

Customer Code : _____

DATASHEET

DAPU P/N: D144-O21L-K425-40.00MHz

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2023.06.05			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2022.11.04
1.1	Add “Spurious Suppression”, The “Steady Consumption” “Operable Temperature” changed	<i>Amway</i>	2023.06.05



1. Electrical Parameters

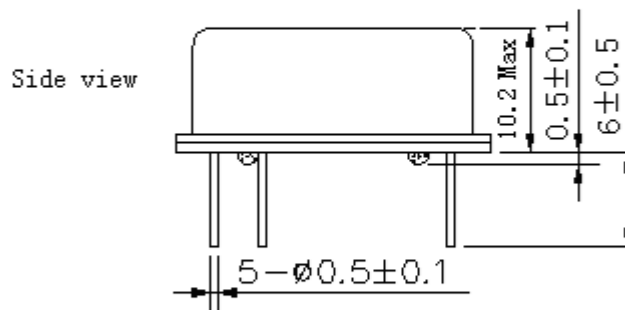
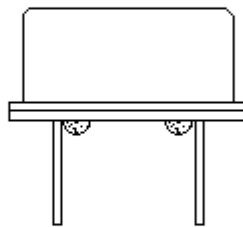
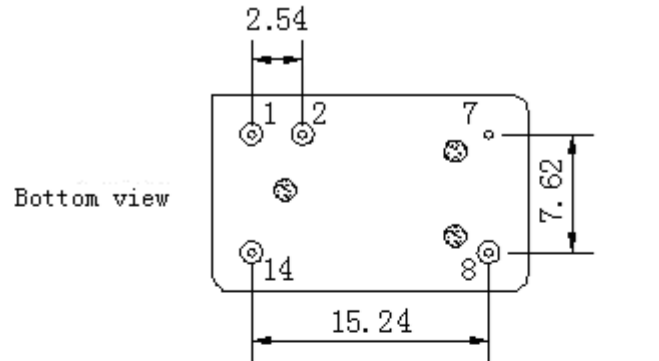
MODEL: D144-O21L-K425-40.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	40.00			MHz	
	Output Waveform	Sine Wave				
	Level	6	8		dBm	
	Harmonics Suppression			-25	dBc	
	Spurious Suppression			-70	dBc	
	Load	50			Ω	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.05		+0.05	$\times 10^{-6}$	T_A varied from -40°C to 65°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 $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=5.0\text{V}$, $V_c=2.1\text{V}$, and after 5 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-2		+2	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^{\circ}\text{C}$, V_{cc} varied from 4.75V to 5.25V, and $O_{\text{load}}=50\Omega$.
	G-Sensitivity			± 1	$\times 10^{-9}\text{G}$	worst direction.
	Allan Deviation		20		$\times 10^{-12}$	0.1s
	Aging Tolerance Per Day	-1.5		+1.5	$\times 10^{-9}$	V_{cc}, T_A constant measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=5.0\text{V}$, and after 30 days of operation.
	Aging Tolerance 1 Year	-0.15		+0.15	$\times 10^{-6}$	
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Reference Voltage	4.1	4.2	4.3	V	
	Steady Consumption			65	mA	@ 25°C
	Warm up Current			220	mA	
	Input Resistance		11		k Ω	
	Input BW		1.6		Hz	-3dB level



	Warm-Up Time			120	S	@-40°C within $\pm 0.1 \times 10^{-6}$ of final frequency with reference after 30minutes on.
	Warm-Up Time			120	S	@25°C within $\pm 0.05 \times 10^{-6}$ of final frequency with reference after 30minutes on.
Voltage Control Characteristics	Frequency Tuning Range			-0.5	$\times 10^{-6}$	$V_c=0V$. measurement referenced to $V_c=2.1V$
		-0.2		+0.2	$\times 10^{-6}$	$V_c=2.1V$. measurement referenced to exactly 40.00MHz
		+0.5			$\times 10^{-6}$	$V_c=4.2V$. measurement referenced to $V_c=2.1V$
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100				K Ω
Phase Noise	Phase Noise		-105	-100	dBc/Hz	10Hz
			-130	-125		100Hz
			-160	-150		1KHz
			-165	-157		10KHz
			-168	-160		100KHz
Environmental Conditions	Operable Temperature	-40		+65	°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				

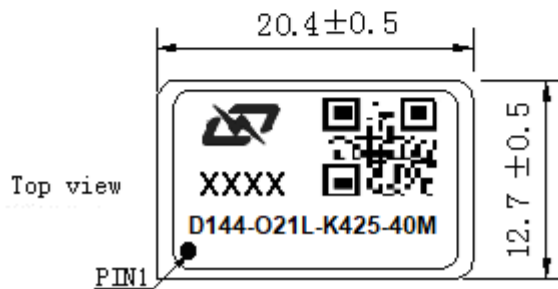


2. Mechanical Structure (mm)



PIN FUNCTION

PIN	NOTATION	FUNCTION
1	VC	Control Voltage
2	VREF	4.2V
7	GND	GND
8	OUTPUT	RF Output
14	VCC	Supply Voltage



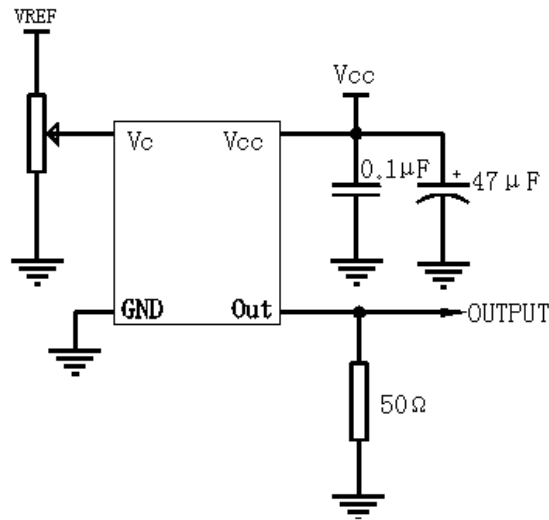
Note1: Tolerance ± 0.2mm without mark

Note2: Referential weight 4.2g

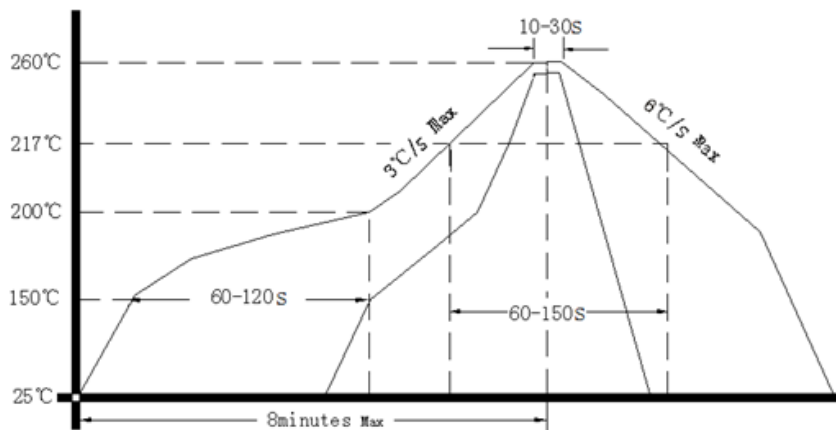
Note3: The first two xx representative: week
After two xx representative: year



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)

