

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

# DATASHEET

DAPU P/N :     **O21G-K426-10.00MHz**    

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2016.09.22			

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## 1. Electrical Parameters

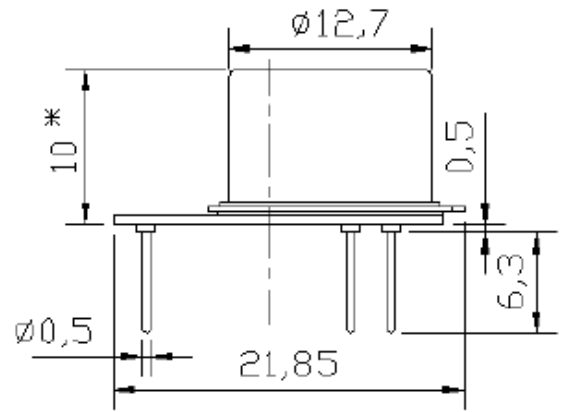
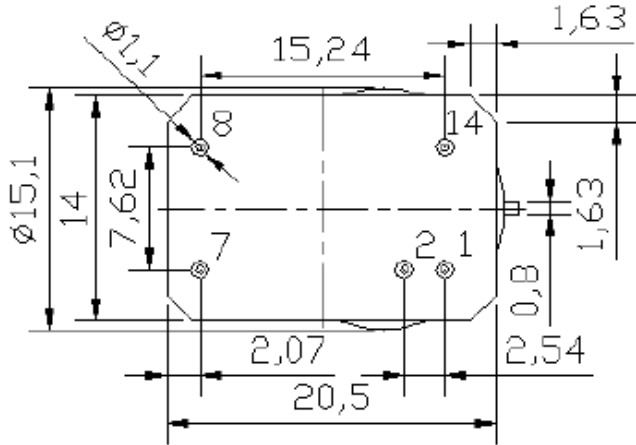
MODEL: O21G-K426-10.00MHZ						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	Sine wave				
	Level		8	10	dBm	
	Load	50			$\Omega$	
	Harmonics Suppression			-25	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.05		+0.05	$\times 10^{-6}$	$T_A$ varied from $-40^\circ\text{C}$ to $85^\circ\text{C}$ , measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{cc}=5.0\text{V}$ , $V_c=2.1\text{V}$ , $O_{load}=50\Omega$ , temperature variable speed less than $2^\circ\text{C}$ per minute.
	Initial Frequency Tolerance	-0.1		+0.1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{cc}=5.0\text{V}$ , $V_c=2.1\text{V}$ and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. supply voltage		$\pm 2$		$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^\circ\text{C}$ , $V_{cc}$ varied from 4.75V to 5.25V, $V_c=2.1\text{V}$ , $O_{load}=50\Omega$ .
	Frequency Tolerance vs. acceleration	$\pm 0.5$		$\pm 1$	$\times 10^{-9}$	Worst direction
	Allan variance	5	20		e-12	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to $25^\circ\text{C}$ ; 1s, using PN9000 equipment.
	Aging Tolerance per day	-0.5		+0.5	$\times 10^{-9}$	$V_{cc}, V_c, T_A$ constant Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ ,
	Aging Tolerance 1Year	-0.05		+0.05	$\times 10^{-6}$	$V_{cc}=5.0\text{V}$ , $V_c=2.1\text{V}$ , $O_{load}=50\Omega$ and after 30 days of operation.
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Steady Consumption		30		mA	@ $25^\circ\text{C}$
	Warm up current		140		mA	
	Vref Out	4.1	4.2	4.3	V	
	Warm-Up Time			35	s	@ $25^\circ\text{C}$ to $Df/f=1e-7$ , ref. to frequency after 10 min.



Voltage Control Characteristics	Frequency Tuning Range	-1		-0.5	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=2.1V$ .
		-0.1		+0.1	$\times 10^{-6}$	$V_c=2.1V$ . measurement referenced to exactly 10.00MHz.
		+0.5		+1.0	$\times 10^{-6}$	$V_c=4.2V$ . measurement referenced to $V_c=2.1V$ .
	Linearity			10	%	
	Slope	Positive				
	Input Impedance		100			K $\Omega$
	Output resistance of Vref		91			$\Omega$
Phase Noise	Phase Noise (Static)	-105	-95		dBc/Hz	1Hz
		-135	-125			10Hz
		-160	-145			100Hz
		-169	-160			1KHz
		-170	-165			10KHz
		-172	-168			100KHz
Environmental Conditions	Operable Temperature	-40		+85	$^{\circ}C$	
	Storage Temperature	-60		+90	$^{\circ}C$	
	Humidity	Non-condensing 95%.				
	Vibration	Per MIL-STD-202, 5G to 2000Hz.				
	Shock	Per MIL-STD-202, 30G, 11ms.				
	Washing conditions	Washing with water or alcohol based detergent allowed only with final enough drying stage				
	Soldering conditions	Hand solder only – not reflow compatible. 260 $^{\circ}C$ 10s (on pins)				
Full Package Storage	Relative humidity (%)	20% ~ 70%				
	Temperature ( $^{\circ}C$ )	-10~35 $^{\circ}C$				



## 2. Mechanical Structure (mm)



Pin	Signal
1	Electrical tuning
2	Reference voltage
7	GND
8	RF Out
14	+V Supply

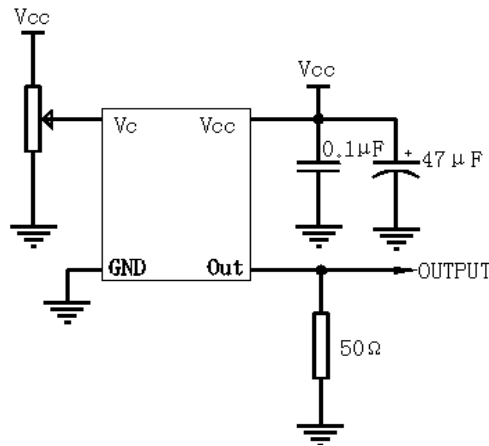
\* - 9 mm and 8 mm heights are available on special request

**Note1:** Tolerance  $\pm 0.2\text{mm}$  without mark

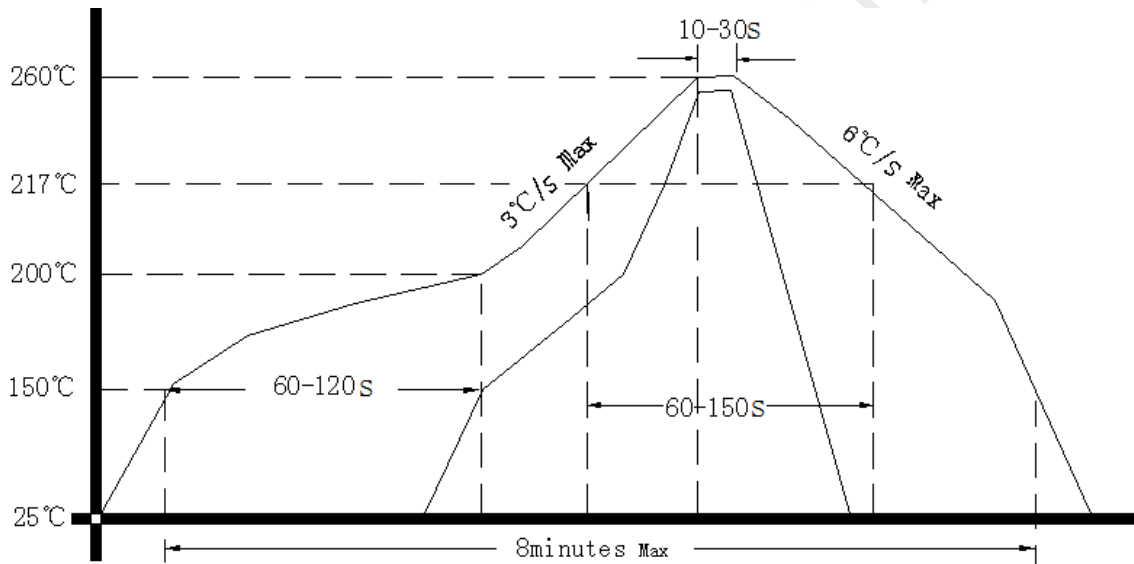
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### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



### 5. Package(mm)

