



2.5x2.0mm HCMOS TCXO

T2HD (former FOX251 Series) DATASHEET

- Analog Temperature Compensation
- Enable/Disable - Standby

ELECTRICAL CHARACTERISTICS

PARAMETERS	MAX (unless otherwise noted)
Frequency Range (MHz)	4.0 ~ 54.000
Temperature Range Operating (T_{OPR}) Storage (T_{STG})	See table below -40°C ~ +125°C
Supply Voltage (V_{DD}) ($\pm 5\%$)	2.5V; 2.8V; 3.3V
Input Current (I_{DD})	See table below
Initial Frequency Tolerance @ 25°C (1hr after reflow)	± 2.0 PPM
Frequency Stability Over Temperature Range Over Supply Voltage Change ($V_{DD} \pm 5\%$) Over Load Change 15pF $\pm 10\%$	See table below ± 0.3 PPM ± 0.3 PPM
Output Voltage Level (V_{OH}) (V_{OL})	0.9V _{DD} min 0.1V _{DD}
Output Load	15pF $\pm 10\%$
Aging per year	± 1.0 PPM
Startup Time (T_S)	10mS
Enable Time	10mS
Disable Time	250nS
Phase Noise @ 10kHz offset	-145 dBc/Hz Typical
Reflow Soldering Temp	260°C / 10 Seconds x 2
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au over Ni
Lead-Free	Yes
RoHS/REACH Compliant	Yes

Operating Temperature	± 2.5 PPM
-30 ~ +75°C	O
-30 ~ +85°C	O
-40 ~ +85°C	O

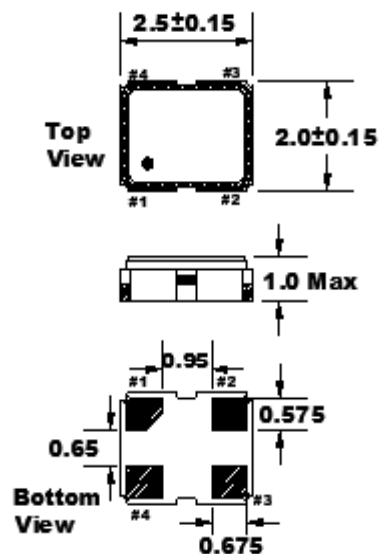
ENABLE / DISABLE FUNCTION

Pin1	Output (pin 3)
OPEN ¹	Active
'1' Level $V_{IH} \geq 70\%V_{DD}$	Active
'0' Level $V_{IL} \leq 30\%V_{DD}$	High Z

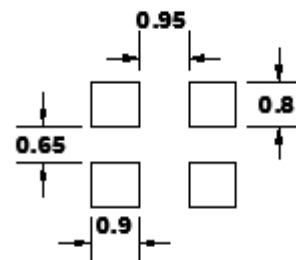
INPUT CURRENT (I_{DD}) (mA Max)

	4 ~ 10MHz	10+ ~ 20MHz	20+ ~ 30MHz	30+ ~ 40MHz	40+ ~ 54MHz
2.5V	3.1	3.7	4.2	4.6	5.5
2.8V	3.4	4.1	4.7	5.2	6.0
3.3V	4.0	4.8	5.5	6.0	7.0

*Dimensional drawing is for reference to critical specifications defined by size measurements.
Certain non-critical visual attributes, such as side castellations, reference pin shape, etc. may vary
All specifications subject to change without notice.



Recommended Solder Pad Layout



Dimensions are in millimeters.

Pin Connections

#1 E/D #3 Output
#2 GND #4 V_{DD}

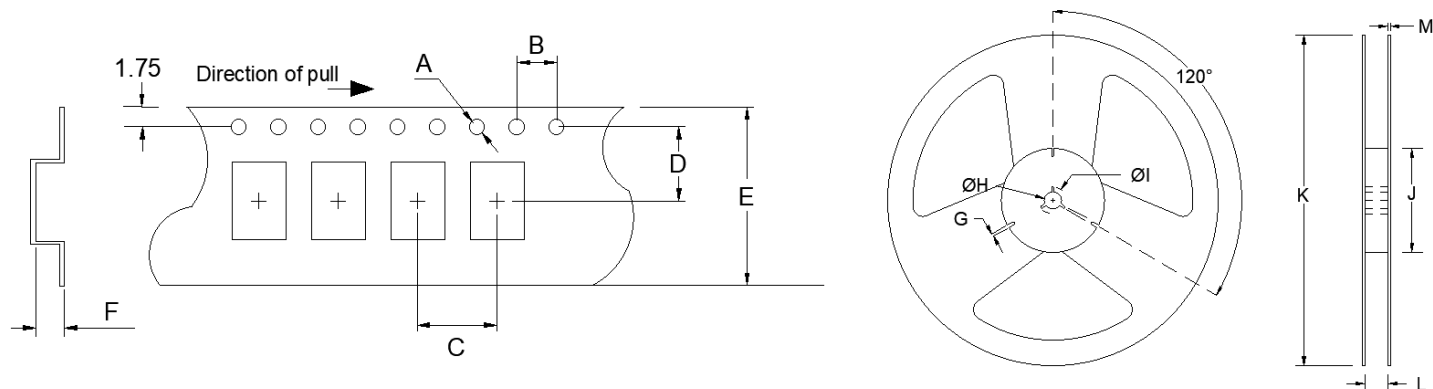




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Tape Specifications (millimeters)							Reel Specifications (millimeters)						
A	B	C	D	E	F	Reel Qty	G	H	I	J	K	L	M
Ø1.5	4.0	4.0	3.5	8.0	1.4	-T3 = 3,000 -T1 = 1,000	2.0	Ø13	Ø21	Ø60	Ø180	9.0	2.0



Available Options & Part Identification for TCXO Model T2HD¹

F T2HD B P H 25.0

F	T2HD	B	P	H	25.0
FOX	Model Number T2HD = TCXO	Voltage B = +3.3V±5% Q = +2.8V±5% H = +2.5V±5%	Stability P = ±2.5 PPM	Operating Temperature H = -30 to +75°C K = -30 to +85°C M = -40 to +85°C	Frequency (MHz)

¹ Not all frequencies in the frequency range available.



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