



SMD Temperature Compensated Crystal Oscillator

TCXO 3226

Features

- Wide Frequency Range
- Low Current Consumption
- 1.5 ps RMS Jitter
- Tuning option available

Output Signal	HC MOS (code H)	PECL (code P)	LVDS (code L)			
Supply Voltage, V_{dd}	+ 2.5 V \pm 5% (Code: 2) + 3.3 V \pm 5% (Code: 3)					
Frequency Range	10 MHz ~ 250 MHz	10 MHz ~ 1500 MHz				
Output Load	15 pF	50 Ω into V_{dd} - 2V	100 Ω			
Output High Voltage, V_{High}	0.9 V_{dd} (min.)	V_{dd} - 1.03 V (min.), V_{dd} - 0.6 V (max.)	1.4 V (typ.), 1.6 V (max.)			
Output Low Voltage, V_{Low}	0.1 V_{dd} (max.)	V_{dd} - 1.85 V (min.), V_{dd} - 1.6 V (max.)	1.1 V (typ.), 0.9 V (min.)			
Current Consumption (max.) @ +2.5 V	<50 MHz : 33 mA	<156 MHz : 50 mA	<156 MHz : 35 mA			
	<100 MHz : 40 mA	<600 MHz : 55 mA	<600 MHz : 40 mA			
	<200 MHz : 45 mA	<1000 MHz : 65 mA	<1000 MHz : 48 mA			
Current Consumption (max.) @ +3.3 V	<50 MHz : 36 mA	<156 MHz : 54 mA	<156 MHz : 39 mA			
	<100 MHz : 44 mA	<600 MHz : 60 mA	<600 MHz : 44 mA			
	<200 MHz : 50 mA	<1000 MHz : 66 mA	<1000 MHz : 50 mA			
Rise Time/ Fall Time	3.0 ns (max.)	0.5 ns (max.)	0.4 ns (max.)			
Frequency Tolerance @ 25°C	\pm 2.0 ppm (max.)					
Frequency Stability @ 25°C	Temperature Stability	As per table 1				
	Aging	\pm 2 ppm (max.) for first year; \pm 10 ppm (max.) over 10 years				
	Supply Voltage Stability	\pm 0.2 ppm (max.)				
	Load Stability	\pm 0.2 ppm (max.), for a \pm 10% load condition change				
Duty Cycle	50% \pm 5%					
Start-up Time	5 ms (max.)					
Storage Temperature	-55°C to + 150°C					
RMS Jitter [12 kHz ~ 20 MHz]	1.0 ps (typ.)					
Phase Noise [dBc/ Hz (typ.)]	Offset	10 Hz	100 Hz	1 KHz	10 KHz	1 MHz
	156.250 MHz	-65	-92	-107	-113	-139
	200.000 MHz	-60	-90	-105	-110	-133
	312.500 MHz	-50	-78	-95	-102	-125
Control Voltage Range (code V)	+1.5 V \pm 1.0 V					
Frequency Pulling Range	\pm 8 ppm (min.)					
Tuning Linearity	\pm 10% (max.)					
Tuning Transfer Function	Positive					
Control Voltage Input Impedance	750 K Ω (typ.)					
Output Enable Control on Pad 2	70% of V_{dd} (min.) to enable output (Open connection prohibit)					
	30% of V_{dd} (max.) to disable output					
Output Enable Time	200 ns (max.)					
Output Disable Time	50 ns (max.)					



SMD Temperature Compensated Crystal Oscillator

Mechanical Specifications

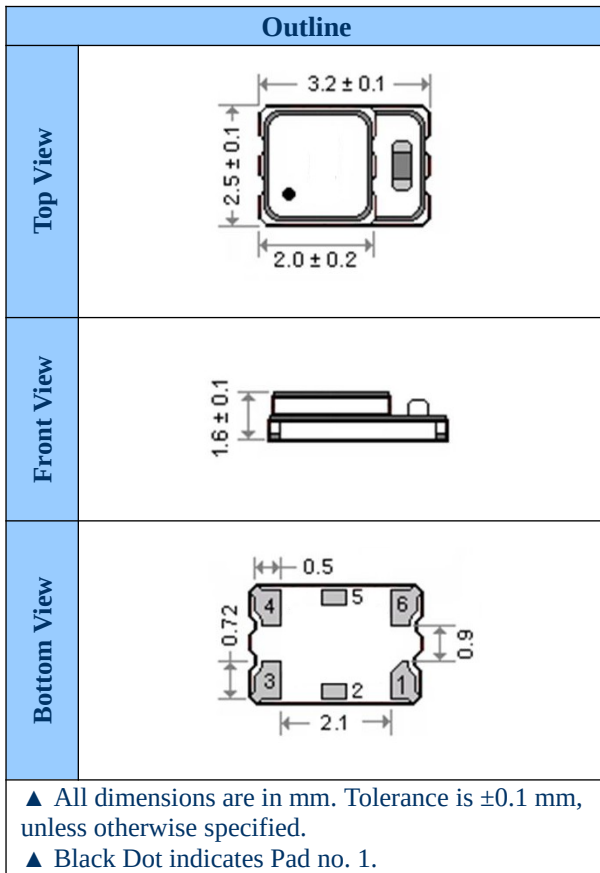


Table 1

OTR Codes	Stability Codes					
	Temperature Stability	Y ± 1 ppm	Z ± 1.5 ppm	P ± 2 ppm	Q ± 2.5 ppm	B ± 5 ppm
C	-20°C to +70°C					
H	-30°C to +85°C					
I	-40°C to +85°C					

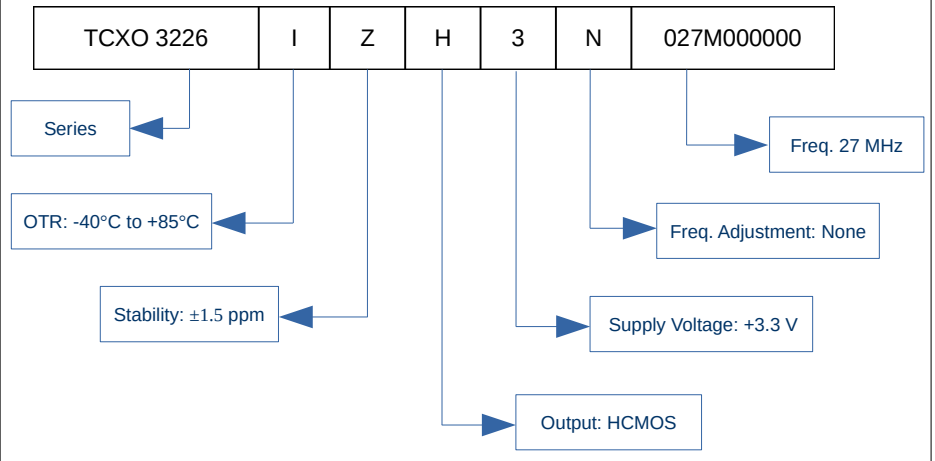
Denotes Available Denotes not Available

Pad Configuration:

Pad	Option N	Option V
1	No Connection	Control Voltage
2	Output Enable	Output Enable
3	Ground	Ground
4	Output	Output
5	No Connection for HCMOS	No Connection for HCMOS
	Complimentary Output for PECL/ LVDS	Complimentary Output for PECL/ LVDS
6	Supply Voltage	Supply Voltage

Ordering Information

Example



Specifications subject to change without prior notice

Rev. Date: 11th July 2023

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

Doc. No.: AE/DS/PS/008

ISSUE 01

REVISION 02

Page 2 of 2

Andhra Electronics Pvt. Ltd.

Plot no. 34 & 35, IDA,
 Kakinada-533 005
 Andhra Pradesh, India
 URL: www.andhraelec.com

Phone: +91 884 234 2203
 Fax: +91 884 234 1145
 e-mail: info@andhraelec.com