

2525 Shader Road Orlando Florida 32804 USA Phone: 407-298-2000 Fax: 407-293-2979 Website: www.mtronpti.com AMEX: LGL



# Specification for a Sinewave Output Thru-Hole OCXO MtronPTI P/N: XO5085-124R

## **Electrical Specifications:**

| Parameter                    | Symbol             | Min.         | Тур.             | Max.      | Units           | Conditions  |
|------------------------------|--------------------|--------------|------------------|-----------|-----------------|---|
| Nominal Frequency            | Fo                 |              | 100.000000       |           | MHz             |   |
|                              |                    |              | Frequency Stab   | ilities   |                 |   |
| vs. Temperature              | ΔF <sub>T</sub> /F | -100         |                  | +100      | ppb             | Over the Operating<br>Temperature Range                             |
| vs. Supply voltage variation |                    | -30          |                  | +30       | ppb             | +/-250mV change in supply voltage                                   |
| Daily Aging                  |                    | -5           |                  | +5        | ppb             | _   |
| 1 Year Aging                 |                    | -0.5         |                  | +0.5      | ppm             | After 30-days Power On  |
| 10-Years Aging               |                    | -2.0         |                  | +2.0      | ppm             |   |
| Retrace                      |                    | -20          |                  | -20       | ppb             | After 30-minutes power on following 24-hours off                    |
|                              |                    |              | RF Output        |           |                 |   |
| Output Type                  |                    | -            | Sinewave         |           |                 |   |
| Output Level                 |                    | +7.5         | +9               | +10.5     | dBm             |   |
| Output Load                  |                    |              | 50               |           | Ω               | ±10%  |
|                              |                    | F            | requency Adjus   | tment     |                 |   |
| Adjustment Method            |                    |              | External \       | /oltage   |                 |   |
| Adjustment Voltage           | V <sub>TUNE</sub>  | 0            |                  | +10       | V <sub>DC</sub> |   |
| Adjustment Range             |                    | ±0.5         |                  |           | ppm             | Over all conditions   |
| Adjustment Slope             |                    |              | Positi           | ve        |                 |   |
|                              |                    | A            | Additional Paran | neters    |                 |   |
|                              |                    |              |                  | -97       | dBc/Hz          | 10Hz Offset   |
|                              |                    |              |                  | -128      | dBc/Hz          | 100Hz Offset  |
| Phase Noise                  |                    |              |                  | -158      | dBc/Hz          | 1kHz Offset   |
| (Under Static                |                    |              |                  | -170      | dBc/Hz          | 10kHz Offset  |
| Conditions)                  |                    |              |                  | -170      | dBc/Hz          | 100kHz Offset   |
|                              |                    |              |                  | -170      | dBc/Hz          | 1MHz Offset   |
|                              |                    |              |                  | -170      | dBc/Hz          | 10MHz Offset  |
| G-sensitivity                |                    |              | 1.5              |           | ppb/g           |   |
| Harmonics                    |                    |              |                  | -25       | dBc             |   |
| Spurious                     |                    |              |                  | -80       | dBc             |   |
| Warm-up Time                 |                    |              |                  | 5         | minutes         | To within ±0.1ppm of the frequency after 1-hour of operation @ 25°C |
|                              |                    | oerature, Su | upply Voltage &  | Power Con |                 |   |
| Operating Temperature        | OTR                | -25          |                  | +80       | °C              | Full Specification Compliance                                       |
| Storage Temperature          | STR                | -55          |                  | +85       | °C              |   |
| Operating Voltage            | Vcc                | +11.4        | +12.0            | +12.6     | $V_{DC}$        |   |
| Power Consumption            |                    |              |                  | 1.5       | Watts           | Steady state @ 25°C,<br>In Still Air                                |
| ·                            |                    |              |                  | 3.6       | Watts           | @ Warm-up   |



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#### **Environmental Conditions:**

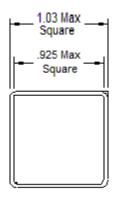
| Seal | Hermetic             |
|------|----------------------|
| RoHS | Full RoHS Compliance |

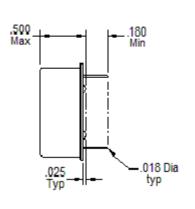
# **Mechanical, Marking and Layout Information:**

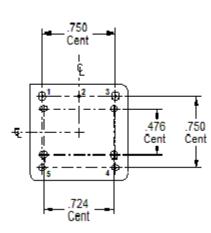
| Part Marking  |
|---------------|
| MtronPTI      |
| XO5085-124R   |
| 100.0000MHz   |
| Serial Number |
| Date Code     |

| Legend |           |  |
|--------|-----------|--|
| уу     | Year      |  |
| ww     | Work Week |  |

| Pin | Function          |
|-----|-------------------|
| 1   | RF Output         |
| 2   | Case Ground       |
| 3   | V <sub>TUNE</sub> |
| 4   | N/C               |
| 5   | Supply Voltage    |







### **Data Sheet Revision Table:**

| Date     | Rev. | Orig. | Details of Revision |
|----------|------|-------|---------------------|
| 09-23-20 | Α    | DPD   | Original release    |