

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.

PRODUCT PHOTO (NOT IN SCALE)

APPLICATIONS

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

PRODUCT SPECIFICATIONS

PARAMETER	OD20H5 / OD20S5 / OD20T5	CONDITIONS / REMARKS
Nominal frequency range	10 ~ 100MHz	See Note
Supply voltage	3.3V _{DC} / 5.0V _{DC} / 12.0V _{DC}	–
Power consumption (warm up)	<3.0W	May vary depending on supply voltage used.
(steady state)	<1.5W	
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 OD20H5
Output waveform SINEWAVE	≥6dBm / ≤10dBm	Model OD20S5
Output waveform TTL	V _{OH} ≥2.4V / V _{OL} ≤0.4V	Model OD20T5

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.

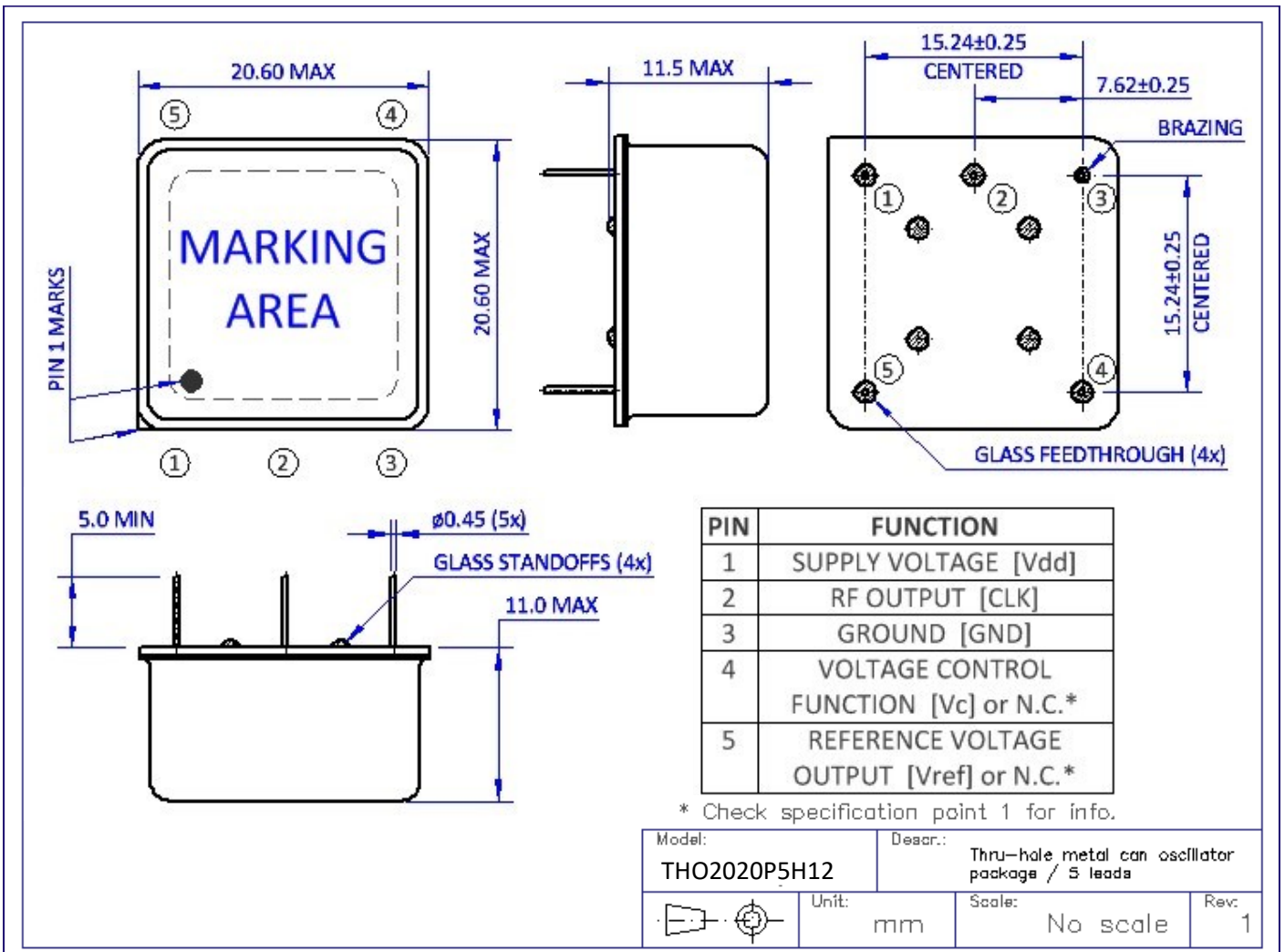
Note 2: Frequency adjustment applies for the option with control voltage function, refer to page 2.

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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.