

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

# DATASHEET

DAPU P/N:           **O22B-K425-10.00MHz-K**          

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

DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2021.11.11			

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### Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2020.03.26
1.1	The “Phase Noise” changed	<i>Amway</i>	2020.04.14
1.2	The “Short Term Stability” changed	<i>Amway</i>	2021.11.11



## 1. Electrical Parameters

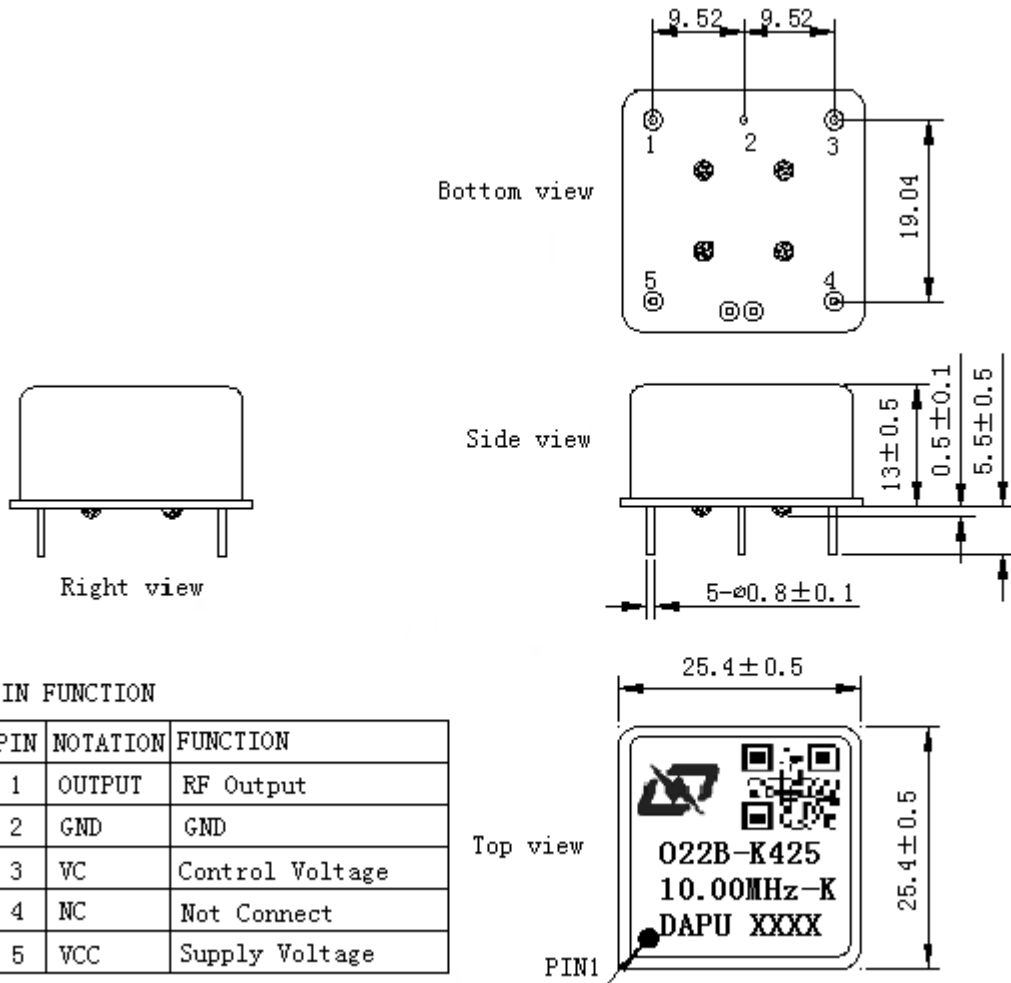
MODEL: O22B-K425-10.00MHZ-K						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	Sine wave				
	Level	8	10	12	dBm	
	Load	50			$\Omega$	
	Harmonics Suppression			-30	dBc	
	Spurious Suppression			-75	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.05		+0.05	$\times 10^{-6}$	$T_A$ varied from $-40^\circ\text{C}$ to $70^\circ\text{C}$ , measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$ , $V_{cc}=5.0\text{V}$ , $V_c=2.5\text{V}$ , $O_{load}=50\Omega$ , 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 $T_A=25^\circ\text{C}$ , $V_{cc}=5.0\text{V}$ , $V_c=2.5\text{V}$ and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. supply voltage	-1		+1	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^\circ\text{C}$ , $V_{cc}$ varied from 4.75V to 5.25V, $V_c=2.5\text{V}$ , $O_{load}=50\Omega$ .
	Frequency Tolerance vs. Load	-1		+1	$\times 10^{-9}$	5% Load Change Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$ , $V_{cc}=5.0\text{V}$ , $V_c=2.5\text{V}$ , $O_{load}=50\Omega$ .
	Short Term Stability			0.004	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to $25^\circ\text{C}$ ; 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
	Aging Tolerance 1 Year	-0.05		+0.05	$\times 10^{-6}$	$T_A=25^\circ\text{C}, V_{cc}=5.0\text{V}, V_c=2.5\text{V}, O_{load}=50\Omega$ and after 30 days of operation.
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Current Consumption			400	mA	@ $25^\circ\text{C}$
	Current Consumption during warm up			800	mA	
	Warm-Up Time			15	minutes	@ $25^\circ\text{C}$ within $\pm 0.05 \times 10^{-6}$ of final frequency with reference after 30 minutes on.



Voltage Control Characteristics	Frequency Tuning Range			-0.5	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=2.5V$ .
		-0.1		+0.1	$\times 10^{-6}$	$V_c=2.5V$ . measurement referenced to exactly 10.00MHz.
		+0.5			$\times 10^{-6}$	$V_c=5.0V$ . measurement referenced to $V_c=2.5V$ .
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100				K $\Omega$
Phase Noise	Phase Noise @25°C			-110	dBc/Hz	1Hz
				-140		10Hz
				-155		100Hz
				-165		1KHz
				-170		10KHz
				-170		100KHz
				-170		1MHz
				-170		
Environmental Conditions	Operable Temperature	-40		+70	°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	Not humidity sensitive.				
	Vibration	Frequency range: 20Hz~2000Hz, acceleration : 6g , ASD:0.04g <sup>2</sup> /Hz one cycle per 30 min, test 2 hour. (3 times for each 3 directions X , Y , Z), GJB 150.16A-2009				
Shock	100g; 6ms; half sine wave (3 times for each 3 directions X , Y , Z),GJB 360B-2009					
Full Package Storage	Relative humidity (%)	20% ~70%				
	Temperature (°C)	-10~35°C				



## 2. Mechanical Structure (mm)



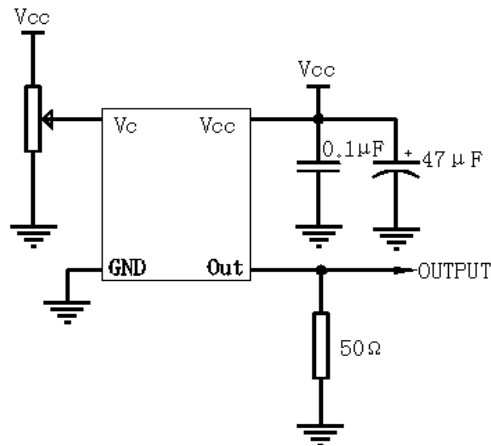
### PIN FUNCTION

PIN	NOTATION	FUNCTION
1	OUTPUT	RF Output
2	GND	GND
3	VC	Control Voltage
4	NC	Not Connect
5	VCC	Supply Voltage

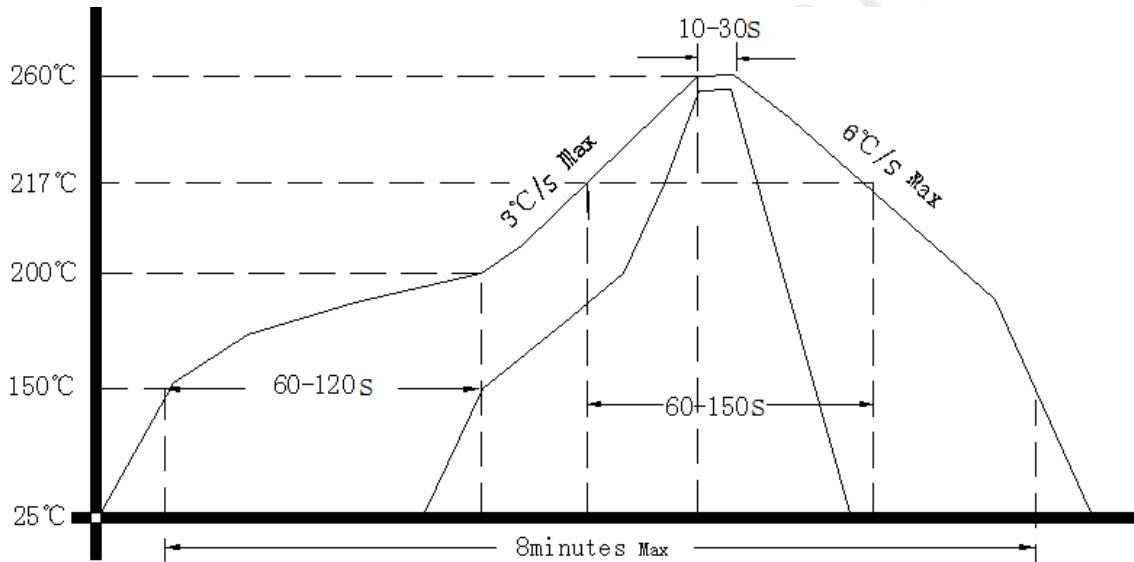
- Note1:** Tolerance ± 0.2mm without mark
- Note2:** The first two xx representative: week  
After two xx representative: year
- Note3:** Referential Weight 13.6g



### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



### 5. Package(mm)

