

March 30, 2016
Nihon Dempa Kogyo Co., Ltd.
Representative Director &
Chairman of the Board,
President and CEO
Toshiaki Takeuchi

World's small class (1612 size and World's lowest-profile : height Max. 0.45 mm)*
crystal unit with temperature sensor developed for mobile terminals

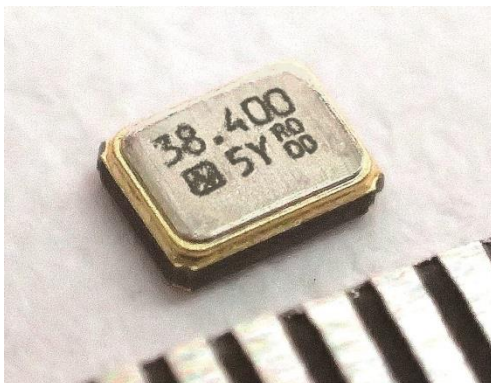
Nihon Dempa Kogyo Co., Ltd. (NDK) has developed the world's small class crystal unit with a temperature sensor (model: NX1612SB; size: 1.6 x 1.2 x Max. 0.45 mm). This is the thinnest product available for 1612 size with a height of Max. 0.45 mm, and maintains the high performance of its predecessor (2.0 x 1.6 x Max. 0.65 mm) with a frequency versus temperature characteristics of Max. $\pm 12 \times 10^{-6}$ in operating temperature range of -30°C to $+85^{\circ}\text{C}$.

For improved performance, diversification of functions in smartphones, tablets and other mobile terminals. Achievement of high-density composition via chip-set integration, component parts have necessitated the miniaturization without loss of performance.

To meet such needs, the newly developed NX1612SB features an NDK proprietary design and crystal technology in a small, low-profile package. With both thermistor (temperature sensor) and crystal blank in a single airtight housing, the product offers a highly stable reference frequency integrated with a temperature compensation circuit on chip-set. This enables the provision of clock signals with stable frequency (Range : 26MHz to 52 MHz) to the backbone circuits of RF, GPS and other systems, and contributes to reduced size and lower-profile of mobile terminals.

* Based on NDK research as of March 2016

【Appearance】



【Samples and Mass production】

Sample delivery has already begun and mass production is scheduled to start in August 2016.

【Product specifications】

Model	NX1612SB
Dimensions	1.6 x 1.2 x Max. 0.45 mm
Nominal frequency range	26 MHz to 52 MHz
Frequency tolerance	Max. $\pm 10 \times 10^{-6}$
Frequency versus temperature characteristics	Max. $\pm 12 \times 10^{-6}$
Operating temperature range	-30°C to +85°C
Equivalent series resistance	Max. 80 Ω (26 MHz to 38.4 MHz) Max. 50 Ω (38.4 MHz to 52 MHz)
Level of drive	10 μ W
Load capacitance	7 pF

【Thermistor specifications】

Resistance (R25)	100 k Ω \pm 1%
B-constant (B25-50)	4250 K \pm 1%

* For more information on the product, contact:

【Contact Info】

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