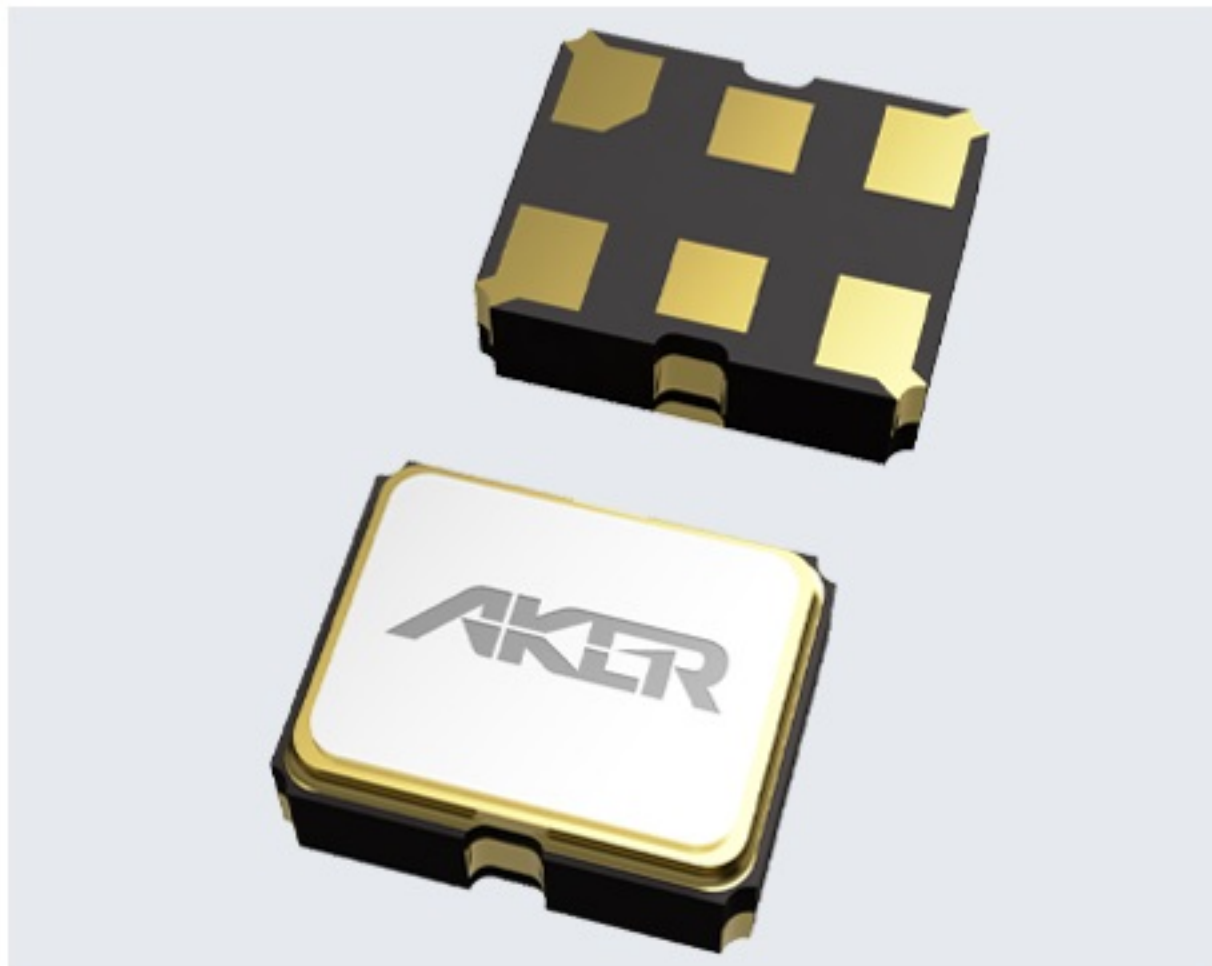


CRYSTAL OSCILLATORS

LVPECL Automotive Grade

ACTUAL SIZE: ☐

SMEF-221 SERIES CERAMIC PACKAGE



APPLICATIONS

- ▶ SONET/SDH
- ▶ Transceiver
- ▶ Optical module

FEATURES

- ▶ LVPECL Complementary Output
- ▶ Low Phase Jitter (12KHz to 20MHz)
Under 0.3 ps (RMS)
- ▶ RoHS Compliant
- ▶ IATF-16949 Certified
- ▶ AEC-Q200 Qualified

Specification

MODEL

FREQUENCY RANGE	MHz	13.500 ~ 200.000	
FREQUENCY STABILITY*	ppm	± 25 ~ ± 100	
OPERATING TEMPERATURE	°C	- 20 ~ + 70 Or Specify (- 40 ~ + 125 is available)	
STORAGE TEMPERATURE	°C	- 55 ~ + 125	
POWER SUPPLY VOLTAGE	VDC	+2.5 ± 5%	+3.3 ± 5%
OUTPUT VOLTAGE HIGH (V _{OH})	V (Min.)	1.475	2.275
OUTPUT VOLTAGE LOW (V _{OL})	V (Max.)	1.095	1.680
OUTPUT LOAD (Connect to VDC -2V)	Ω	50	
OUTPUT SYMMETRY	%	45 ~ 55	45 ~ 55

INPUT CURRENT

13.500 ~ 200.000MHz	mA (Max.)	50	50
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INPUT VOLTAGE

INPUT ENABLE VOLTAGE (V _{IH})	V (Min.)	1.75	2.31
INPUT DISABLE VOLTAGE (V _{IL})	V (Max.)	0.75	0.99

RISE / FALL TIME (20% to 80% / 80% to 20% Output Swing)

13.500 ~ 99.999MHz	ns (Max.)	1.0	1.0
100.000 ~ 200.000MHz	ns (Max.)	0.5	0.5
PHASE JITTER RMS (Fj:12K~20MHz)	ps (Max.)	0.3	
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	N.C.
#3	GND
#4	Output Q
#5	Output QN
#6	VDC

Enable/Disable Function

Pin #1	Pin #4 & Pin #5
HIGH(OPEN)	Output
LOW	High Impedance

Dimension(mm)

SMEF-221 SERIES

