# Crystal Bridge to the Future

### **NX2012SA**

## For OA / AV / Mobile Communication / Automotives

#### **■** Features

Compact, thin, and light weight tuning fork crystal unit.

- •Compact and thin. (2.0×1.2×0.55mm)
- Excellent electric performance optimum for mobile communications, OA (office automation) and AV (audiovisual) applications are exhibited.
- •A surface-mount crystal oscillator. (Reflow soldering is possible.)
- RoHS compliant. These can meet the requirements of re-flow profiling using leadfree solder.
- •Conforms to AEC-Q200. (For Automotives)



#### **■** Specifications

Item Model	NX2012SA						
Standard	Standard						Optional
Main Application	For OA / AV / Mobile Communication			For Automotive			For OA / AV / Mobile Communication/ Automotive
Nominal Frequency (kHz)	32.768						32.768
Operating Temperature Range (°C)	-40 to +85			-40 to +125			-40 to +85 *1
Storage Temperature Range (°C)	-40 to +85			-40 to +125			-40 to +85 *1
Level of Drive (µW)	0.1 (Max. 0.5)						0.1 (Max. 0.5) *1
Frequency Tolerance (25 ±3 °C)	±20 × 10 <sup>-6</sup>						±20 × 10 <sup>-6</sup>
Turning Point (°C)	+25 ± 5						+25 ± 5
Temperature Coefficient (/°C²)	Max. −0.04 × 10 <sup>-6</sup>						Max. −0.04 × 10 <sup>-6</sup>
Load Capacitance (pF)	6.0	9.0	12.5	6.0	9.0	12.5	6.0 to 12.5 *1
Equivalent Series Resistance (kΩ)	Max. 80 Max. 120						Max. 80 *1
Shunt Capacitance (pF)	Typ. 1.3/ Max. 1.6						Typ. 1.3/ Max. 1.6
Insulation Resistance (MΩ)	Min. 500						Min. 500
Specifications Number	STD-MUB-3	STD-MUB-2	STD-MUB-1	STD-MUT-3	STD-MUT-2	STD-MUT-1	Refer to *2

Please specify the model name, frequency, and specification number when you order products.

For futher questions regarding specifications, please feel free to contact us.

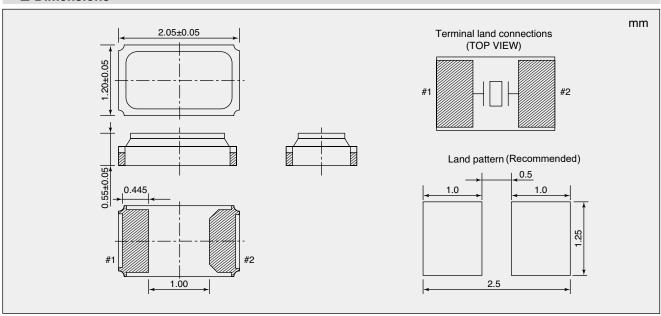
S1:Fundamental - Operating Range(-40 to +85°C) - Frequency Tolerance(±20×10-6) - Load Capacitance (9pF)

NX2012SA

32.768000kHz

S1-4085-20-9

#### **■** Dimensions



<sup>\*1</sup> If you have any other requests, NDK will study it.

<sup>\*2</sup> Ordering information: Overtone Order Fundamental, the Operating Temperature Range, Frequency Tolerance, and Load Capacitance. Ex. Model, Frequency (32.768000kHz 6digits),