

Customer Code:

# DATASHEET

DAPU P/N: 021L-C325-10.00MHz-G216

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2025.02.25			

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## 1. Electrical Parameters

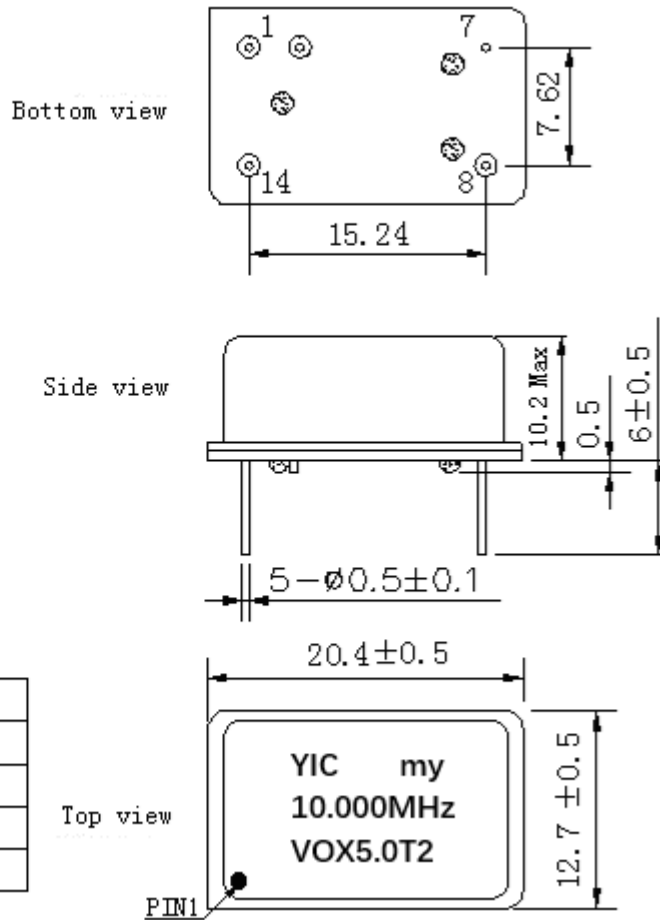
MODEL: O21L-C325-10.00MHz-G216						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=5.0V, O_{load}=15pF$
	Output High Voltage	2.7			V	$V_{cc}=5.0V, O_{load}=15pF$
	Duty Cycle	45		55	%	@50%
	Rise / Fall Time (10%~90%)			6	ns	
	Load	15			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.3		+0.3	$\times 10^{-6}$	$T_A$ varied from $-20^{\circ}C$ to $70^{\circ}C$ , measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$ , $V_{cc}=5.0V, O_{load}=15pF$ , temperature variable speed less than $2^{\circ}C$ per minute.
	Initial Frequency Tolerance	-0.5		+0.5	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}C$ , $V_{cc}=5.0V, V_c=2.5V$ , at time of shipment.
	Frequency Tolerance vs. Supply Voltage	-0.02		+0.02	$\times 10^{-6}$	measurement referenced to frequency observed $T_A=25^{\circ}C$ , $V_{cc}$ varied from 4.75V to 5.25V, and $O_{load}=15pF$ .
	Frequency Tolerance vs. Load	-0.02		+0.02	$\times 10^{-6}$	10% load change measurement referenced to frequency observed with $T_A=25^{\circ}C$ , $V_{cc}=5.0V, V_c=2.5V$ and $O_{Load}=15pF$ .
	Short-Term Stability Allan Variance			0.05	$\times 10^{-9}$	Temperature stability, no EMI\EMC or other interference, test after power for 1hour ref. to $25^{\circ}C$ ; 1s.
	Aging Tolerance Per Day	-5		+5	$\times 10^{-9}$	$V_{cc}, T_A$ constant measurement referenced to frequency observed with $T_A=25^{\circ}C$ , $V_{cc}=5.0V$ , and after 30 days of operation.
	Aging Tolerance 1 Year	-0.5		+0.5	$\times 10^{-6}$	
	Aging Tolerance 10 Years	-3		+3	$\times 10^{-6}$	
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Steady Consumption			200	mA	@ $25^{\circ}C$
	Warm up Current			600	mA	
	Warm-Up Time			5	min	@ $25^{\circ}C$ within $\pm 0.5 \times 10^{-6}$ of final frequency with reference after 1hour on.



Voltage Control Characteristics	Frequency Tuning Range			-2	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=2.5V$
		-0.5		+0.5	$\times 10^{-6}$	$V_c=2.5V$ . measurement referenced to exactly 10.00MHz
		+2			$\times 10^{-6}$	$V_c=5V$ . measurement referenced to $V_c=2.5V$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100				K $\Omega$
Phase Noise	Phase Noise @25°C			-100	dBc/Hz	10Hz
				-130		100Hz
				-140		1KHz
				-145		10KHz
				-150		100KHz
Environmental Conditions	Operating Temperature	-20		+70	°C	
	Storage Temperature	-55		+125	°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
7	GND	GND
8	OUTPUT	RF Output
14	VCC	Supply Voltage

**Note1:** Tolerance ± 0.2mm without mark

**Note2:** Referential weight 4.2g

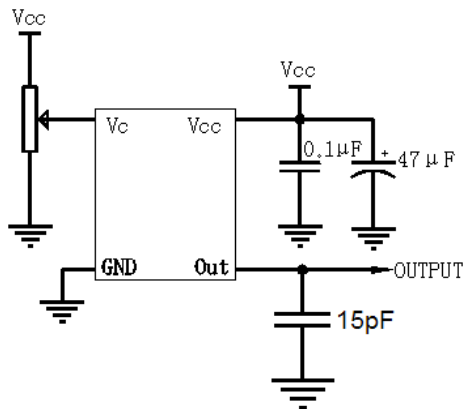
**Note3:** my: Date Code

m> January: A, February: B, and so on,

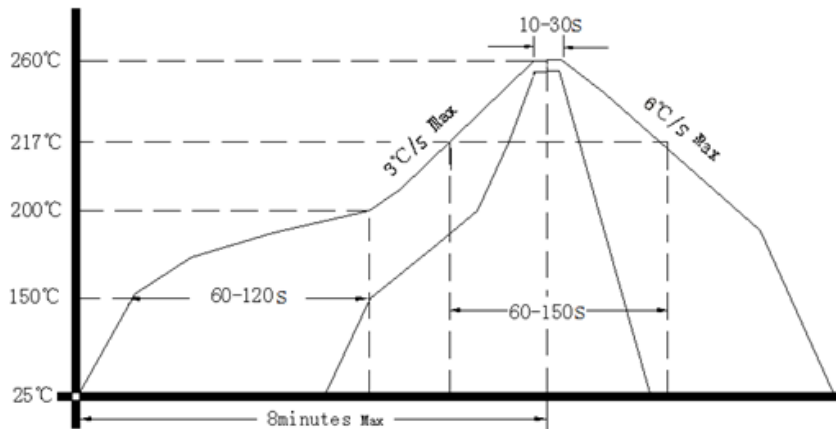
Y> Year 5:2025, Year 6:2026, and so on.



### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



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

