

CRYSTAL OSCILLATORS

VCTCXO Automotive Grade



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

■ Actual Size:

Specification

MODEL

FREQUENCY RANGE	MHz	10.000 ~ 52.000		
FREQUENCY TOLERANCE	ppm	± 2.0 Max.		
OPERATING TEMPERATURE	°C	- 20 ~ + 70 Or - 40 ~ + 85		
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.	Connection
#1	VCON
#2	GND
#3	Output
#4	VDC

Dimension(mm)

VTOF-221

