

OVEN CONTROLLED CRYSTAL OSCILLATOR UNIT IN THRU-HOLE 20x20MM METAL CAN PACKAGE.

PRODUCT FEATURES

- High accuracy OCXO 20x20x11 with 5 leads.
- Various frequency stabilities being available.
- Excellent low aging and short term stability.
- Output signal with very low phase noise.
- Optional control voltage and reference voltage.

APPLICATIONS

- Base station
- Telecom equipment
- Satellite equipment
- Test equipment

PRODUCT PHOTO (NOT IN SCALE)



PRODUCT SPECIFICATIONS

| PARAMETER | 5220H5 / 5220S5 / 5220T5 | CONDITIONS / REMARKS |
|---|---|--|
| Nominal frequency range | 10 ~ 100MHz | See Note |
| Supply voltage | 3.3V _{DC} / 5.0V _{DC} / 12.0V _{DC} | — |
| Power consumption (warm up) (steady state) | <3.0W <1.5W | May vary depending on supply voltage used. |
| Operating temperature range | -20 to +70°C or -40 to 85°C | Other options available. |
| Output waveform HCMOS | V _{OH} ≥90%V _{CC} / V _{OL} ≤10%V _{CC} | Model 5220H5 |
| Output waveform SINEWAVE | ≥6dBm / ≤10dBm | Model 5220S5 |
| Output waveform TTL | V _{OH} ≥2.4V / V _{OL} ≤0.4V | Model 5220T5 |

Note: Typical frequencies 10MHz, 15.36MHz, 16.384MHz, 19.44MHz, 20MHz, 25MHz, 26MHz, 38.88MHz, 50MHz.

FREQUENCY SPECIFICATIONS (dependent on crystal type)

| PARAMETER | for SC-cut crystal | for AT-cut crystal |
|-------------------------------|-----------------------------|---------------------------|
| Frequency tolerance (@+25°C) | ±200ppb ~ ±500ppb | ±200ppb ~ ±500ppb |
| Frequency stability (Note 1) | ±1ppb / ±5ppb / ±10ppb | ±30ppb / ±50ppb / ±100ppb |
| Short term stability | ±0.01ppb/s | ±0.1ppb/s |
| Stability versus voltage | ±0.5ppb | ±5ppb |
| Aging rate DAILY | ±0.3ppb / ±0.5ppb / ±1.0ppb | ±3ppb / ±5ppb / ±10ppb |
| ANNUALLY | ±30ppb / ±50ppb / ±100ppb | ±300ppb / ±500ppb / ±1ppm |
| Frequency adjustment (Note 2) | 0.5 ~ 1.0ppm | 5 ~ 10ppm |
| Phase noise @10Hz | -92dBc/Hz | |
| Example for Sinewave @100Hz | -127dBc/Hz | |
| Output 100MHz unit @1kHz | -152dBc/Hz | |
| @10kHz | -165dBc/Hz | |
| @100kHz | -168dBc/Hz | |

Note 1: Frequency stability is the frequency deviation over operating temperature range.

Note 2: Frequency adjustment applies for the option with Control voltage function, refer to page 2.

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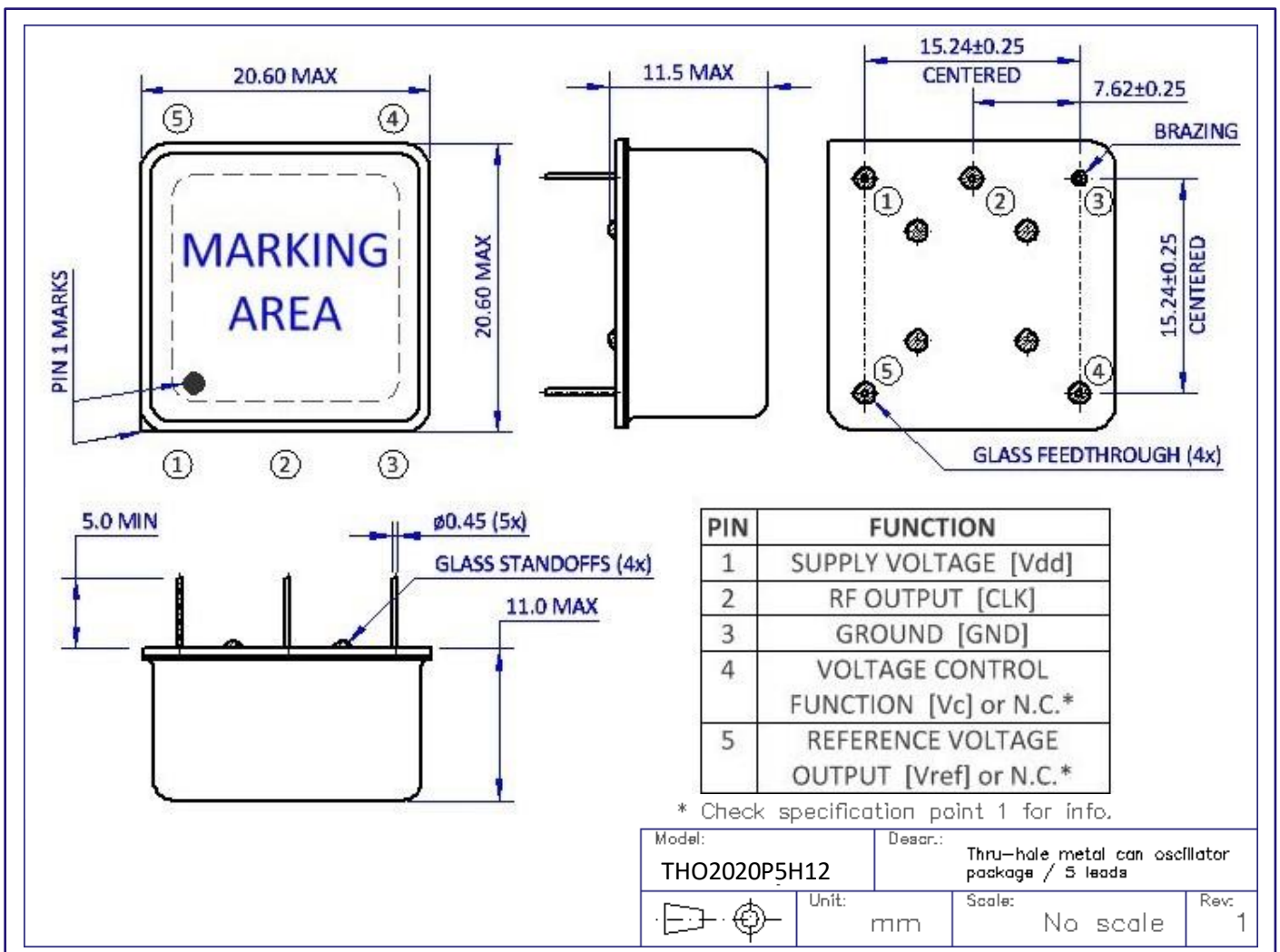
AVAILABLE OPTIONS

| PARAMETER | for 3.3V | | for 5.0V | | for 12.0V |
|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Control voltage range (Note 1) | 0~2.8V _{DC} | 0~3.3V _{DC} | 0~4.0V _{DC} | 0~5.0V _{DC} | 0~5.0V _{DC} |
| Frequency stability (Note 1) | 1.4V _{DC} | 1.65V _{DC} | 2.0V _{DC} | 2.5V _{DC} | 2.5V _{DC} |
| Reference voltage (Note 2) | 2.8V _{DC} | N/A | 4.0V _{DC} | N/A | 5.0V _{DC} |

Note 1: Applies for option with a Control Voltage Input.

Note 2: Applies for option with a Reference Voltage output.

PACKAGE OUTLINE / DIMENSIONS



PACKAGING INFORMATION

- Packaging in antistatic foam tray.
- QTY per tray: 20pcs

ENVIRONMENTAL COMPLIANCE INFORMATION

- Product is RoHS and RoHS 2 compliant.
- Product is built using a LEAD-FREE solder alloy, if required a high melting point solder alloy can be used as well.