
10 Hz offset	-84 dBc/ Hz
100 Hz offset	-111 dBc/ Hz
1 KHz offset	-133 dBc/ Hz
10 KHz offset	-147 dBc/ Hz
100 KHz offset	-152 dBc/ Hz

**Pad Configuration:**

Pad	Description
1	Tri-state
2	Ground
3	Output
4	Supply Voltage

**Ordering Information**

**Example**



Specifications subject to change without prior notice

Rev. Date: 25<sup>th</sup> July 2023

Note: Not all combination of options are available. Other specifications may be available upon request.