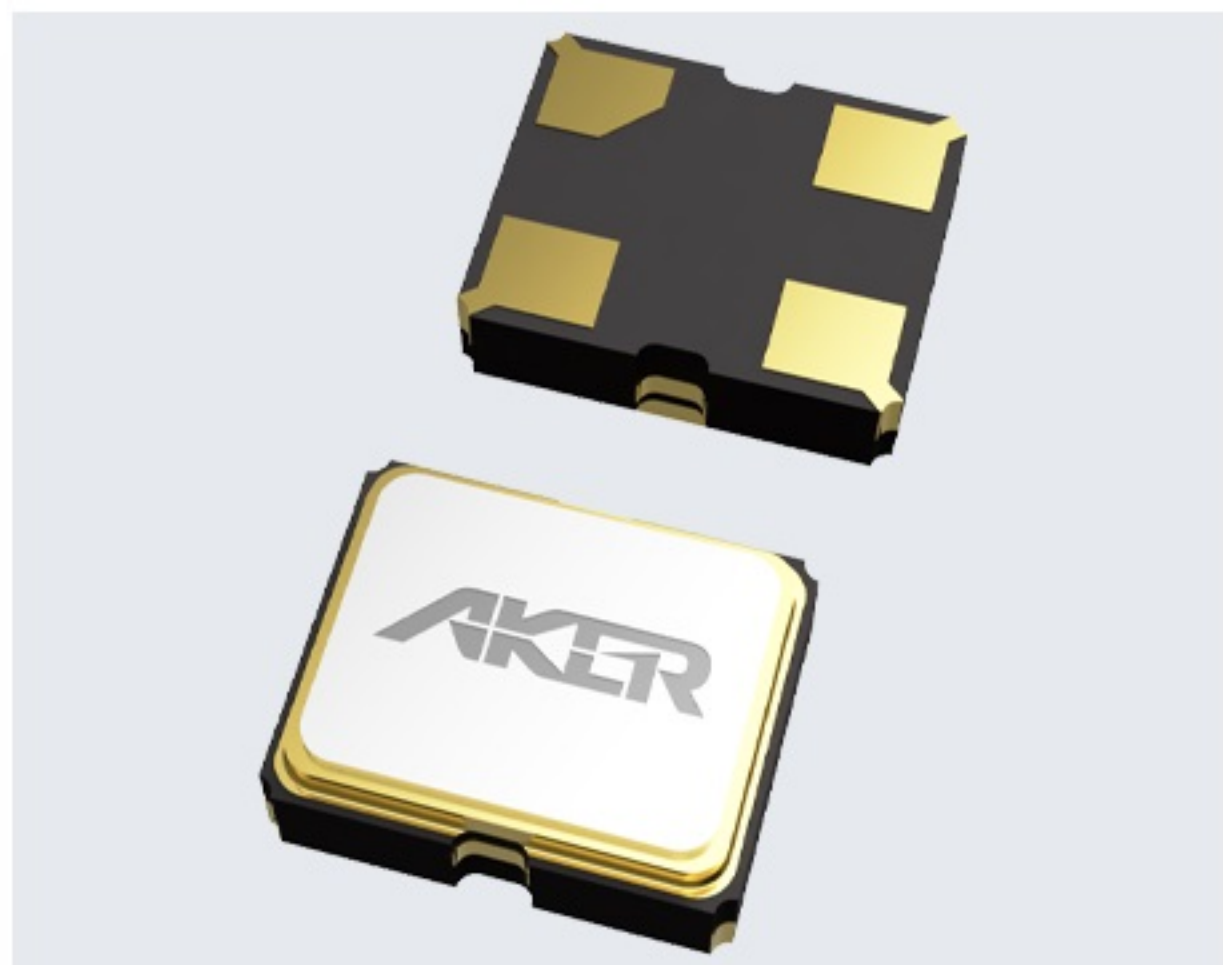


CRYSTAL OSCILLATORS

Automotive Grade

ACTUAL SIZE: ☐

SMAF-221 SERIES 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	2.000~110.000	2.000~160.000	2.000~160.000	2.000~110.000	2.000~50.000
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

2.0 ~ 9.9MHz	mA (Max.)	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 ~ 49.9MHz		10	12	12	12	22
50.0 ~ 109.9MHz		10	20	25	25	-
110.0 ~ 160.0MHz		-	20	30	-	-

RISE/FALL TIME

2.0 ~ 9.9MHz	ns (Max.)	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 ~ 49.9MHz		6	6	5	6	5
50.0 ~ 109.9MHz		6	6	5	6	-
110.0 ~ 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-221 SERIES

