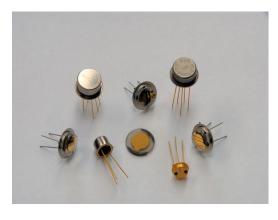


# **AT Cut TO Style Crystals**

## **Description**

Unmatched performance during extreme shock and vibration combined with superior aging and high reliability make this crystal the choice for AT cut designs in aerospace, defense, and commercial systems.



## **Features:**

- Available in frequencies from 1.0 MHz to 150 MHz
- +/- 15 ppm available over temp.
- Exceptional Aging Characteristics
- 4-Point mount for ruggedized designs
- Extremely Shock resistant
- Designed for high-temp reflow
- RoHS compliant available
- Coldweld Vacuum Sealed Package

Frequency Range, Operating Temperature, and Frequency Stability:

| rrequency Range, Operating rempera |                          |                 |  |  |
|------------------------------------|--------------------------|-----------------|--|--|
| Frequency<br>Range                 | Operating<br>Temperature | Product<br>Code |  |  |
|                                    | 0 to +70°C               | Α               |  |  |
| 1.0 MHz to<br>150 MHz              | -20 to +70°C             | В               |  |  |
|                                    | -40 to +70°C             | С               |  |  |
|                                    | -55 +105°C               | D               |  |  |

| Temperature<br>Stability (includes<br>calibrations at<br>25°C) | Product<br>Code |
|--|-----------------|
| ±15 ppm  | А               |
| ± 20 ppm   | В               |
| ± 30 ppm   | С               |
| ± 50 ppm   | D               |

<sup>\*\*</sup> Note: Not all combinations of temperature ranges and frequency stability available. Other temperature ranges and stabilities are available. For specific details consult factory.

| Bliley Type | Frequency | Crystal Cut     | Max Series | Shunt       | Industry   | Mil-H-10056 |
|-------------|-----------|-----------------|------------|-------------|------------|-------------|
|             | Range     | (Mode)          | Resistance | Capacitance | Package    | Package     |
|             | (MHz)     |                 | $(\Omega)$ | (Co)        | Designator | Designator  |
|             | 1 – 2     |                 | 150        |             |            |             |
| BK2W        | 2-3       |                 | 80         |             | N/A        | HC-40/U     |
|             | 3 – 6     |                 | 25         |             |            |             |
|             | 2-3       | ta l            | 250        | 3 to 5 pf   | TO-8       | HC-37/U     |
| BK5W        | 3 – 4     | Fundamental     | 100        |             |            |             |
|             | 4 – 5     | аш              | 50         |             |            |             |
|             | 5 – 6     | Ď               | 30         |             |            |             |
|             | 6 – 8     | Ω               | 20         |             |            |             |
|             | 8 – 25    |                 | 15         |             |            |             |
|             | 7 – 10    |                 | 40         |             |            |             |
| BK3         | 10 – 25   |                 | 25         |             | TO-5       | HC-35/U     |
| BNO         | 20 – 100  | 3 <sup>rd</sup> | 30         |             | 10-5       | HG-35/U     |
|             | 80 – 150  | 5 <sup>th</sup> | 60         |             |            |             |

**Aging** 

| Frequency | Timeframe             | Aging    |  |  |
|-----------|-----------------------|----------|--|--|
| All       | 1 <sup>st</sup> Month | ± 0.5ppm |  |  |
|           | Per Year              | ± 1.0ppm |  |  |



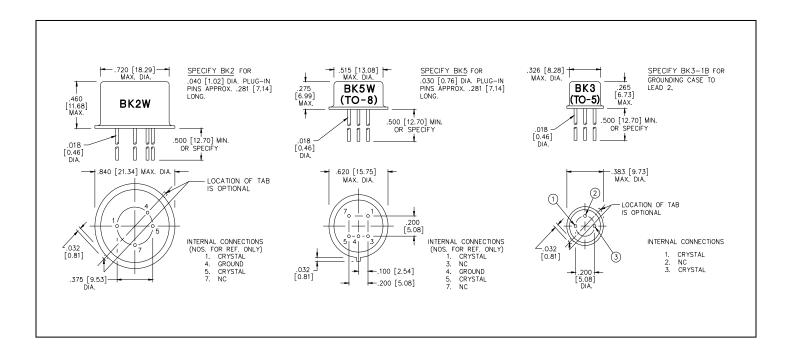
## **AT Cut TO Style Crystals**

### **Drive Level:**

| Frequency | Drive Level ( mW ) |  |  |
|-----------|--------------------|--|--|
| All       | 0.5                |  |  |

#### **Environmental:**

| Storage Temperature | -55 to +125 °C        |  |  |
|---------------------|-----------------------|--|--|
| Vibration           | 20G from 10 to 2000Hz |  |  |
| Shock               | 150G for 7 mSec       |  |  |



## **Ordering Options:**

| Package<br>Style | RoHs | Operating<br>Temp. | Temperature<br>Stability | Shunt<br>Capacitance<br>(pF) | - | Operating Frequency** @ Room Temperature (MHz) |
|------------------|------|--------------------|--------------------------|------------------------------|---|--|
| BK2              |      | A                  | A                        |                              | - | xxxMxx   |
| BK5              |      | ВВВ                | В                        |                              |   | xxMxxxxxx                                      |
| BK3              | G    | С                  | С                        | 3 to 5                       |   | xxMxxxxxx                                      |
|                  |      | D                  | D                        |                              |   | xxMxxxxxx                                      |

ATBK5 C B 3 - 23M9875

## This example part number has the following specs:

HC/37U Package, Non-RHos, Operating Temperature -20 to +70C, ±20 ppm frequency stability with a shunt capacitance of 3.0pf at an operating frequency of 23.9875000MHz

<sup>\*</sup> Trailing zeros will be omitted in final part number