

**Ceramic Surface Mount**

- 1.25 mm height
- Glass-sealed housing for high reliability
- Three industry standard footprints
- Economic cost

**Series CX12A**



**CX12B**  
**CX12C**

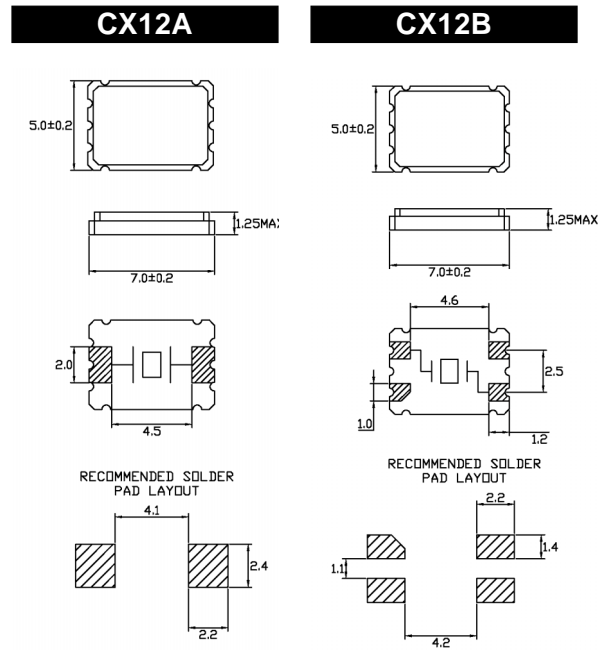
**Part Numbering Example: CX12A Z - A1 B2 C2 60 - 9.83 D18 - 3**

| CX12A  | Z                                      | A1*   | B2   | C2   | 60                 | 9.83      | D18                           | - 3   |
|--------|--|---|--|--|--------------------|-----------|-------------------------------|---|
| SERIES | ADDED FEATURES                         | OPERATING TEMP.   | STABILITY  | TOLERANCE  | RESISTANCE         | FREQUENCY | LOAD CAP.                     | OVERTONE  |
| CX12A  | BLANK = BULK PACK<br>Z = TAPE AND REEL | A0 = -10°C ~ +60°C<br>A1 = -10°C ~ +70°C<br>A2 = -40°C ~ +85°C<br>A3 = -55°C ~ +125°C | B1 = ±100<br>B2 = ± 50<br>B3 = ± 30<br>B4 = ± 10 | C1 = ±100<br>C2 = ± 50<br>C3 = ± 30<br>C4 = ± 10 | SEE CHART<br>BELOW |           | D16,18,20,ETC.<br>DS = SERIES | BLANK: FUND.<br>-3: 3rd OT<br>-5: 5th OT<br>-7: 7th OT<br>-BT: BT Cut |

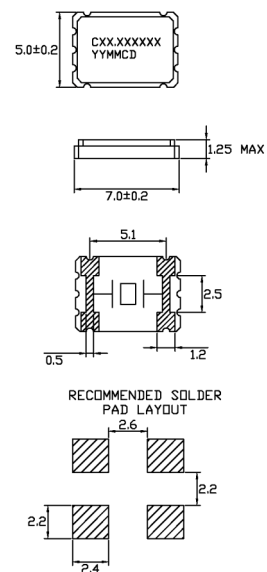
*\*NOTE: The above ABC combinations cover basic specification options. We tailor our crystal specifications to meet customer requirements. Please contact our sales department if you don't see exactly what you need.*

**Specifications:**

|                               |  |
|-------------------------------|--|
| <b>Frequency Range:</b>       | 9.83 ~ 100.000 MHz   |
| <b>Operating Temperature:</b> | -10°C ~ +60°C <i>Standard</i><br>-40°C ~ +85°C   |
| <b>Frequency Stability:</b>   | ±100 ppm <i>Standard</i><br>± 50 ppm   |
| <b>Frequency Tolerance:</b>   | ± 50 ppm <i>Standard</i><br>(at 25°C)  |
| <b>Load Capacitance:</b>      | Standard 18 pF or series.<br>Other values are available.   |
| <b>Resistance:</b>            | Maximum resistance corresponds to frequency.<br>See chart below.   |
| <b>Standard:</b>              | Mode: Fundamental or 3rd Overtone<br>Shunt Capacitance: 5 pF Max<br>Aging: ± 5 ppm/year<br>Drive Level: 0.1 mW<br>Packaging: Tape and Reel (1K per Reel) |



**CX12C**



**Resistance Chart: All resistances are maximum values.**

| EQUIVALENT SERIES RESISTANCE (ESR), MODE OF OPERATION (MODE), AND CUT |        |          |                |         |                 |
|---|--------|----------|----------------|---------|-----------------|
| Frequency MHz   | ESR(Ω) | Mode/cut | Frequency MHz  | ESR (Ω) | Mode/cut        |
| 9.83~11.999   | 60 Max | Fund./AT | 28.000~30.999  | 100 Max | 3rd Overtone/AT |
| 12.000~15.999   | 60 Max | Fund./AT | 31.000~34.999  | 100 Max | 3rd Overtone/AT |
| 16.000~25.999   | 40 Max | Fund./AT | 35.000~49.999  | 60 Max  | 3rd Overtone/AT |
| 26.000~41.000   | 40 Max | Fund./AT | 50.000~100.000 | 60 Max  | 3rd Overtone/AT |

