

Helping Customers Innovate, Improve & Grow



### Features

- Very High Stability
- Low Aging
- SC-Cut Crystal Standard
- Frequency Range: 4 MHz to 15 MHz
- Previous Model: C4650, 4884

### Applications

- Base Stations
- Test Equipment
- Synthesizers
- Digital Switching

## Performance Specifications

| Parameter  | Min   | Typ  | Max        | Units          | Condition   |
|--|-------|------|------------|----------------|---|
| <b>Frequency Stabilities<sup>1</sup></b>                 |       |      |            |                |   |
| vs. operating temperature range<br>(referenced to +25°C) | -10   |      | +10        | ppb            | -40... +70°C  |
|  | -7    |      | +7         | ppb            | -20... +70°C  |
|  | -5    |      | +5         | ppb            | 0... +70°C  |
| Initial Tolerance  | -250  |      | +250       | ppb            | at time of shipment, nominal EFC                          |
| vs. supply voltage change                                | -1.0  |      | +1.0       | ppb            | Vs ± 5%   |
| vs. load change  | -1.0  |      | +1.0       | ppb            | Load ± 5%   |
| vs. aging / day  | -0.5  |      | +0.5       | ppb            | after 72 hours of operation                               |
| vs. aging / 1 year                                       | -50   |      | +50        | ppb            | after 72 hours of operation                               |
| vs. aging / year (following years)                       | -30   |      | +30        | ppb            |   |
| Warm-up Time   |       |      | 10         | minutes        | to ± 10ppb of final frequency<br>(1 hour reading) @ +25°C |
| <b>Supply Voltage (Vs)</b>                               |       |      |            |                |   |
| Supply voltage (Standard)                                | 11.4  | 12.0 | 12.6       | VDC            |   |
| Supply voltage (Option)                                  | 14.25 | 15.0 | 15.75      | VDC            |   |
| Power consumption  |       |      | 6.0<br>1.5 | Watts<br>Watts | during warm-up<br>steady state @ +25°C                    |

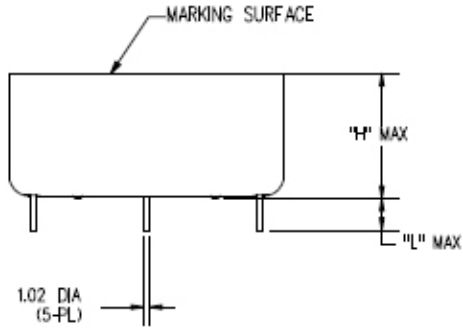
# Performance Specifications

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| Parameter                                | Min                        | Typ  | Max                                 | Units  | Condition                                  |
|--|----------------------------|------|-------------------------------------|--|--|
| <b>RF Output</b>                         |                            |      |                                     |  |  |
| Signal (standard)                        | HCMOS                      |      |                                     |  |  |
| Load                                     |                            | 15   |                                     | pF   |  |
| Signal Level (Vol)                       |                            |      | 0.5                                 | V  | with 15pF load                             |
| Signal Level (Voh)                       | 4.5                        |      |                                     | V  | with 15pF load                             |
| Duty cycle                               | 40                         |      | 60                                  | %  | @ (Voh-Vol)/2                              |
| Signal (Option)                          | Sinewave                   |      |                                     |  |  |
| Load                                     |                            | 50   |                                     | ohm  |  |
| Output Power                             | +5.0                       | +7.0 | +9.0                                | dBm  | 50 ohm load                                |
| Harmonics                                |                            |      | -30                                 | dBc  | 50 ohm load                                |
| <b>Frequency Tuning (EFC)</b>            |                            |      |                                     |  |  |
| Tuning Range                             | ±0.3                       | ±0.6 | ±1.0                                | ppm  |  |
| Linearity                                |                            |      | 20                                  | %  |  |
| Tuning Slope                             | Positive                   |      |                                     |  |  |
| Control Voltage Range                    | 0.0                        | 2.5  | 5.0                                 | VDC  |  |
| <b>Additional Parameters<sup>1</sup></b> |                            |      |                                     |  |  |
| Reference Voltage                        | 4.7                        | 4.9  | 5.1                                 | VDC  |  |
| Phase Noise <sup>3</sup> (@ 10 MHz)      |                            |      | -95<br>-125<br>-145<br>-150<br>-155 | dBc/Hz<br>dBc/Hz<br>dBc/Hz<br>dBc/Hz<br>dBc/Hz | 1 Hz<br>10 Hz<br>100 Hz<br>1 kHz<br>10 kHz |
| Weight                                   |                            |      | 53.0                                | g  |  |
| Processing & Packing                     | Handling & processing note |      |                                     |  |  |
| <b>Absolute Maximum Ratings</b>          |                            |      |                                     |  |  |
| Supply voltage (Vs)                      |                            |      | 28.0                                | V  |  |
| Output Load                              |                            |      | 50<br>25                            | pF<br>ohm                                      | with HCMOS signal<br>with Sinewave signal  |
| Operable temperature range               | -55                        |      | +85                                 | °C   |  |
| Storage temperature range                | -55                        |      | +125                                | °C   |  |

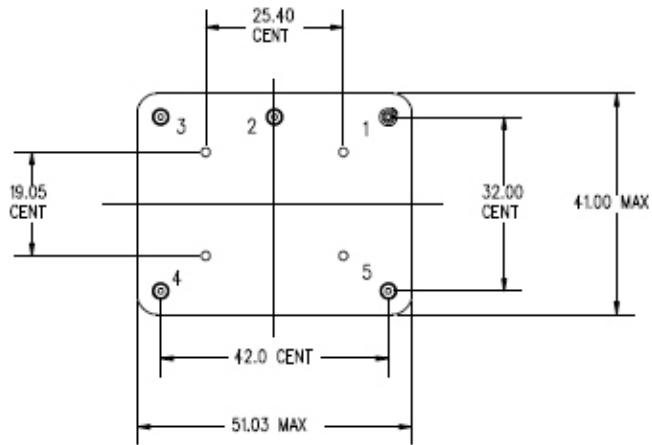
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## Outline Drawing / Enclosure



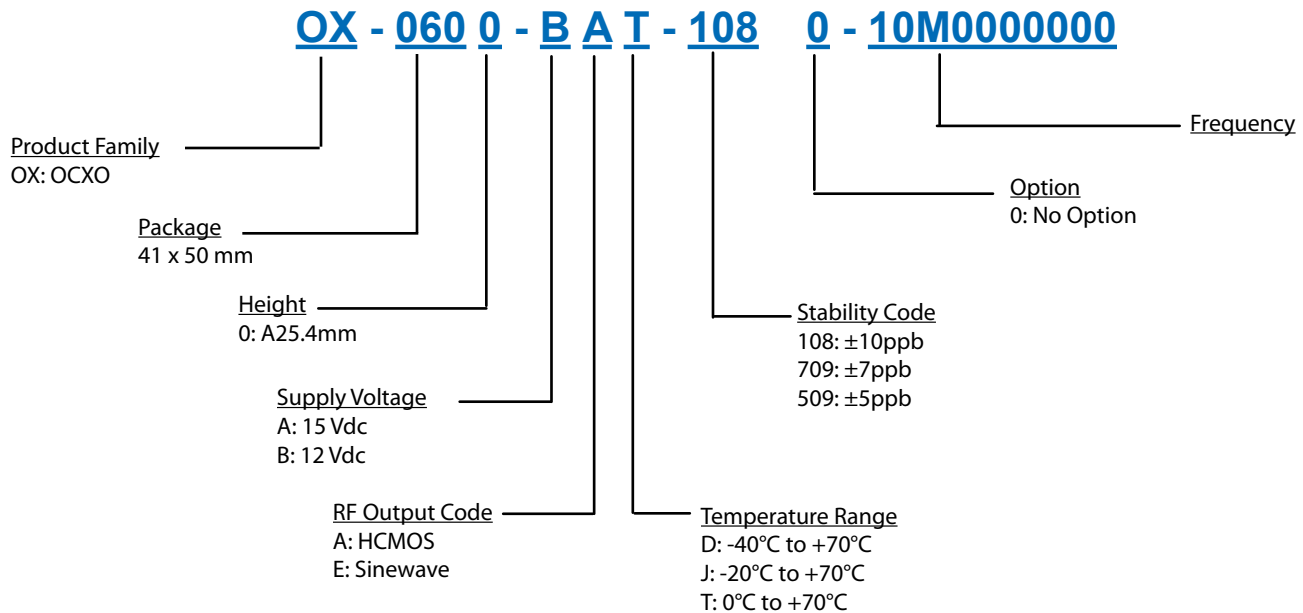
Dimensions in mm

| Type A |            |                |
|--------|------------|----------------|
| Code   | Height "H" | Pin Length "L" |
| 0      | 25.4       | 6.40           |



| Pin Connections |   |
|-----------------|---|
| 1               | Ground (Case)                           |
| 2               | Electronic Frequency Control Input(EFC) |
| 3               | Reference Voltage Output                |
| 4               | Supply Voltage Input (Vs)               |
| 5               | RF Output                               |

## Ordering Information



### Notes:

1. Contact factory for improved stabilities or additional product options. Not all options and codes are available at all frequencies.
2. Unless other stated all values are valid after warm-up time and refer to typical conditions for supply voltage, frequency control voltage, load, temperature (25°C).
3. Phase noise degrades with increasing output frequency.
4. Subject to technical modification.
5. Contact factory for availability.

## For Additional Information, Please Contact

### USA:

Vectron International  
267 Lowell Road  
Hudson, NH 03051  
Tel: 1.888.328.7661  
Fax: 1.888.329.8328

### Europe:

Vectron International  
Landstrasse, D-74924  
Neckarbischofsheim, Germany  
Tel: +49 (0) 3328.4784.17  
Fax: +49 (0) 3328.4784.30

### Asia:

Vectron International  
1F-2F, No 8 Workshop, No 308 Fenju Road  
WaiGaoQiao Free Trade Zone  
Pudong, Shanghai, China 200131  
Tel: 86.21.5048.0777  
Fax: 86.21.5048.1881

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