

Customer Code : _____

DATASHEET

DAPU P/N: O22B-K428-100.00MHz-A

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2025.01.06			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2025.01.06



1. Electrical Parameters

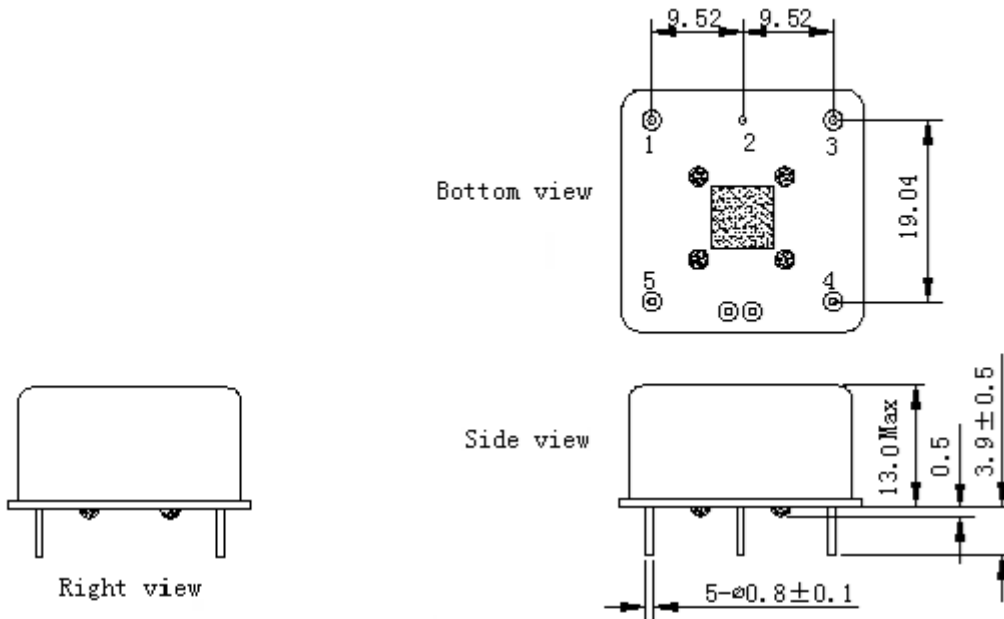
MODEL: O22B-K428-100.00MHz-A						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	100.00			MHz	
	Output Waveform	Sine wave				
	Level	7			dBm	
	Load	50			Ω	
	Harmonics Suppression			-30	dBc	
	Spurious Suppression			-80	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.05		+0.05	$\times 10^{-6}$	T_A varied from -40°C to 70°C , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$, $V_{\text{cc}}=5.0\text{V}$, $O_{\text{load}}=50\Omega$, temperature variable speed less than 2°C per minute.
	Initial Frequency Tolerance	-0.2		+0.2	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_{\text{cc}}=5.0\text{V}$, $V_c=2.5\text{V}$ and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. supply voltage	-0.02		+0.02	$\times 10^{-6}$	Measurement referenced to frequency observed $T_A=25^\circ\text{C}$, V_{cc} varied from 4.75V to 5.25V, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$.
	Frequency Tolerance vs. Load	-0.02		+0.02	$\times 10^{-6}$	5% Load Change Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_{\text{cc}}=5.0\text{V}$, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$.
	Short Term Stability			0.05	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to 25°C ; 1s.
	Aging Tolerance per day	-5.0		+5.0	$\times 10^{-9}$	V_{cc}, V_c, T_A constant Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_{\text{cc}}=5.0\text{V}$, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$ and after 30 days of operation.
	Aging Tolerance 1 Year	-0.3		+0.3	$\times 10^{-6}$	
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Steady Consumption			300	mA	@ 25°C
	Warm up current			800	mA	



Voltage Control Characteristics	Frequency Tuning Range		-1.0	$\times 10^{-6}$	$V_c=0V$. measurement referenced to $V_c=2.5V$.	
		-0.1	+0.1	$\times 10^{-6}$	$V_c=2.5V$. measurement referenced to exactly 100.00MHz.	
		+1.0		$\times 10^{-6}$	$V_c=5.0V$. measurement referenced to $V_c=2.5V$.	
	Linearity		10	%		
	Slope	Positive				
	Input Impedance	100			K Ω	
Phase Noise	Phase Noise		-100	-90	dBc/Hz	10Hz
			-130	-122		100Hz
			-160	-155		1KHz
			-170	-165		10KHz
			-175	-170		100KHz
Environmental Conditions	Operable Temperature	-40		+70	$^{\circ}C$	
	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	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 $^{\circ}C$				

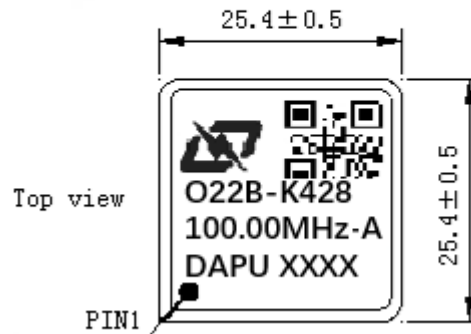


2. Mechanical Structure (mm)



PIN FUNCTION

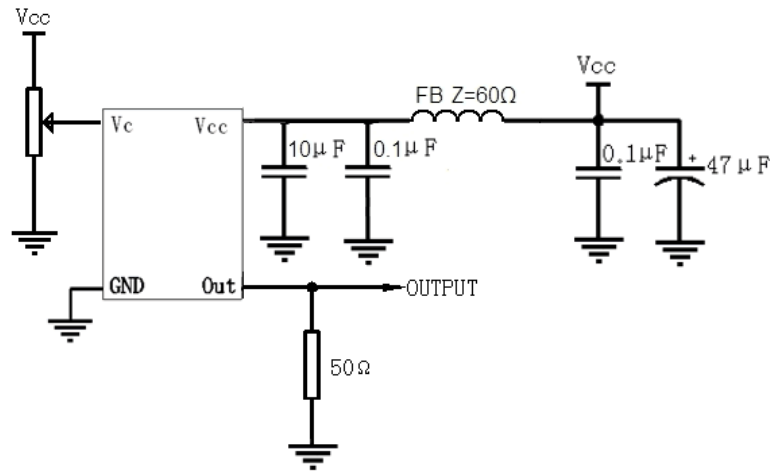
PIN	NOTATION	FUNCTION
1	OUTPUT	RF Output
2	GND	GND
3	VC	Control Voltage
4	NC	Not Connect
5	VCC	Supply Voltage



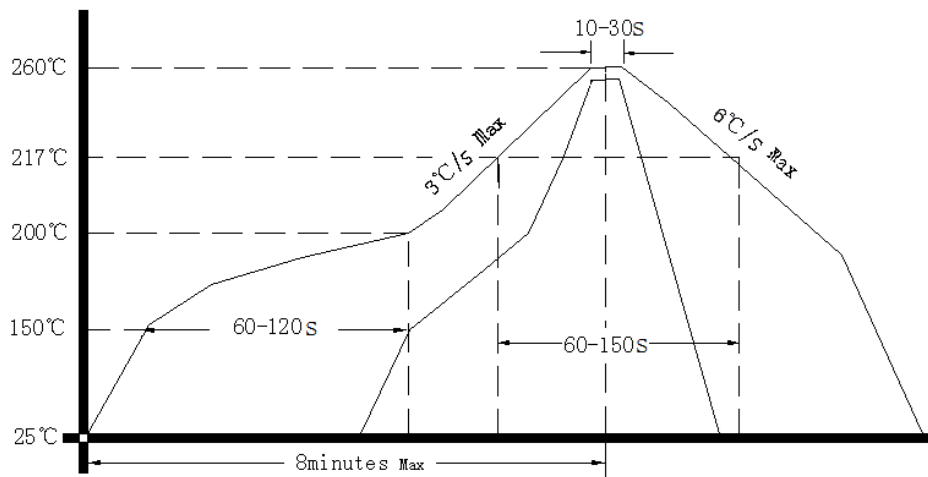
- Note1:** Tolerance $\pm 0.20\text{mm}$ without mark
Note2: The first two xx representative: year
 After two xx representative: week
Note3: Referential weight 13.6g
Note4: NC is not connect



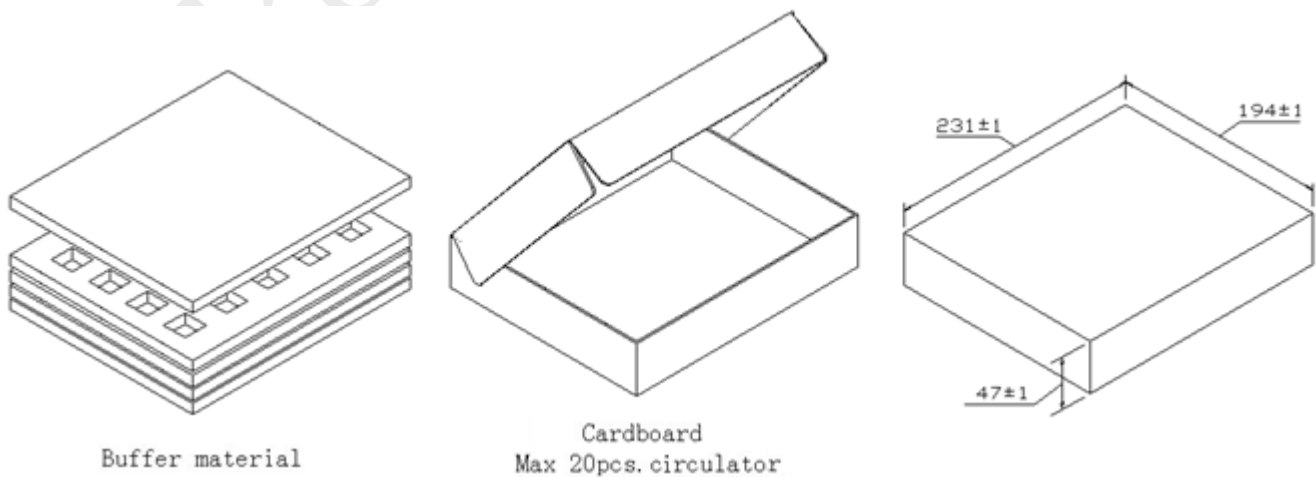
3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package(mm)



Buffer material

Cardboard
Max 20pcs. circulator