



5.0x3.2mm HCMOS TCXO

T5HD (former FOX551 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}) | See table below |
| Storage (T_{STG}) | -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 | See table below |
| Over Supply Voltage Change ($V_{DD} \pm 5\%$) | ± 0.3 PPM |
| Over Load Change 15pF $\pm 10\%$ | ± 0.3 PPM |
| Output Voltage Level (V_{OH}) | 0.9V _{DD} min |
| (V_{OL}) | 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 |

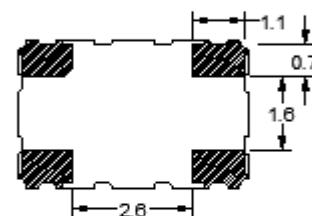
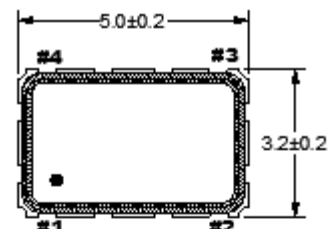
INPUT CURRENT (I_{DD}) (mA Max)

| | 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 |

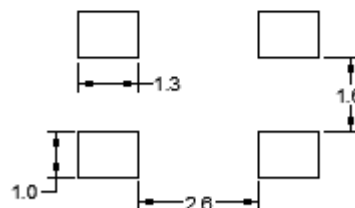
*Dimensional drawing is for reference to critical specifications defined by size measurements.

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}

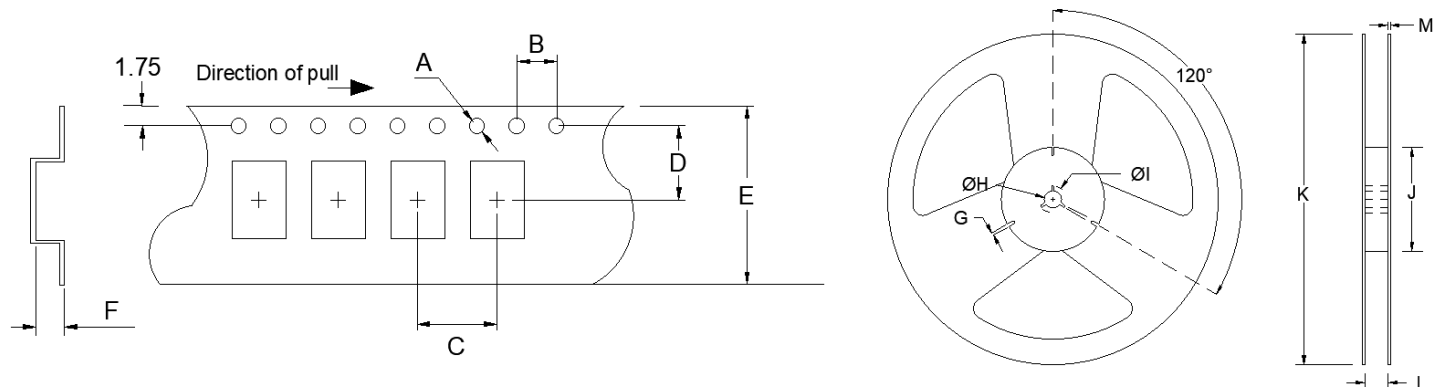




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| Tape Specifications (millimeters) | | | | | | | Reel Specifications (millimeters) | | | | | | |
|-----------------------------------|-----|-----|-----|------|-----|----------------------------|-----------------------------------|-----|--------------|-------------|--------------|------|------------|
| A | B | C | D | E | F | Reel Qty | G | H | I | J | K | L | M |
| Ø1.55 | 4.0 | 8.0 | 5.5 | 12.0 | 1.5 | -T3 = 3,000 -T1 = 1,000 | 2.0 | Ø13 | Ø21 Ø20.2 | Ø100 Ø62 | Ø330 Ø180 | 12.4 | 2.0 2.2 |



Available Options & Part Identification for TCXO Model T5HD¹ F T5HD B P H 25.0

| F | T5HD | B | P | H | 25.0 |
|------------|------------------------------------|--|----------------------------------|--|------------------------|
| FOX | Model Number T5HD = 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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