

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

# DATASHEET

DAPU P/N: **O21L-K425-40.00MHz -B**

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2023.12.13			

## 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

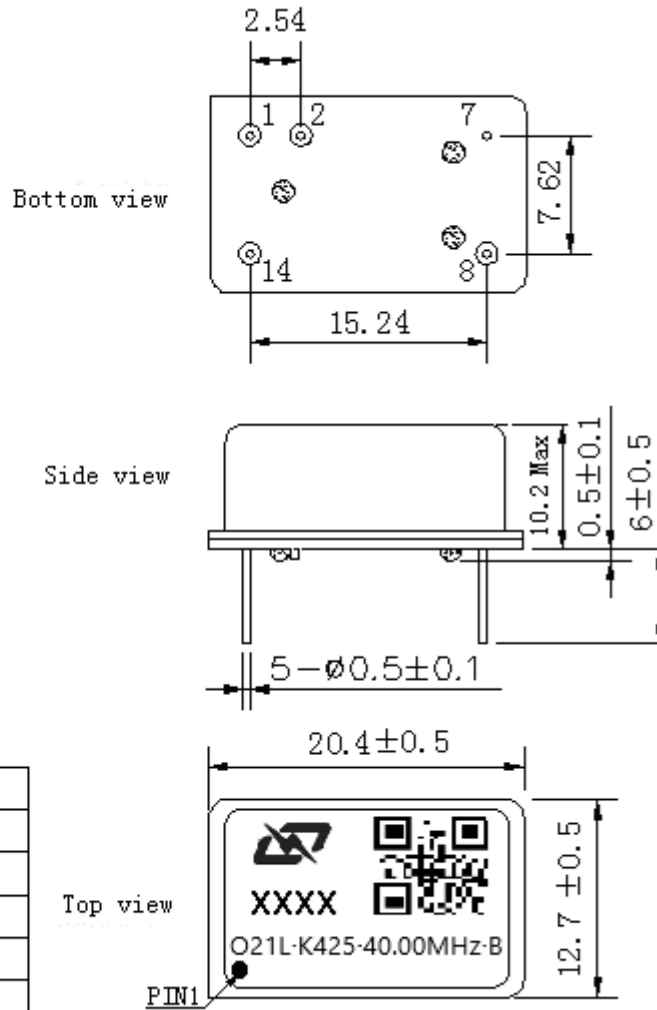
MODEL: O21L-K425-40.00MHz-B						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	40.00			MHz	
	Output Waveform	Sine Wave				
	Level	6	8		dBm	
	Harmonics Suppression			-25	dBc	
	Load	50			$\Omega$	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.05		+0.05	$\times 10^{-6}$	$T_A$ varied from $-45^\circ\text{C}$ to $85^\circ\text{C}$ , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$ , $V_{\text{cc}}=5.0\text{V}$ , $V_c=2.1\text{V}$ , $O_{\text{load}}=50\Omega$ , temperature variable speed less than $2^\circ\text{C}$ per minute.
	Initial Frequency Tolerance	-0.2		+0.2	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{\text{cc}}=5.0\text{V}$ , $V_c=2.1\text{V}$ , and after 5 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-2		+2	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^\circ\text{C}$ , $V_{\text{cc}}$ varied from 4.75V to 5.25V, and $O_{\text{load}}=50\Omega$ .
	Allan Deviation		20		$\times 10^{-12}$	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to $25^\circ\text{C}$ ; 1s.
	Aging Tolerance Per Day	-1		+1	$\times 10^{-9}$	$V_{\text{cc}}, T_A$ constant measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ ,
	Aging Tolerance 1 Year	-0.1		+0.1	$\times 10^{-6}$	$V_{\text{cc}}=5.0\text{V}$ , and after 30 days of operation.
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Steady Consumption			80	mA	@ $25^\circ\text{C}$
	Warm up Current			250	mA	
	Warm-Up Time			3	min	@ $25^\circ\text{C}$ within $\pm 0.05 \times 10^{-6}$ of final frequency with reference after 1 hour on.



Voltage Control Characteristics	Frequency Tuning Range			-0.5	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=2.1V$
		-0.2		+0.2	$\times 10^{-6}$	$V_c=2.1V$ . measurement referenced to exactly 40.00MHz
		+0.5			$\times 10^{-6}$	$V_c=4.2V$ . measurement referenced to $V_c=2.1V$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100				K $\Omega$
Phase Noise	Phase Noise		-105	-100	dBc/Hz	10Hz
			-130	-125		100Hz
			-158	-148		1KHz
			-163	-153		10KHz
			-165	-155		100KHz
Environmental Conditions	Operable Temperature	-45		+85	$^{\circ}C$	
	Storage Temperature	-55		+125	$^{\circ}C$	
	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	Not humidity sensitive.				
	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 ( $^{\circ}C$ )	-10~35 $^{\circ}C$				



## 2. Mechanical Structure (mm)



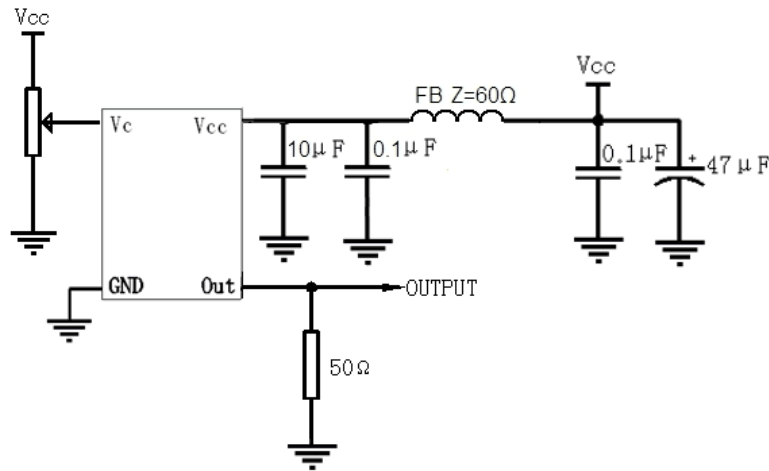
### PIN FUNCTION

PIN	NOTATION	FUNCTION
1	VC	Control Voltage
2	NC	Not Connect
7	GND	GND
8	OUTPUT	RF Output
14	VCC	Supply Voltage

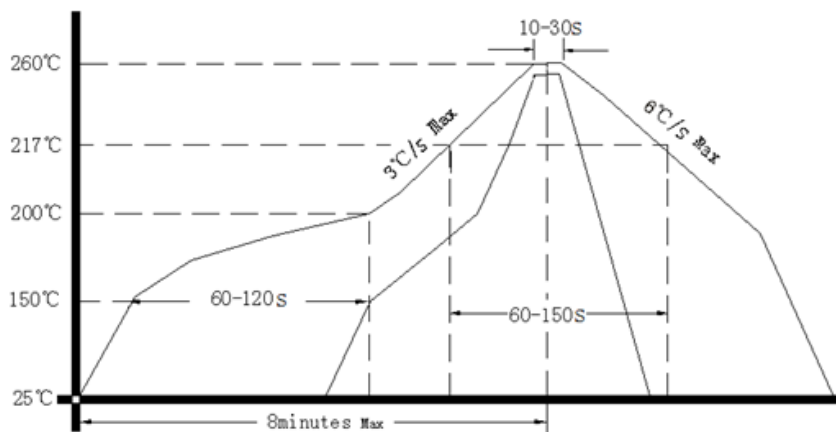
- Note1:** Tolerance ± 0.2mm without mark
- Note2:** Referential weight 4.2g
- Note3:** The first two xx representative: week  
After two xx representative: year



### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



### 5. Package: Tape & Reel (mm)

