

Customer Code: _____

DATASHEET

DAPU P/N: 055F-1801-10.00MHz

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2024.12.30			

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1. Electrical Parameters

MODEL: O55F-1801-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	Sine wave				
	Level	5		10	dBm	
	Load	50			Ω	
	Harmonics Suppression			-40	dBc	
	Spurious Suppression			-90	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-1		+1	$\times 10^{-9}$	T_A varied from -10°C to 75°C , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$, $V_{\text{cc}}=12.0\text{V}$, $O_{\text{load}}=50\Omega$, temperature variable speed less than 2°C per minute.
	Frequency Accuracy	-0.03		+0.03	$\times 10^{-6}$	Within 90 days after shipment and 15 minutes warm up time(before reflow), Measurement referenced to nominal frequency
		-0.03		+0.03	$\times 10^{-6}$	Within 90 days after shipment and 15 minutes warm up time(after reflow), Measurement referenced to nominal frequency
	Frequency Tolerance vs. supply voltage	-1		+1	$\times 10^{-9}$	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	-1		+1	$\times 10^{-9}$	10% Load Change Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=12.0\text{V}$, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$.
	G-Sensitivity	-1		+1	$\times 10^{-9}/g$	Gamma vector of all three axes from 30 Hz to 1500 Hz
	Short-Term Stability: Allan Variance			0.01	$\times 10^{-9}$	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 $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=12.0\text{V}$, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$ and after 30 days of operation.
	Aging Tolerance Per 30 Days	-5		+5	$\times 10^{-9}$	
Aging Tolerance First Year	-0.03		+0.03	$\times 10^{-6}$		
Aging Tolerance 10 Years	-0.5		+0.5	$\times 10^{-6}$		



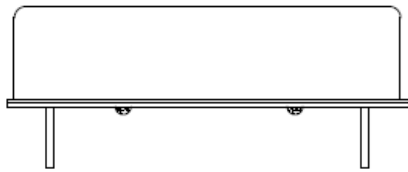
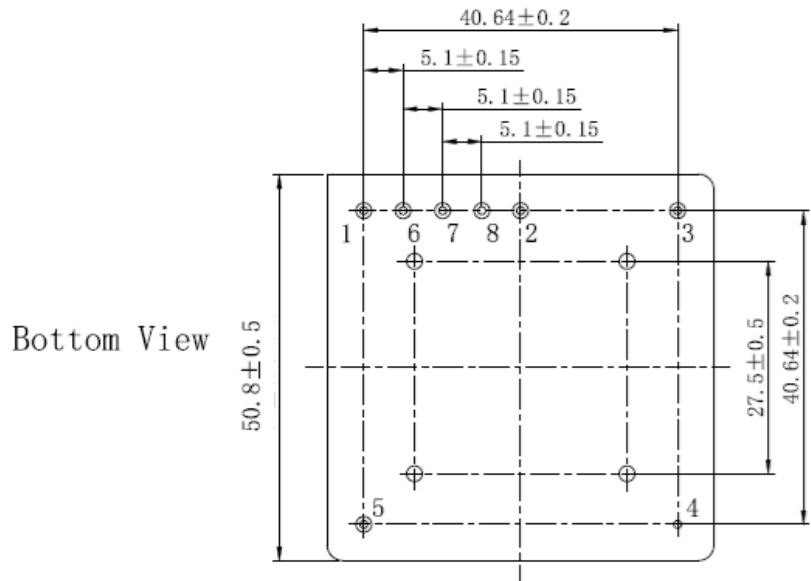
	Frequency Retrace	-5		+5	$\times 10^{-9}$	After 48 hours operation, record the frequency f1. Power off the oscillator at least 24 hours. Then power on, measurement frequency f2 after 1 hour operation. $\Delta f_r = f_1 - f_2$
	Warm up	-0.05		+0.05	$\times 10^{-6}$	After warm up 5 minutes. Measurement referenced to frequency observed with TA = 25°C, VS = 12V, VC = 2.5V. and after 1 hour of operation.
		-0.05		+0.05	$\times 10^{-6}$	After warm up 1 hour. Measurement referenced to frequency observed with TA = 25°C, VS = 12V, VC = 2.5 V. and after 24hour of operation.
	Warm up Time		5	10	minutes	
Power Supply	Supply Voltage	10.8	12.0	13.2	V	
	Steady Consumption			200	mA	@25°C
	Warm up current			450	mA	
	Reference Voltage Output	4.925	5	5.075	V	1 mA max
Voltage Control Characteristics	Frequency Tuning Range			-0.4	$\times 10^{-6}$	V _c =0V. measurement referenced to V _c =2.5V
		-0.03		+0.03	$\times 10^{-6}$	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
	Cut-off Frequency	1			kHz	3dB
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	10			KΩ	
I ² C Interface	Bus Voltage	3.135	3.3	3.465	V	
	Voltage High	2.3		3.3	V	
	Voltage Low	0		0.9	V	
	Clock Frequency	0		100	kHz	
	Resolution	12			Bit	
Phase Noise	Phase Noise @25°C			-119	dBc/Hz	1Hz
				-145		10Hz
				-157		100Hz
				-160		1KHz
				-166		10KHz



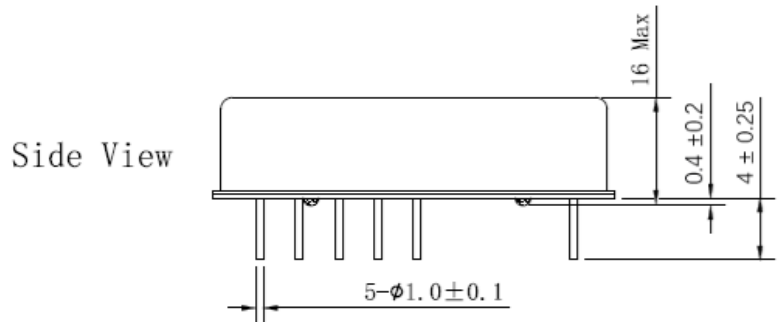
Environmental Conditions	Operating Temperature	-10	+75	°C
	Operable Temperature	-10	+100	°C
	Storage Temperature	-55	+105	°C
	ESD Level	Human Body Model, class2: 2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010.		
		Machine Model, class B: 200V to 400V; JEDEC JESD22-A115C.		
	Moisture Sensitivity Level	Not 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)



Right View



Pin 1	Vc(control voltage)
Pin 2	Reference Voltage Output
Pin 3	RF(output)
Pin 4	GND
Pin 5	Vs(supply voltage)
Pin 6	SCL (DAC控制管脚)
Pin 7	IO (1=I ² C,0=Vc)
Pin 8	SDA (DAC控制管脚)

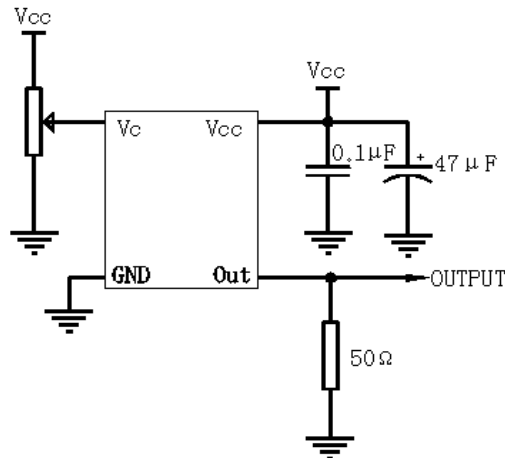


Note1: Tolerance ± 0.20 mm without mark.

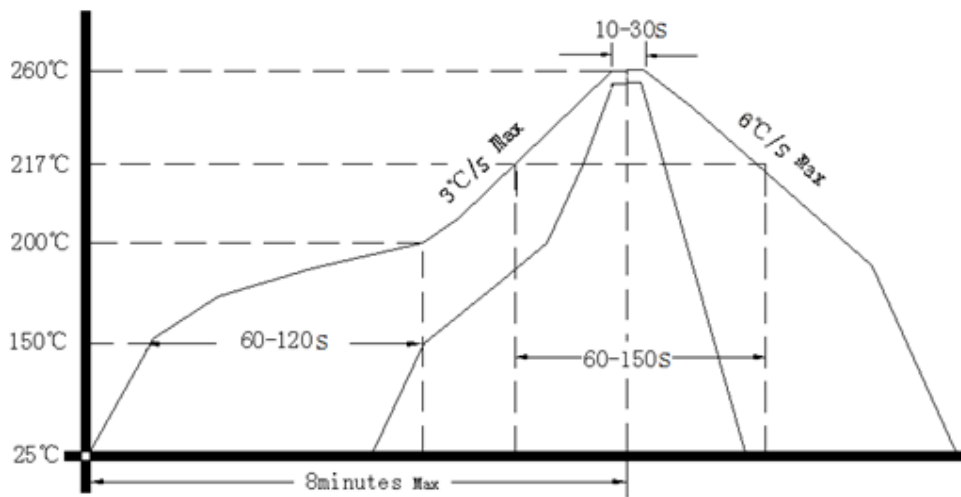
Note2: The first two xx representative: year.
After two xx representative: week.



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package: Tape & Reel (mm)

