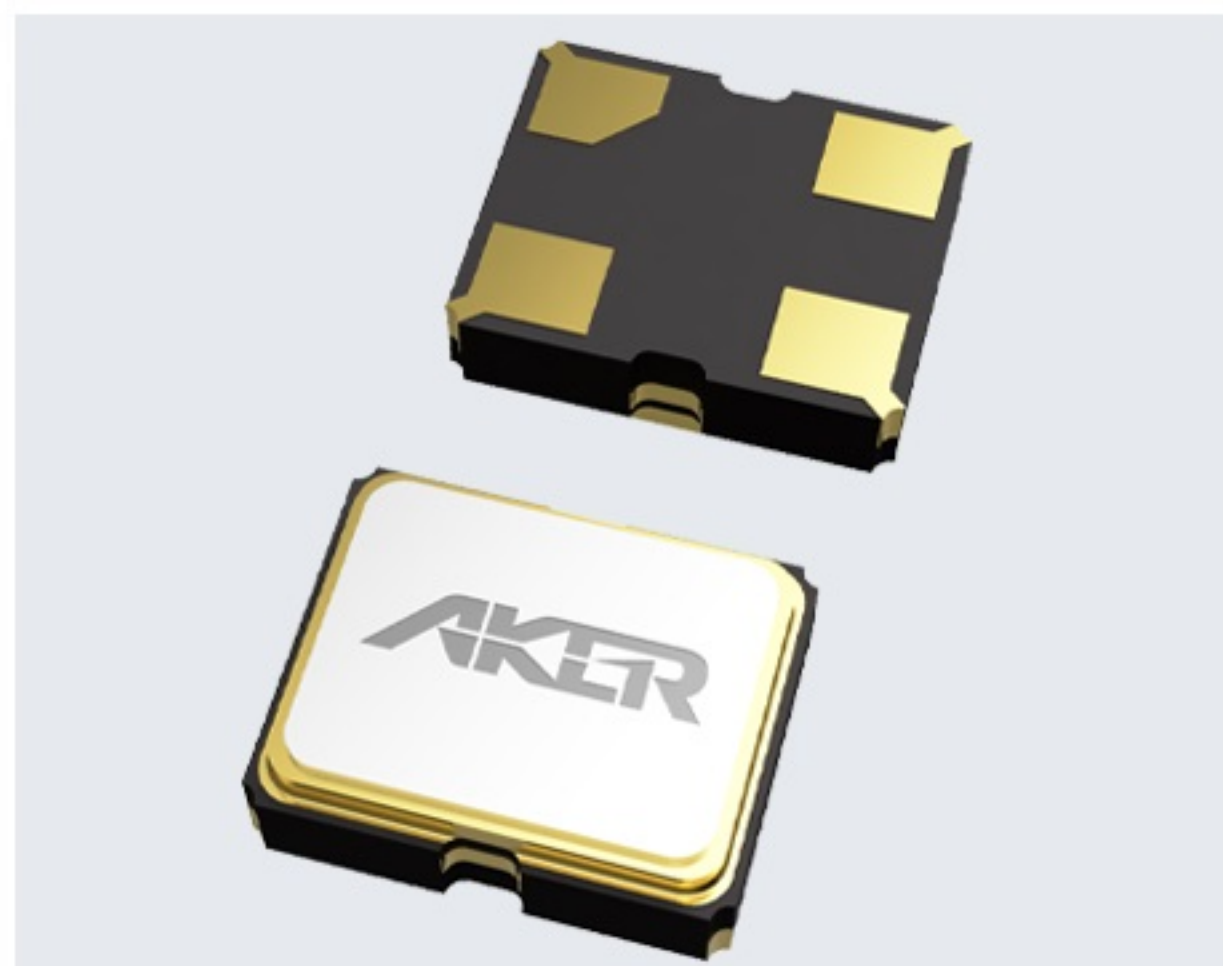


CRYSTAL OSCILLATORS

VCTCXO Automotive Grade

ACTUAL SIZE: ☐

VTOF-221 SERIES CERAMIC PACKAGE



APPLICATIONS

- ▶ Navigation
- ▶ Camera
- ▶ Telematics
- ▶ RKE

FEATURES

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

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
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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)

VTOF-221 SERIES

