

Customer Code : _____

DATASHEET

DAPU P/N: **O22A-B443-10.00MHz**

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2025.03.05			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2023.12.07
1.1	The “Linearity” “Mechanical Structure” changed	<i>Amway</i>	2025.03.05



1. Electrical Parameters

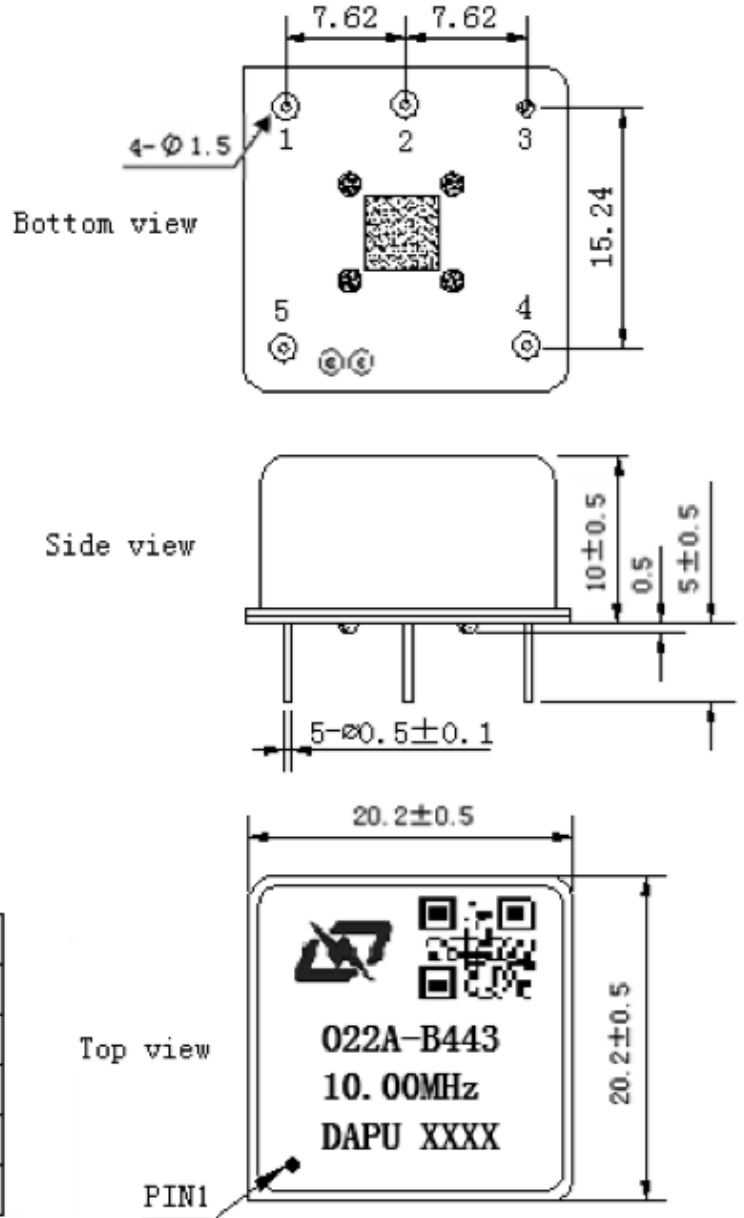
MODEL: O22A-B443-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	Sine wave				
	Level	5		9	dBm	
	Load	50			Ω	
	Harmonics Suppression			-30	dBc	
	Spurious Suppression			-80	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-2		+2	$\times 10^{-9}$	T_A varied from -10°C to 60°C , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$, $V_{\text{cc}}=12\text{V}$, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$, temperature variable speed less than 2°C per minute.
	Initial Frequency Tolerance	-0.1		+0.1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=12\text{V}$, $V_c=2.5\text{V}$ and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. supply voltage	-0.5		+0.5	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^{\circ}\text{C}$, V_{cc} varied from 11.4V to 12.6V, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$.
	Frequency Tolerance vs. Load	-0.5		+0.5	$\times 10^{-9}$	5% Load Change Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=12\text{V}$, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$.
	Short Term Stability			0.002	$\times 10^{-9}$	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 $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=12\text{V}, V_c=2.5\text{V}, O_{\text{load}}=50\Omega$ and after 30 days of operation.
	Aging Tolerance 1Year	-0.075		+0.075	$\times 10^{-6}$	
	Aging Tolerance 10Years	-0.3		+0.3	$\times 10^{-6}$	
Power Supply	Supply Voltage	11.4	12.0	12.6	V	
	Reference Voltage	4.75	5	5.25	V	
	Current Consumption			100	mA	@ 25°C
	Current Consumption during warm up			300	mA	
	Warm-Up Time			3	minutes	@ 25°C within $\pm 0.1 \times 10^{-6}$ of final frequency with reference after 1 hour on.



Voltage Control Characteristics	Frequency Tuning Range			-0.4	$\times 10^{-6}$	$V_c=0V$. measurement referenced to $V_c=2.5V$.
		-0.1		+0.1	$\times 10^{-6}$	$V_c=2.5V$. measurement referenced to exactly 10.00MHz.
		+0.4			$\times 10^{-6}$	$V_c=5.0V$. measurement referenced to $V_c=2.5V$.
	Linearity			5	%	
	Slope	Positive				
	Input Impedance	100				K Ω
Phase Noise	Phase Noise @25°C			-100	dBc/Hz	1Hz
				-130		10Hz
				-150		100Hz
				-155		1KHz
				-160		10KHz
				-160		100KHz
Environmental Conditions	Operating Temperature	-10		+60	°C	
	Operable Temperature	-40		+85	°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	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 FUNCTION

PIN	NOTATION	FUNCTION
1	VC	Control Voltage
2	OUTPUT	RF Output
3	GND	GND
4	VCC	Supply Voltage
5	VREF	VREF

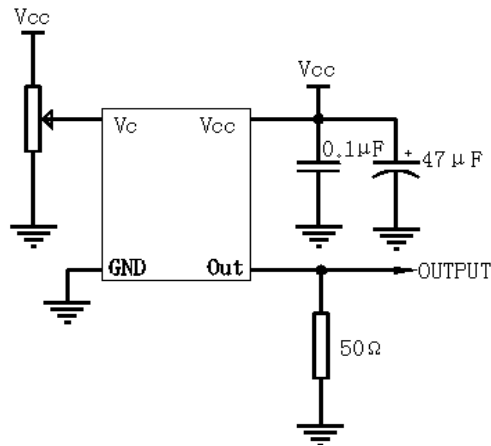
Note1: Tolerance ± 0.2 mm without mark

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

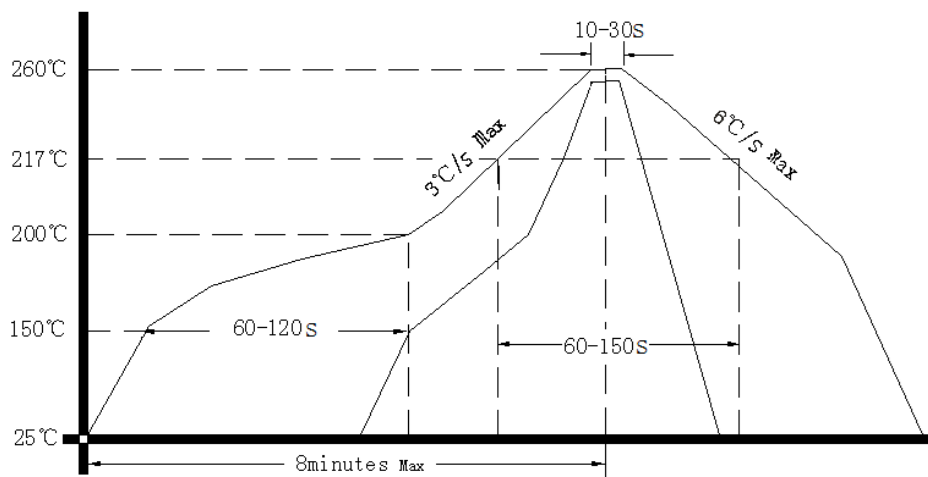
Note3: Referential Weight 8.0g



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package(mm)

