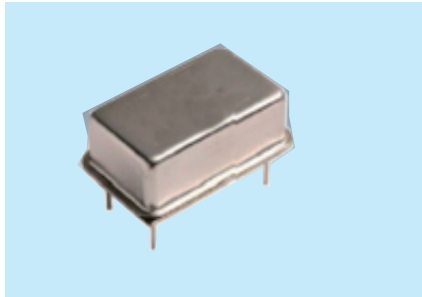




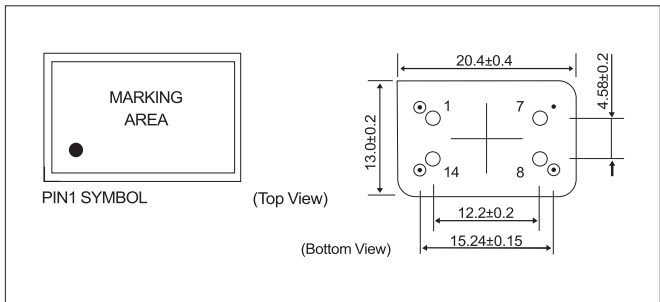
Products Information

TC20

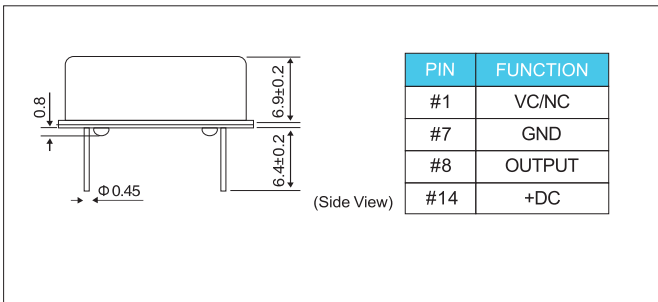


- **DESCRIPTION:**
- Stability up to  $\pm 0.5 \times 10^{-6}$
  - Control Voltage Range  $\pm 10 \times 10^{-6}$  Max.
  - TTL/HCMOS Outout
  - Low Aging
  - 14PIN Package
  - SDH/SONET
  - ATM
  - WLL
  - Measurement Equipment

■ **RECOMMENDED LAND PATTERN** [mm]



■ **DIMENSION** [mm]



■ **PERFORMANCE CHARACTERISTICS**

| Parameter                   |                       | Condrtion                              | TC20                                     |                |
|-----------------------------|-----------------------|----------------------------------------|------------------------------------------|----------------|
| Frequency Range             |                       | F <sub>0</sub>                         | 1.250MHz~50.000MHz                       |                |
| Frequency Stability         |                       | All Condition                          | See Next Table                           |                |
| Operating Temperature Range |                       | T <sub>OPR</sub>                       | See Next Table                           |                |
| Supply Voltage              |                       | V <sub>DD</sub>                        | B: +5.0VDC±10%                           | A: +3.0VDC±10% |
| Supply Current              |                       | I <sub>DD</sub>                        | 1.25M≤F <sub>0</sub> <15M                | 15mA Max.      |
|                             |                       |                                        | 15M≤F <sub>0</sub> <36M                  | 20mA Max.      |
|                             |                       |                                        | 36M≤F <sub>0</sub> <50M                  | 25mA Max.      |
| Output Load                 |                       |                                        | A: TTL 15pF C: CMOS 15pF<br>D: CMOS 50pF |                |
| Output Duty                 |                       | 1.4V or 1/2V <sub>DD</sub>             | 45%~55%                                  |                |
| Control Voltage Range       |                       |                                        | See Ordering Information                 |                |
| Frequency Stability<br>Vs   | Supply Voltage change | ±5%                                    | ±0.2×10 <sup>-6</sup>                    |                |
|                             | Load change           | ±10%                                   | ±0.2×10 <sup>-6</sup>                    |                |
|                             | Aging                 |                                        | ±1×10 <sup>-6</sup> /year                |                |
| Rise Time                   | Tr                    | 0.4V~2.4V                              | 10nS Max.                                |                |
|                             |                       | 10%V <sub>DD</sub> ~90%V <sub>DD</sub> |                                          |                |
| Fall Time                   | Tf                    | 2.4V~0.4V                              | 10nS Max.                                |                |
|                             |                       | 90%V <sub>DD</sub> ~10%V <sub>DD</sub> |                                          |                |
| Output Level                | “0”Level              | V <sub>OL</sub>                        | 0.4V Max. or 10%V <sub>DD</sub>          |                |
|                             | “1”Level              | V <sub>OH</sub>                        | 2.4V Min. or 90%V <sub>DD</sub>          |                |
| Vc Input Impedance          |                       |                                        | 100KΩ                                    |                |
| Start-Up Time               |                       | T <sub>s</sub>                         | 2mS Max.                                 |                |
| Storage Temperature Range   |                       | T <sub>STG</sub>                       | -55℃~+125℃                               |                |



Tel:021-53082119 Fax:021-61372591 E-mail:jdschina@163.com http://www.jdschina.com



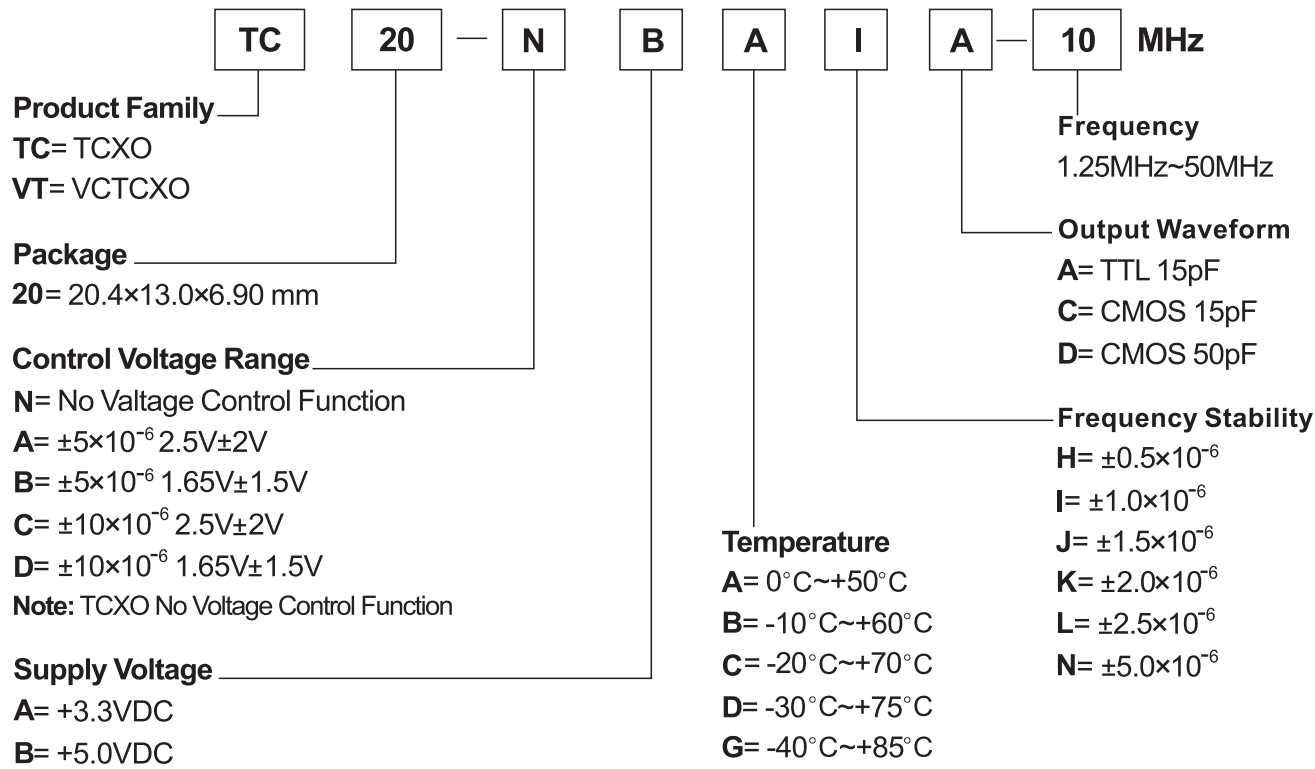
Products Information

TC20

■ **FREQUENCY STABILITY OVER TEMPERATURE RANGE**

| Temperature Range | Frequency Stability      |                          |                          |                         |                          |                          |
|-------------------|--------------------------|--------------------------|--------------------------|-------------------------|--------------------------|--------------------------|
|                   | H: ±0.5×10 <sup>-6</sup> | I: ±1.0×10 <sup>-6</sup> | J: ±1.5×10 <sup>-6</sup> | K ±2.0×10 <sup>-6</sup> | L: ±2.5×10 <sup>-6</sup> | N: ±5.0×10 <sup>-6</sup> |
| A: 0℃~+50℃        | ●                        | ●                        | ●                        | ●                       | ●                        | ●                        |
| B: -10℃~+60℃      | ●                        | ●                        | ●                        | ●                       | ●                        | ●                        |
| C: -20℃~+70℃      |                          | ●                        | ●                        | ●                       | ●                        | ●                        |
| D: -30℃~+75℃      |                          | ●                        | ●                        | ●                       | ●                        | ●                        |
| G: -40℃~+85℃      |                          | ●                        | ●                        | ●                       | ●                        | ●                        |

ORDERING INFORMATION



ORDERING EXAMPLE

**TC20-NBAIA-10MHz**  
TCXO / No Voltage Control Function / +5.0VDC / 0℃~+50℃ / ±1.0×10<sup>-6</sup> / TTL 15pF / 10MHz

**VT20-ABAIA-10MHz**  
VCTCXO / ±5PPM 2.5V±2V / +5.0VDC / 0℃~+50℃ / ±1.0×10<sup>-6</sup> / TTL 15pF / 10MHz



Tel:021-53082119 Fax:021-61372591 E-mail:jdschina@163.com http://www.jdschina.com