

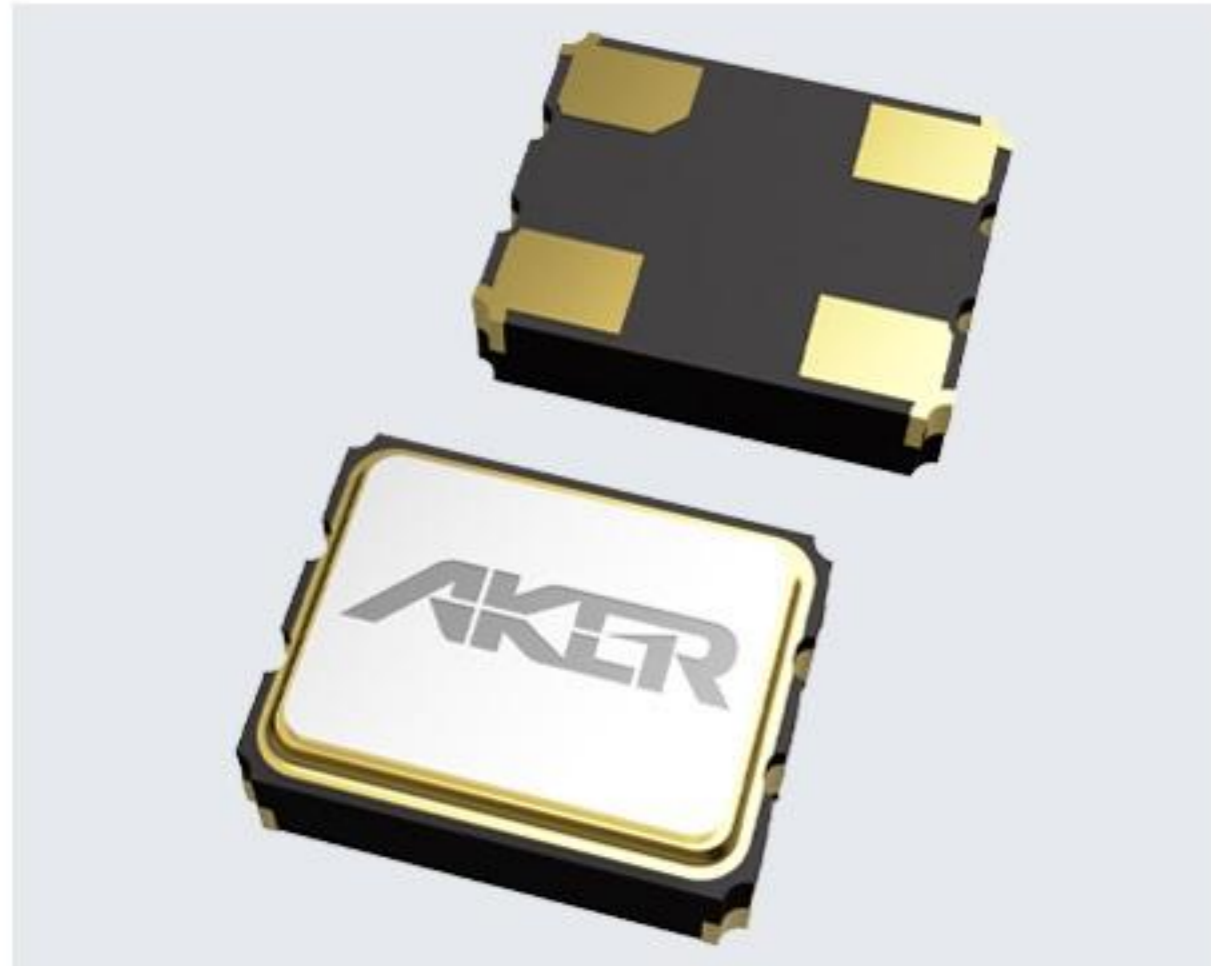
CRYSTAL OSCILLATORS

Automotive Grade

 ACTUAL SIZE:

SMAF-000032-3XY5T00

CERAMIC PACKAGE



APPLICATIONS

- ▶ Camera
- ▶ TPMS
- ▶ AVM

FEATURES

- ▶ Seam Seal
- ▶ Excellent Solderability
- ▶ Tri-State
- ▶ Low Power Consumption
- ▶ RoHS Compliant
- ▶ IATF-16949 Certified
- ▶ AEC-Q200 Qualified

Specification

MODEL

| FREQUENCY RANGE | MHz | 1.000~110.000 | 1.000~160.000 | 1.000~160.000 | 1.000~110.000 | 1.000~60.000 |
|-----------------------|-----|-----------------------------|---------------|---------------|---------------|--------------|
| FREQUENCY STABILITY* | ppm | ± 25 ~ ± 100 | | | | |
| OPERATING TEMPERATURE | °C | - 40 ~ + 85 Or - 40 ~ + 125 | | | | |
| STORAGE TEMPERATURE | °C | - 55 ~ + 125 | | | | |
| POWER SUPPLY VOLTAGE | VDC | +1.8 ± 10% | +2.5 ± 10% | +3.3 ± 10% | +1.62~+3.63 | +5.0 ± 10% |
| OUTPUT LEVEL | | CMOS | | | | |
| OUTPUT SYMMETRY | % | 45 ~ 55 (at 50% VDC) | | | | |

INPUT CURRENT

| Frequency Range | mA (Max.) | 1.000~110.000 | 1.000~160.000 | 1.000~160.000 | 1.000~110.000 | 1.000~60.000 |
|------------------|-----------|---------------|---------------|---------------|---------------|--------------|
| 1.0 ~ 9.9MHz | | 3 | 5 | 5 | 5 | 10 |
| 10.0 ~ 19.9MHz | | 5 | 5 | 5 | 5 | 12 |
| 20.0 ~ 31.9MHz | | 5 | 6 | 7 | 7 | 15 |
| 32.0 ~ 60.0MHz | | 10 | 12 | 12 | 12 | 22 |
| 60.1 ~ 110.0MHz | | 10 | 20 | 25 | 25 | - |
| 110.1 ~ 160.0MHz | | - | 20 | 30 | - | - |

RISE/FALL TIME

| Frequency Range | ns (Max.) | 1.000~110.000 | 1.000~160.000 | 1.000~160.000 | 1.000~110.000 | 1.000~60.000 |
|------------------|-----------|---------------|---------------|---------------|---------------|--------------|
| 1.0 ~ 9.9MHz | | 7 | 7 | 6 | 7 | 6 |
| 10.0 ~ 19.9MHz | | 7 | 7 | 6 | 7 | 6 |
| 20.0 ~ 31.9MHz | | 6 | 6 | 5 | 6 | 5 |
| 32.0 ~ 60.0MHz | | 6 | 6 | 5 | 6 | 5 |
| 60.1 ~ 110.0MHz | | 6 | 6 | 5 | 6 | - |
| 110.1 ~ 160.0MHz | | - | 6 | 6 | - | - |

OUTPUT LOAD

15 pF Max.

AGING

ppm/Year

± 3

*Inclusive of 25°C±3°C & Operating Temperature Range.

**Specification subject to change without notice.

Pin Connection

| PIN No. | Connection |
|---------|----------------|
| #1 | Enable/Disable |
| #2 | GND |
| #3 | Output |
| #4 | VDC |

Enable/Disable Function

| Pin #1 | Pin #3 |
|------------|----------------|
| HIGH(OPEN) | Output |
| LOW | High Impedance |

Dimension(mm)

SMAF-321 SERIES

