

Customer Code: _____

DATASHEET

DAPU P/N: **O23S-1801-10.00MHz**

Customer P/N: _____

| DAPU | | | Customer Approval |
|------------------|---------|----------|------------------------|
| Drew | Audited | Approved | Stamp, please! Thanks! |
| | | | |
| Date: 2023.07.06 | | | |

Guangdong Dapu Telecom Technology Co.,Ltd

Building 5, No.24, Industrial East Road, Songshanhu Park, Dongguan, Guangdong, P.R. China

TEL: 0086-0769-88010888 FAX: 0086-0769-81800098



1. Electrical Parameters

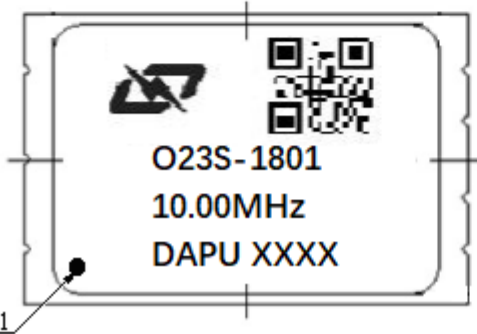
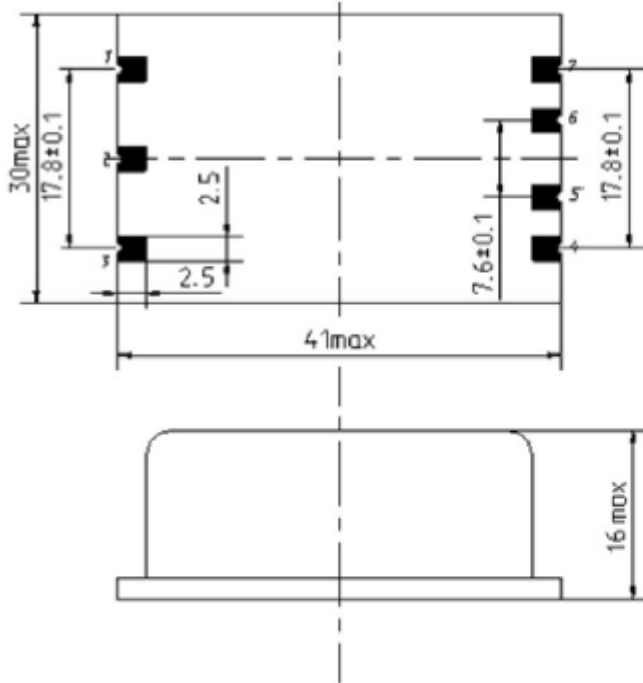
| MODEL: O23S-1801-10.00MHz | | | | | | |
|---------------------------|---|------------|---------|------------------|-----------------------------------|---|
| Item | Description | Parameters | | | Unit | Test Condition |
| | | Min. | Typ. | Max. | | |
| Output | Frequency | 10.00 | | | MHz | |
| | Output Waveform | Sine wave | | | | |
| | Level | 5 | | 10 | dBm | |
| | Load | 50 | | | Ω | |
| | Harmonics Suppression | | | -30 | dBc | |
| | Spurious Suppression | | | -80 | dBc | |
| Frequency Stabilities | Frequency Tolerance vs. Operating Temperature Range | -1 | | +1 | $\times 10^{-9}$ | T_A varied from 0°C to 75°C , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$, $V_{\text{cc}}=12.0\text{V}$, $O_{\text{load}}=50\Omega$, temperature variable speed less than 2°C per minute. |
| | Frequency Accuracy | -0.1 | | +0.1 | $\times 10^{-6}$ | $V_c = 2.5\text{V}$. Within 90 days after shipment and 15 minutes warm up time (before reflow), Measurement referenced to nominal frequency |
| | | -0.2 | | +0.2 | $\times 10^{-6}$ | $V_c = 2.5\text{V}$. Within 90 days after shipment and 15 minutes warm up time (after reflow), Measurement referenced to nominal frequency |
| | Frequency Tolerance vs. supply voltage | -0.5 | | +0.5 | $\times 10^{-9}$ | measurement referenced to frequency observed $T_A=25^\circ\text{C}$, V_{cc} varied from 10.8V to 13.2V, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$. |
| | Frequency Tolerance vs. Load | -0.5 | | +0.5 | $\times 10^{-9}$ | 5% Load Change Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_{\text{cc}}=12.0\text{V}$, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$. |
| | Short-Term Stability: Allan Variance | | | 0.005 | $\times 10^{-9}$ | Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to 25°C ; 1s. |
| | Aging Tolerance Per Day | -0.5 | | +0.5 | $\times 10^{-9}$ | V_{cc}, V_c, T_A constant Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_{\text{cc}}=12.0\text{V}$, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$ and after 30 days of operation. |
| | Aging Tolerance Per 30 Days | -5 | | +5 | $\times 10^{-9}$ | |
| | Aging Tolerance First Year | -0.03 | | +0.03 | $\times 10^{-6}$ | |
| | Aging Tolerance 15 Years | -0.5 | | +0.5 | $\times 10^{-6}$ | |
| Retrace | | | ± 5 | $\times 10^{-9}$ | 24hours ON, 2hours OFF, 1hour ON. | |



| | | | | | | |
|---------------------------------|---|--|------|------|------------------|---|
| Power Supply | Supply Voltage | 10.5 | 12.0 | 12.6 | V | |
| | Steady Consumption | | | 150 | mA | @25°C |
| | Warm up current | | | 400 | mA | |
| | Warm-Up Time | | | 5 | min | @25°C within $\pm 0.03 \times 10^{-6}$ of final frequency with reference after 1hour on |
| Voltage Control Characteristics | Frequency Tuning Range | | | -0.6 | $\times 10^{-6}$ | $V_c=0V$. measurement referenced to $V_c=2.5V$ |
| | | -0.1 | | +0.1 | $\times 10^{-6}$ | $V_c=2.5V$. measurement referenced to exactly 10.00MHz |
| | | +0.6 | | | $\times 10^{-6}$ | $V_c=5.0V$. measurement referenced to $V_c=2.5V$ |
| | Linearity | | | 10 | % | |
| | Slope | Positive | | | | |
| | Cut-off Frequency(3dB) | 1 | | | | kHz |
| | Input Impedance | 10 | | | | K Ω |
| Phase Noise | Phase Noise @25°C | | | -119 | dBc/Hz | 1Hz |
| | | | | -145 | | 10Hz |
| | | | | -157 | | 100Hz |
| | | | | -160 | | 1KHz |
| | | | | -166 | | 10KHz |
| Environmental Conditions | Operating Temperature | 0 | | +75 | °C | |
| | Storage Temperature | -55 | | +105 | °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~500Hz, one cycle per 30 min, test 2 hour. (3 times for each 3 directions X ,Y , Z), IEC 68-2-06 Test Fc. | | | | |
| Shock | 50g; 11ms; half sine wave (3 times for each 3 directions X ,Y , Z),IEC 68-2-27 Test Ea/Severity 50A. | | | | | |
| Full Package Storage | Relative humidity (%) | 20% ~ 70% | | | | |
| | Temperature (°C) | -10~35°C | | | | |



2. Mechanical Structure (mm)



| Pin | Designation |
|-----|----------------------|
| 1 | Ground |
| 2 | Not Connected |
| 3 | RF Output |
| 4 | Supply Voltage |
| 5 | Not Connected |
| 6 | Tuning Voltage Input |
| 7 | Not Connected |

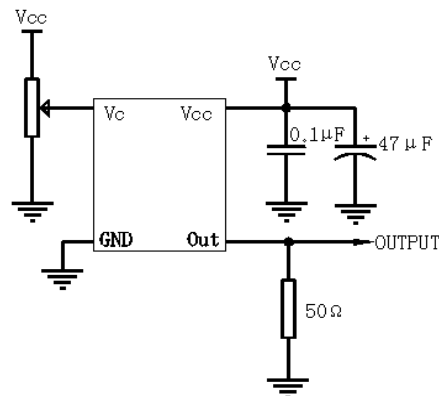
Note1: Tolerance ± 0.20mm without mark.

Note2: The first two xx representative: year.
After two xx representative: week.

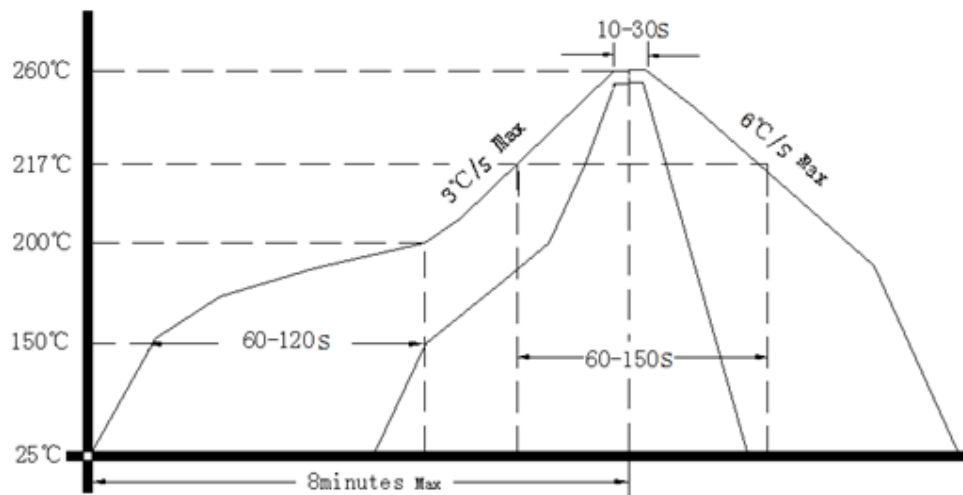
Note3: Referential Weight 21g.



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



Note: Passing through reflow upside down is not supported

5. Package: Tape & Reel (mm)

