

Customer Code: _____

DATASHEET

DAPU P/N: 022B-L445-10.00MHz

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2023.01.20			

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



Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2023.01.20



1. Electrical Parameters

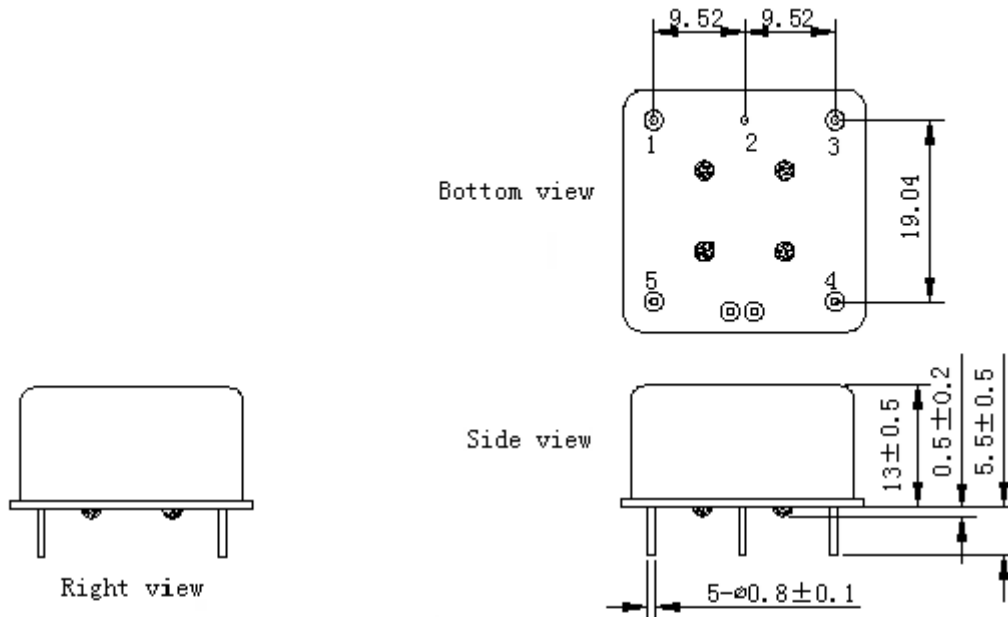
MODEL: O22B-L445-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	Sine wave				
	Level	10			dBm	
	Load	50			Ω	
	Harmonics Suppression			-30	dBc	
	Spurious Suppression			-85	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.01		+0.01	$\times 10^{-6}$	T_A varied from -30°C to 70°C , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$, $V_{\text{cc}}=12\text{V}$, $O_{\text{load}}=50\Omega$, 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 $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=12\text{V}$, $V_c=2.5\text{V}$, and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. supply voltage	-1.5		+1.5	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^{\circ}\text{C}$, V_{cc} varied form 11.4V to 12.6V, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$.
	Frequency Tolerance vs. Load	-1.5		+1.5	$\times 10^{-9}$	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: Allan Variance			0.5	$\times 10^{-12}$	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to 25°C ; 1s.
	G-sensitivity			1	$\times 10^{-9}/\text{g}$	Tested for stimulus up to 2kHz.
	Aging Tolerance Per Day	-0.5		+0.5	$\times 10^{-9}$	V_{cc} , V_c , T_A constant measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=12\text{V}$, $V_c=2.5\text{V}$, and after 30 days of operation..
	Aging Tolerance Per Year	-0.03		+0.03	$\times 10^{-6}$	
	Aging Tolerance 10 Years	-0.5		+0.5	$\times 10^{-6}$	



Power Supply	Supply Voltage	11.4	12.0	12.6	V	
	Reference Voltage	4.75	5	5.25	V	
	Steady Consumption			170	mA	@25°C
	Warm up current			550	mA	@25°C
	Warm-Up Time			5	min	@25°C within $\pm 0.02 \times 10^{-6}$ of final frequency with reference after 1 hour on.
			20	min	@25°C within $\pm 5 \times 10^{-9}$ of final frequency with reference after 1 hour on.	
Voltage Control Characteristics	Frequency Tuning Range	-1		-0.5	$\times 10^{-6}$	$V_c=0V$. measurement referenced to $V_c=2.5V$
		-0.2		+0.2	$\times 10^{-6}$	$V_c=2.5V$. measurement referenced to exactly 10.00MHz
		+0.5		+1	$\times 10^{-6}$	$V_c=5V$. measurement referenced to $V_c=2.5V$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	10			K Ω	
Phase Noise	Phase Noise @25°C			-95	dBc/Hz	1Hz
				-130		10Hz
				-155		100Hz
				-167		1KHz
				-170		10KHz
				-170		100KHz
				-170		1MHz
Environmental Conditions	Operating Temperature	-30		+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	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				

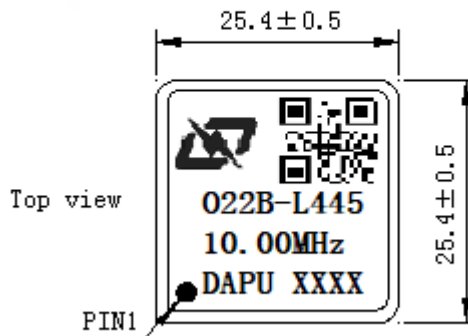


2. Mechanical Structure (mm)



PIN FUNCTION

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



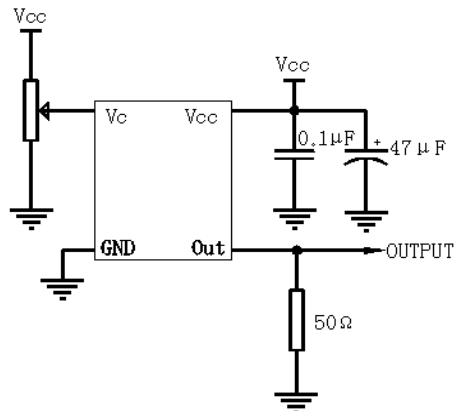
Note1: Tolerance ± 0.20mm without mark.

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

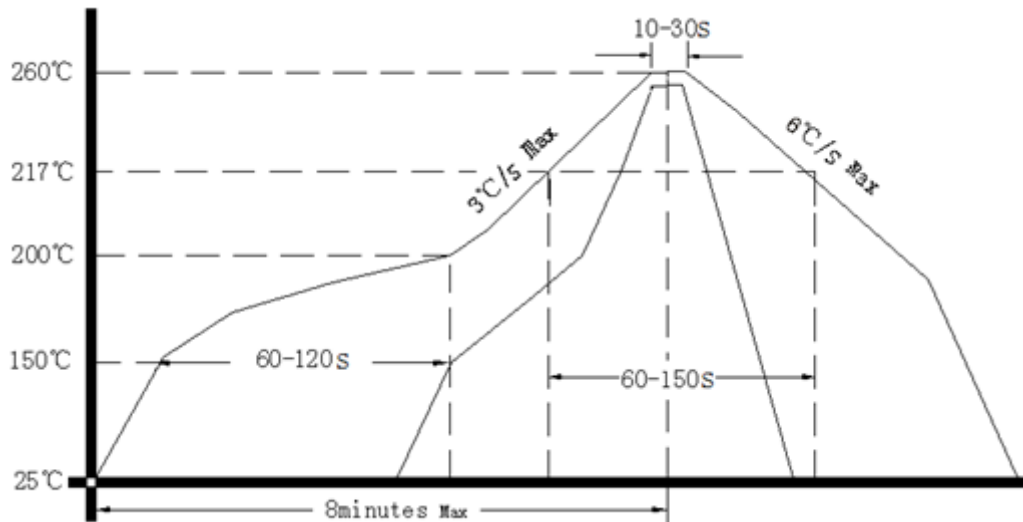
Note3: Referential Weight 13.6g.



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)

