Specification of Quartz Crystal Controlled Oscillators



1 NDK Part Number NT2520SA-26M-DJA3001A

NDK Specification Number
 Type
 DJA3001A
 NT2520SA

4 Rating

 $\begin{array}{lll} \text{4.1} & \text{Nominal Frequency } (f_{\text{nom}}) & \text{26 MHz (2 digits marking)} \\ \text{4.2} & \text{Supply Voltage} & \text{+2.4 V +/-0.1 V DC (-Earth)} \\ \text{4.3} & \text{Current Consumption} & \text{Max. 1.1 mA (Typ. 0.9 mA)} \end{array}$

4.4 Output Voltage Min. 0.8 V_{p-p} Clipped sine wave (DC-Coupling)

 $\begin{array}{lll} 4.5 & \mbox{Operable Temperature Range} & -30 \ \mbox{to} \ +75 \ ^{\circ}\mbox{C} \\ 4.6 & \mbox{Storage Temperature Range} & -40 \ \mbox{to} \ +85 \ ^{\circ}\mbox{C} \\ 4.7 & \mbox{Load impedance} & 10 \ \mbox{k}\Omega \ /\!/ \ 10 \ \mbox{pF} \\ \end{array}$

4.8 DC-cut Capacitor DC-cut capacitor of output is not put in TCXO.

Please add DC-cut capacitor (1000 pF) in output line.

5 Electrical specification

5.1 Frequency Stability

5.1.1 Frequency / Temperature Characteristics Max. +/-2.5 ppm / -30 to +75 °C (Based on frequency at +25 +/-2 °C)

5.1.2 Frequency / Voltage Coefficient Max. +/-0.2 ppm / +2.4 V +/-0.1 V

5.1.3 Frequency / Load Coefficient Max. +/-0.2 ppm / $(10 k\Omega // 10 pF)$ +/-10%

5.1.4 Frequency Tolerance at Control Voltage
(V_{cont} = +1.2 V DC)

Max. +/-2.5 ppm
(at +25 +/-2 °C, after two reflows, based on nominal frequency)

5.1.5 Long-term Frequency Stability Max. +/-2.0 ppm / 5 years

5.2 External Adjustment

5.2.1 Control Voltage (V_{cont}) +1.2 V +/-1.0 V DC

5.2.2 Frequency control range based on frequency at V = +1.3 V DC +/-9.0 to +/-15.0 ppm

frequency at V_{cont} = +1.2 V DC

5.2.3 Frequency Change Polarity Positive

5.3 Stabilization Time Max. 4.0 ms

(+/-0.1 ppm of final frequency final frequency is the frequency after 10 s from the point when supply voltage is reached at+2.4 V. Measurement is done while the

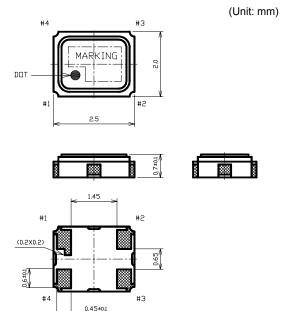
control voltage is kept at its typical value at +25 +/-2 °C)

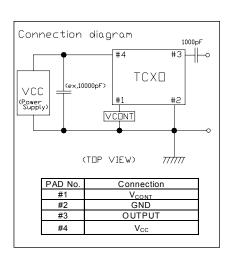
5.4 Symmetry 40 to 60 % (Based on GND. The output signal after DC cut capacitor passage)

5.5 Harmonic Distortion Max. -5 dBc

5.6 Phase Noise Max. -130 dBc/Hz (@1 kHz offset)

6 Dimension





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