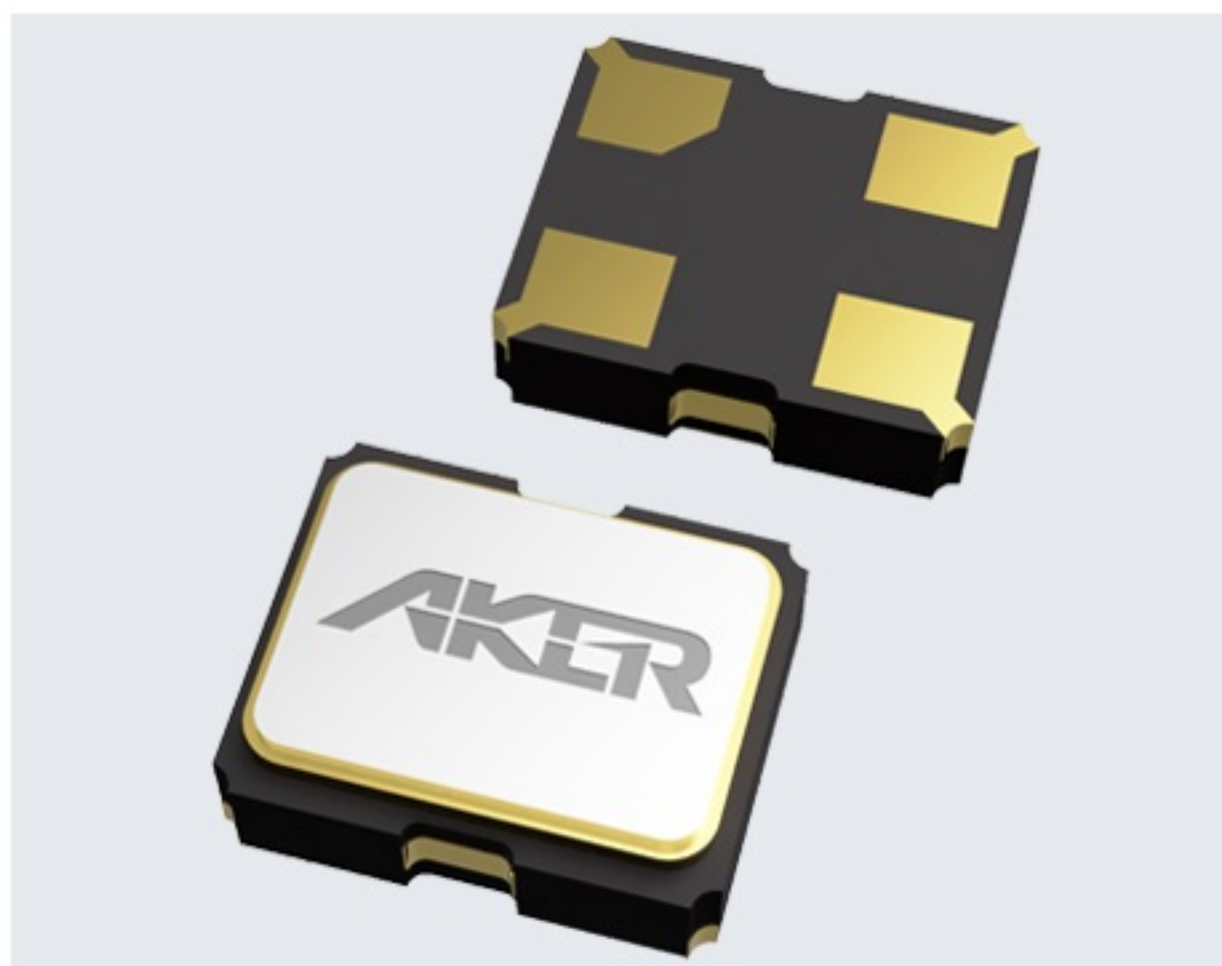


# CRYSTAL OSCILLATORS

VOLTAGE CONTROL TEMPERATURE COMPENSATED  
CRYSTAL OSCILLATOR

ACTUAL SIZE:

## VTON-211 SERIES CERAMIC PACKAGE



### APPLICATIONS

- ▶ Cell Phone
- ▶ Communication
- ▶ Test Equipment

### FEATURES

- ▶ Seam Seal
- ▶ Low Power Consumption
- ▶ RoHS Compliant

### Specification

#### MODEL

|                       |     |                                            |           |           |
|-----------------------|-----|--------------------------------------------|-----------|-----------|
| FREQUENCY RANGE       | MHz | 10.000 ~ 52.000                            |           |           |
| FREQUENCY TOLERANCE   | ppm | ± 2.0 Max.                                 |           |           |
| OPERATING TEMPERATURE | °C  | - 30 ~ + 85 Or - 40 ~ + 85 Or - 40 ~ + 105 |           |           |
| STORAGE TEMPERATURE   | °C  | - 55 ~ + 125                               |           |           |
| POWER SUPPLY VOLTAGE  | VDC | +1.8 ± 5%                                  | +2.5 ± 5% | +3.3 ± 5% |

#### FREQUENCY STABILITY

|                            |             |                  |               |               |
|----------------------------|-------------|------------------|---------------|---------------|
| VS. OPERATING TEMPERATURE* | ppm         | ± 0.5 ~ ± 2.0    | ± 0.5 ~ ± 2.0 | ± 0.5 ~ ± 2.0 |
| VS. POWER SUPPLY VOLTAGE   | ppm (Max.)  | ± 0.2            | ± 0.2         | ± 0.2         |
| VS. OUTPUT LOAD            | ppm (Max.)  | ± 0.2            | ± 0.2         | ± 0.2         |
| OUTPUT WAVEFORM            |             | CLIPPED SINEWAVE |               |               |
| OUTPUT LOAD                |             | 10KΩ//10pF       |               |               |
| OUTPUT LEVEL               | Vp-p (Min.) | 0.8              | 0.8           | 0.8           |
| CONTROL VOLTAGE RANGE      | V           | 0.3 ~ 1.5        | 0.4 ~ 2.4     | 0.4 ~ 2.4     |
| FREQUENCY CONTROL RANGE    | ppm (Min.)  | ± 5              | ± 5           | ± 5           |

#### INPUT CURRENT

|                    |           |     |     |     |
|--------------------|-----------|-----|-----|-----|
| 10.000 ~ 52.000MHz | mA (Max.) | 2.5 | 2.5 | 2.5 |
|--------------------|-----------|-----|-----|-----|

#### PHASE NOISE

|               |               |      |      |      |
|---------------|---------------|------|------|------|
| @100Hz offset |               | -114 | -114 | -114 |
| @1KHz offset  | dBc/Hz (Typ.) | -131 | -131 | -131 |
| @10KHz offset |               | -148 | -148 | -148 |
| START UP TIME | ms (Max.)     | 2.0  | 2.0  | 2.0  |
| AGING         | ppm/Year      | ± 1  | ± 1  | ± 1  |

\*Refer to the middle point between the minimum and maximum frequency values.

\*\*Specification subject to change without notice.

### Pin Connection

| PIN No.    | #1   | #2  | #3     | #4  |
|------------|------|-----|--------|-----|
| Connection | VCON | GND | Output | VDC |

### Dimension(mm)

#### VTON-211 SERIES

