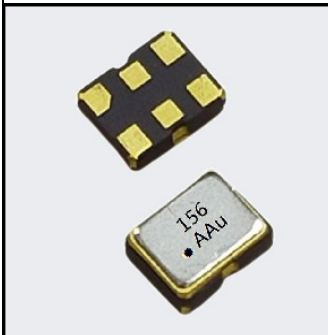


CRYSTAL OSCILLATORS

LVPECL



SMEN-221 SERIES

CERAMIC PACKAGE

Applications

- SONET/SDH
- Fiber Channel
- Ethernet

Features

- LVPECL Complementary Output
- Low Phase Jitter (12KHz to 20MHz) Under 1 ps (RMS)
- RoHS Compliant

■ Actual Size:

Specification

MODEL

FREQUENCY RANGE	MHz	13.500 ~ 156.250	
FREQUENCY STABILITY*	ppm	± 25 ~ ± 100	
OPERATING TEMPERATURE	°C	- 10 ~ + 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 ~ 156.250MHz	mA (Max.)	50	50
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 ~ 156.250MHz	ns (Max.)	0.5	0.5
PHASE JITTER RMS (F _j :12K~20MHz)	ps (Max.)	1	
AGING	ppm/Year	± 3	

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

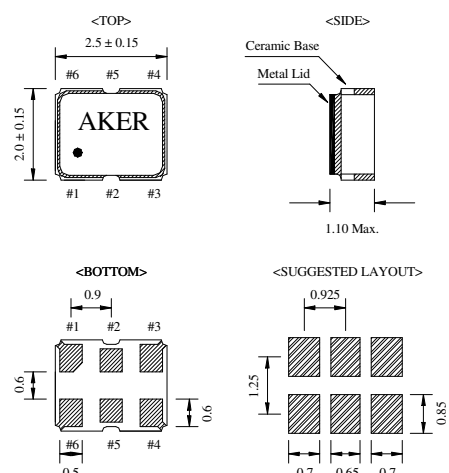
**Specification subject to change without notice.

Pin Connection

PIN No.	Connection
#1	Enable/Disable
#2	N.C.
#3	GND
#4	Output Q
#5	Output QN
#6	VDC

Dimension(mm)

SMEN-221



Enable/Disable Function

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