

Customer Code : \_\_\_\_\_

# DATASHEET

DAPU P/N : T936-H412-100.00MHz

P/N : \_\_\_\_\_

| DAPU             |         |          | Customer Approval      |
|------------------|---------|----------|------------------------|
| Drew             | Audited | Approved | Stamp, please! Thanks! |
|                  |         |          |                        |
| Date: 2023.03.29 |         |          |                        |

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## 1. Electrical Parameters

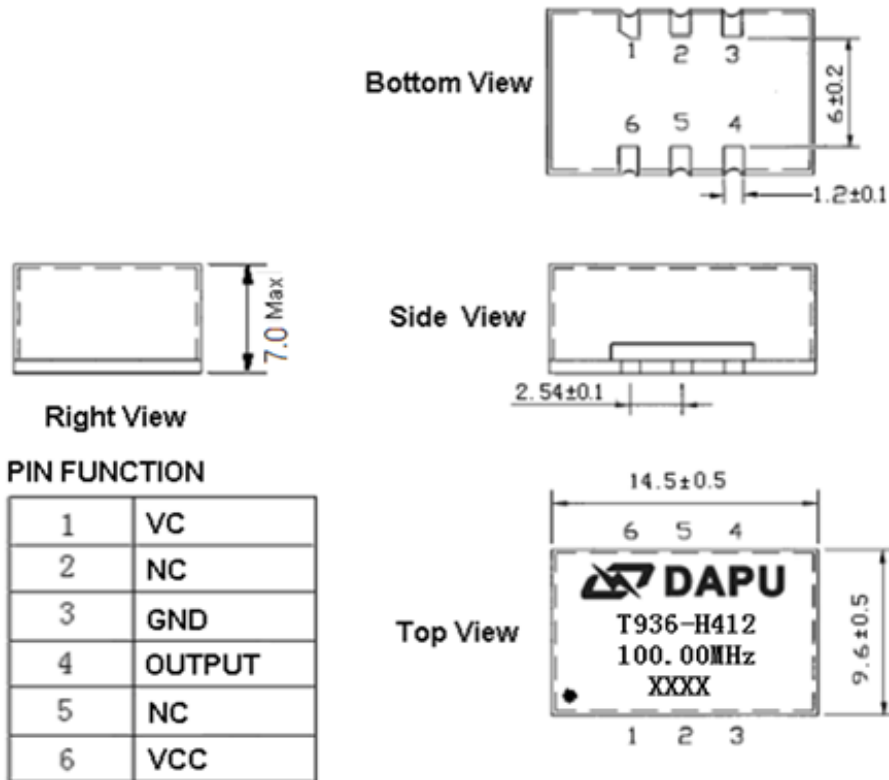
| MODEL: T936-H412-100.00MHz |   |            |      |      |                  |  |
|----------------------------|---|------------|------|------|------------------|--|
| Item                       | Description   | Parameters |      |      | Unit             | Test Condition   |
|                            |   | Min.       | Typ. | Max. |                  |  |
| Output                     | Frequency   | 100.00     |      |      | MHz              |  |
|                            | Output Waveform                                     | Sine Wave  |      |      |                  |  |
|                            | Level   | 5          |      |      | dBm              |  |
|                            | Harmonics Suppression                               |            |      | -30  | dBc              |  |
|                            | Spurious Suppression                                |            |      | -60  | dBc              |  |
|                            | Load  | 50         |      |      | $\Omega$         |  |
| Frequency Stabilities      | Frequency Tolerance vs. Operating Temperature Range | -0.5       |      | +0.5 | $\times 10^{-6}$ | $T_A$ varied from $-40^\circ\text{C}$ to $85^\circ\text{C}$ , measurement referenced to frequency observed with $f_{\text{ref}} = (f_{\text{max}} + f_{\text{min}}) / 2$ , $V_{\text{cc}} = 3.3\text{V}$ , $V_c = 1.5\text{V}$ , $O_{\text{load}} = 50\Omega$ , temperature variable speed less than $2^\circ\text{C}$ per minute. |
|                            | Initial Frequency Tolerance                         | -1.0       |      | +1.0 | $\times 10^{-6}$ | Measurement referenced to frequency observed with $T_A = 25^\circ\text{C}$ , $V_{\text{cc}} = 3.3\text{V}$ , $V_c = 1.5\text{V}$ , and after 15 minutes of operation, within 30 days after ex-works.   |
|                            | Frequency Tolerance vs. Supply Voltage              | -0.1       |      | +0.1 | $\times 10^{-6}$ | measurement referenced to frequency observed $T_A = 25^\circ\text{C}$ , $V_{\text{cc}}$ varied from 3.13V to 3.47V, $V_c = 1.5\text{V}$ , and $O_{\text{Load}} = 50\Omega$ .   |
|                            | Frequency Tolerance vs. Load                        | -0.1       |      | +0.1 | $\times 10^{-6}$ | 5% load change measurement referenced to frequency observed with $T_A = 25^\circ\text{C}$ , $V_{\text{cc}} = 3.3\text{V}$ , $V_c = 1.5\text{V}$ , $O_{\text{Load}} = 50\Omega$ .   |
|                            | Aging Tolerance Per Day                             | -10        |      | +10  | $\times 10^{-9}$ | TA=25°C, Vcc=3.3V, Vc=1.5V and after 1h of operation.  |
|                            | Aging Tolerance 1 Year                              | -1         |      | +1   | $\times 10^{-6}$ |  |
|                            | Aging Tolerance 10 Year                             | -4.6       |      | +4.6 | $\times 10^{-6}$ |  |
| Power Supply               | Current Consumption                                 |            | 30   |      | mA               | @25°C, $V_{\text{cc}} = 3.3\text{V}$ , $O_{\text{Load}} = 50\Omega$ .  |
|                            | Supply Voltage                                      | 3.13       | 3.3  | 3.47 | V                | @25°C  |



|                                 |   |   |      |      |                  |  |
|---------------------------------|---|---|------|------|------------------|--|
| Voltage Control Characteristics | Frequency Tuning Range  | -15   |      | -9   | $\times 10^{-6}$ | $V_c=0.5V$ . measurement referenced to $V_c=1.5V$        |
|                                 |   | -1  |      | +1   | $\times 10^{-6}$ | $V_c=1.5V$ . measurement referenced to exactly 100.00MHz |
|                                 |   | +9  |      | +15  | $\times 10^{-6}$ | $V_c=2.5V$ . measurement referenced to $V_c=1.5V$        |
|                                 | Linearity   |   |      | 10   | %                |  |
|                                 | Slope   | Positive  |      |      |                  |  |
|                                 | Input Impedance   | 100   |      |      |                  | K $\Omega$   |
| Phase Noise                     | Phase Noise @25 $^{\circ}C$   |   | -80  |      | dBc/Hz           | 10Hz   |
|                                 |   |   | -110 |      |                  | 100Hz  |
|                                 |   |   | -140 |      |                  | 1KHz   |
|                                 |   |   | -150 |      |                  | 10KHz  |
|                                 |   |   | -155 |      |                  | 100KHz   |
| Environmental Conditions        | Operable Temperature  | -40   |      | +85  | $^{\circ}C$      |  |
|                                 | Storage Temperature   | -55   |      | +105 | $^{\circ}C$      |  |
|                                 | ESD Level   | Human Body Model,class2:2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010.  |      |      |                  |  |
|                                 |   | Machine Model, class B: 200V to 400V; JEDEC JESD22-A115C.   |      |      |                  |  |
|                                 | Moisture Sensitivity Level  | Level 2.  |      |      |                  |  |
|                                 | Vibration   | Test Condition: 0.75mm ;acceleration:10g;10Hz~2000Hz, one cycle per 30 min, test 2 hour. (3 times for each 3 directions X ,Y , Z) .IEC 68-2-06 Test Fc. |      |      |                  |  |
| Shock                           | 100g; 6ms; half sine wave (3 times for each 3 directions X ,Y , Z ),IEC 68-2-27 Test Ea/Severity 50A. |   |      |      |                  |  |



## 2. Mechanical Structure(mm)



**Note1:** Tolerance ±0.2mm without mark

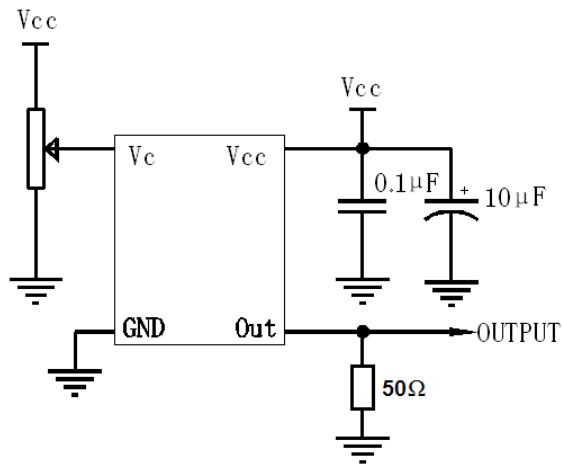
**Note2:** Referential weight 2.2g

**Note3:** NC is not connect

**Note4:** The first two xx representative: week  
After two xx representative: year



### 3. Test circuit



### 4. Reflow Soldering Curve (RoHS)

