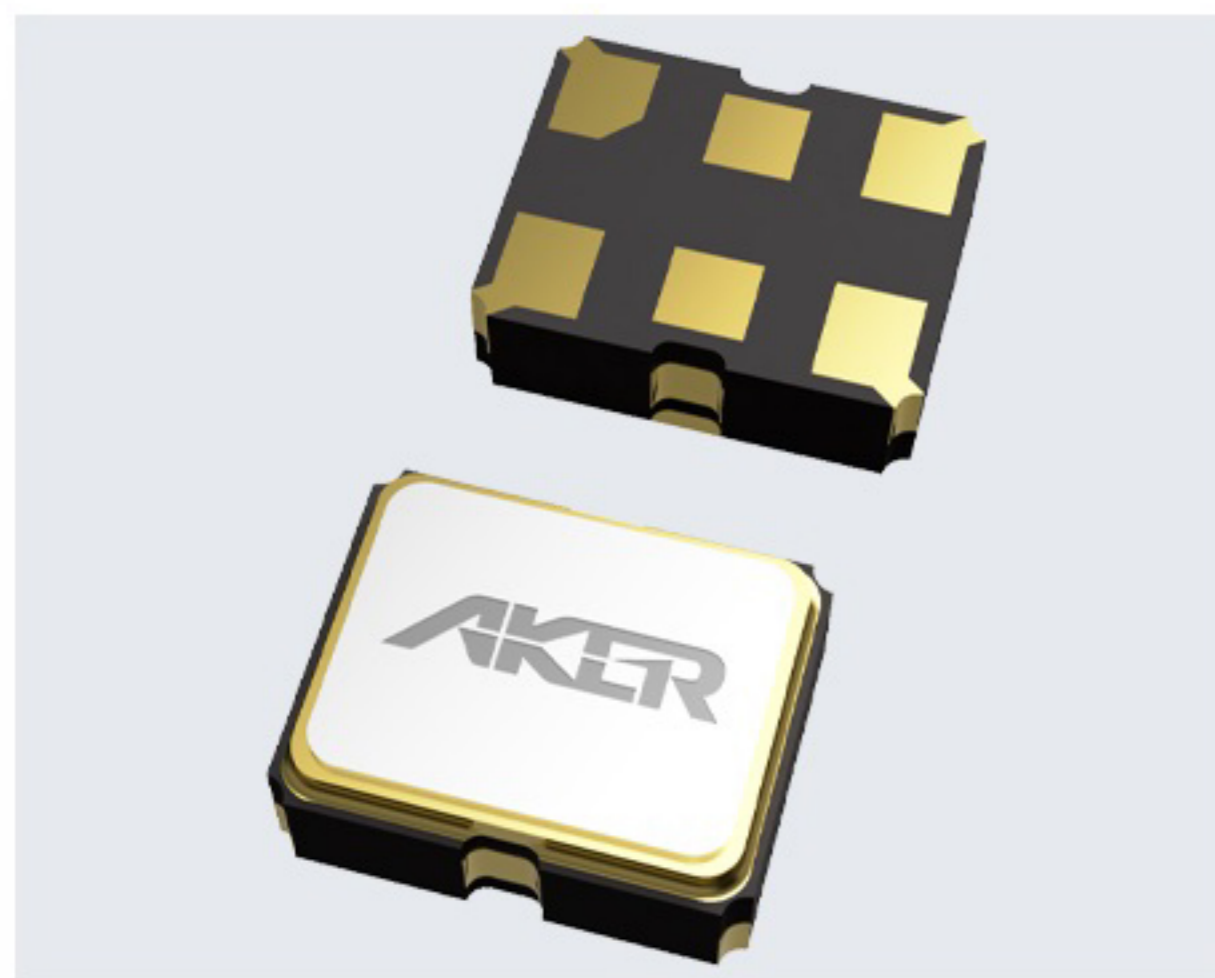


# CRYSTAL OSCILLATORS

LVDS Automotive Grade

 ACTUAL SIZE: 

## SMDF-211 SERIES CERAMIC PACKAGE



### APPLICATIONS

- ▶ Cable
- ▶ CCD camera ( car )

### FEATURES

- ▶ LVDS Complementary Output
- ▶ Low Phase Jitter ( 12KHz to 20MHz )  
Under 0.5 ps ( RMS )
- ▶ RoHS Compliant
- ▶ IATF-16949 Certified
- ▶ AEC-Q200 Qualified

## Specification

### MODEL

FREQUENCY RANGE	MHz	100.000 ~ 160.000		
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%	2.375~3.63
OUTPUT VOLTAGE HIGH (V <sub>OH</sub> )	V (Max.)	1.600		
OUTPUT VOLTAGE LOW (V <sub>OL</sub> )	V (Min.)	0.900		
OUTPUT LOAD ( Between Q and QN )	Ω	100		
DIFFERENTIAL OUTPUT VOLTAGE	mV	247(Min.)	330(Typ.)	454(Max.)
OFFSET VOLTAGE	V	1.125(Min.)	1.250(Typ.)	1.375(Max.)
OUTPUT SYMMETRY	%	45 ~ 55	45 ~ 55	45 ~ 55
<b>INPUT CURRENT</b>				
100.000 ~ 160.000MHz	mA (Max.)	20	20	20
<b>INPUT VOLTAGE</b>				
INPUT ENABLE VOLTAGE (V <sub>IH</sub> )	V (Min.)	1.75	2.31	70%VDC
INPUT DISABLE VOLTAGE (V <sub>IL</sub> )	V (Max.)	0.75	0.99	30%VDC
<b>RISE / FALL TIME (20% to 80% / 80% to 20% Output Swing)</b>				
100.000 ~ 160.000MHz	ns (Max.)	0.5	0.5	0.5
PHASE JITTER RMS (Fj:12K~20MHz)	ps (Max.)	0.5		
AGING	ppm/Year	± 3		

\*Inclusive of 25°C±3°C &amp; 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)

### SMDF-211 SERIES

