Crystal Units

NDK
Crystal Bridge to the Future

NX2016SF   For Mobile Communications

■ Features

Crystal Unit with built-in Thermistor construction.

● Minimize circuit design space by combining crystal unit into one component.
  (Presently, Crystal unit and temperature sensor is mounted in one board separately.)

● Placing temperature sensor(Thermistor) close to Crystal blank in one airtight housing
  can detect more precise crystal blank temperature. Improvement on frequency
  temperature compensation compared to present Crystal unit.

● Single cavity housing which is ideal to module applications.

● External configuration size is 2.0x1.6mm typ., H0.65 mm Max.

● A surface-mount crystal oscillator. (Reflow soldering is possible.)

● Lead-free. Meets the requirements for re-flow profiling using lead-free solder.
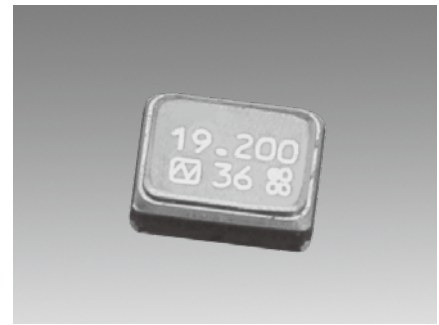
Pb Free

RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863

■ Specifications

Item Model	NX2016SF	
Standard	Standard	Optional
Nominal Frequency (MHz)	$19.2 \leq F \leq 52$	$19.2 \leq F \leq 52$
Overtone Order	Fundamental	Fundamental
Frequency Tolerance (25 ± 3°C)	$\pm 10 \times 10^{-6}$	$\pm 10 \times 10^{-6}$
Frequency versus Temperature Characteristics (with reference to +32 °C)	$\pm 12 \times 10^{-6}$	Please contact us about temp extended case, *1
Operating Temperature Range (°C)	−30 to +85	Please contact us about temp extended case, *1
Storage Temperature Range (°C)	−40 to +105	−40 to +105
Equivalent Series Resistance	Refer to *2	Refer to *2
Level of Drive (µW)	10 (Max. 100)	10 (Max. 100)
Load Capacitance (pF)	7	6 to 18
Frequency Aging (+25°C)	---	Max. $\pm 3 \times 10^{-6}$ / year *1
Specifications Number	STD-CTZ-1	Refer to *3

Please specify the model name,frequency,and specification number when you order products.
For futher questions regarding specifications, please feel free to contact us.
*1 If you have any other requests, NDK will study it.
*3 Ordering information: Overtone Order Fundamental / 3rd Overtone, the Operating Temperature Range, Frequency versus Temperature
   Characteristics, Frequency Tolerance, and Load Capacitance.
   Ex. Model, Frequency (38.400000MHz 6digits), S1:Fundamental or S3:3rd Overtone
      - Operating Temperature Range (-30 to +85°C) - Frequency versus Temperature Characteristics ($\pm 12 \times 10^{-6}$)
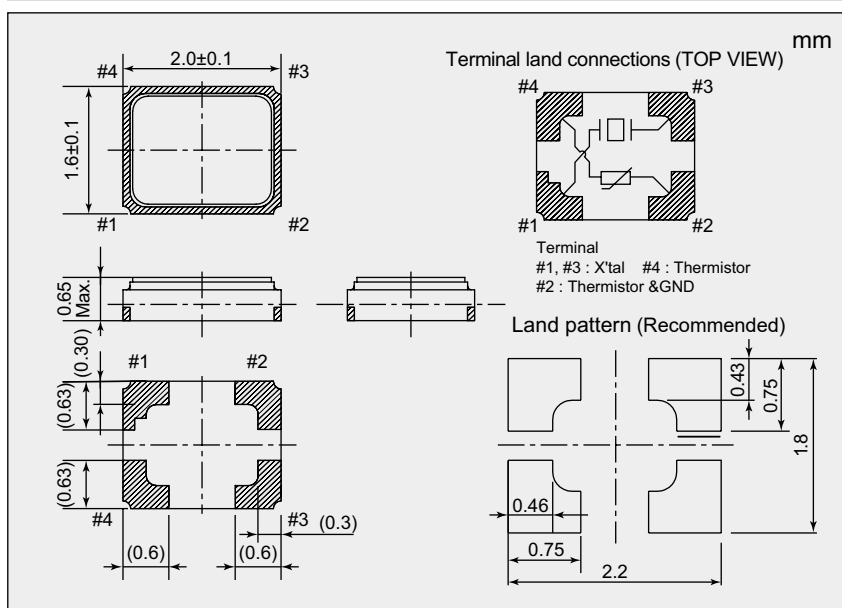   - Frequency Tolerance ($\pm 12 \times 10^{-6}$) - Load Capacitance (7pF)
   NX2016SF
   38.400000MHz
   S1-3085-12-12-7

■ Dimensions

*2 Equivalent Series Resistance

Nominal Frequency (MHz)	Equivalent Series Resistance Max. (Ω)
$19.2 \leq F < 24$	80
$24 \leq F \leq 52$	60

NTC Thermistor for Temperature Sensor

Resistance (R25)	100k Ω ± 1 %
B-Constant (B25-50)	4250K ± 1 %

Terminal
#1, #3 : X'tal   #4 : Thermistor
#2 : Thermistor &GND

NIHON DEMPA KOGYO CO.,LTD.