

CRYSTAL OSCILLATORS

Automotive Grade



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

■ Actual Size:

Specification

MODEL

FREQUENCY RANGE	MHz	2.000 ~ 50.000			
FREQUENCY STABILITY*	ppm	± 25 ~ ± 100			
OPERATING TEMPERATURE	°C	- 40 ~ + 85 Or - 40 ~ + 125			
STORAGE TEMPERATURE	°C	- 55 ~ + 150			
POWER SUPPLY VOLTAGE	VDC	+1.8 ± 5%	+2.5 ± 5%	+3.3 ± 10%	+1.62 ~ +3.63
OUTPUT LEVEL		CMOS			
OUTPUT SYMMETRY**	%	40 ~ 60 (at 50% VDC)			
INPUT CURRENT					
2.0 ~ 9.9MHz	mA (Max.)	3	6	7	7
10.0 ~ 19.9MHz		5	7	7	8
20.0 ~ 31.9MHz		5	8	12	12
32.0 ~ 50.0MHz		10	20	20	20
RISE/FALL TIME					
2.0 ~ 9.9MHz	ns (Max.)	5	7	6	7
10.0 ~ 19.9MHz		5	7	6	7
20.0 ~ 31.9MHz		5	6	5	6
32.0 ~ 50.0MHz		5	6	5	6
OUTPUT LOAD		15 pF Max.			
AGING	ppm/Year	± 3			

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

**Symmetry of 45~55% is available.

***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

