



Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2017.09.01
1.1	The “Frequency Tuning Range”, “Frequency Tolerance vs. Operating Temperature Range” “Phase Noise”, “Frequency Tolerance vs. Load”, “Initial Frequency Tolerance”, and “aging” changed	<i>Amway</i>	2017.12.29
1.2	The “ESD Level” “Mechanical Structure” changed	<i>Amway</i>	2021.04.21
1.3	The “Mechanical Structure” changed	<i>Amway</i>	2021.05.27
1.4	The “Frequency Tuning Range” changed	<i>Amway</i>	2022.05.26
1.5	The “Voltage Control Characteristics” “Reflow Soldering Curve” changed , Add “Aging Calculation method”	<i>Amway</i>	2023.03.30
1.6	The “Mechanical Structure” changed	<i>Amway</i>	2024.02.20



1. Electrical Parameters

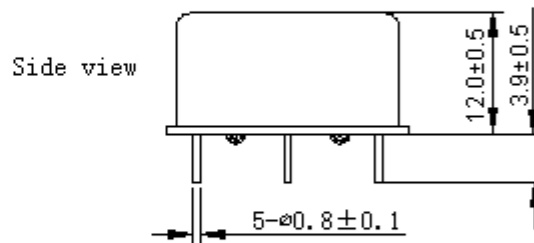
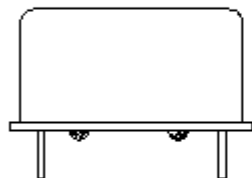
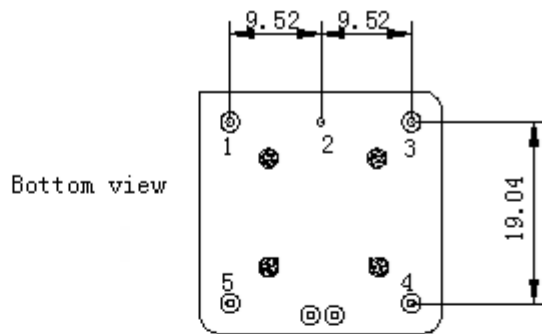
MODEL: O22B-0803-100.00MHZ-A						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	100.00			MHz	
	Output Waveform	Sine wave				
	Level	8	13		dBm	
	Load	50			Ω	
	Harmonics Suppression			-50	dBc	
	Spurious Suppression			-80	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.1		+0.1	$\times 10^{-6}$	T_A varied from -40°C to 85°C , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$, $V_{\text{cc}}=5.0\text{V}$, $V_c=1.65\text{V}$, $O_{\text{load}}=50\Omega$, temperature variable speed less than 2°C per minute.
	Initial Frequency Tolerance	-0.5		+0.5	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=5.0\text{V}$, $V_c=1.65\text{V}$ and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. supply voltage	-0.01		+0.01	$\times 10^{-6}$	measurement referenced to frequency observed $T_A=25^{\circ}\text{C}$, V_{cc} varied from 4.75V to 5.25V, $V_c=1.65\text{V}$, $O_{\text{load}}=50\Omega$.
	Frequency Tolerance vs. Load	-0.1		+0.1	$\times 10^{-6}$	5% Load Change Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=5.0\text{V}$, $V_c=1.65\text{V}$, $O_{\text{load}}=50\Omega$.
	Short Term Stability			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	-3		+3	$\times 10^{-9}$	V_{cc}, V_c, T_A constant Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=5.0\text{V}$, $V_c=1.65\text{V}$, $O_{\text{load}}=50\Omega$ and after 30 days of operation.
	Aging Tolerance 1Year	-0.2		+0.2	$\times 10^{-6}$	Calculation method: Annual Aging Rate: $66.7 \times \text{daily aging rate}$.
Power Supply	Supply Voltage	4.75	5	5.25	V	
	Steady Consumption			400	mA	@ 25°C
	Warm up current			800	mA	
	Warm up time			2.5	minutes	@ 25°C within $\pm 0.1 \times 10^{-6}$ of final frequency with reference after 1 hour on.
			15	minutes	@ 25°C within $\pm 0.05 \times 10^{-6}$ of final frequency with reference after 1 hour on.	



Voltage Control Characteristics	Frequency Tuning Range			-2	$\times 10^{-6}$	$V_c=0V$. measurement referenced to exactly 100.00MHz
		-0.5		+0.5	$\times 10^{-6}$	$V_c=1.65V$. measurement referenced to exactly 100.00MHz
		+2			$\times 10^{-6}$	$V_c=3.3V$. measurement referenced to exactly 100.00MHz
	Linearity			10	%	Frequency deviation of 0V, 3.3V relative to 1.65V.
	Slope	Positive				
	Input Impedance	100				K Ω
Phase Noise	Phase Noise		-108	-103	dBc/Hz	10Hz
			-135	-130		100Hz
			-160	-155		1KHz
			-175	-170		10KHz
			-175	-170		100KHz
			-175	-170		1MHz
Environmental Conditions	Operable Temperature	-40		+85	$^{\circ}C$	
	Storage Temperature	-55		+105	$^{\circ}C$	
	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 ($^{\circ}C$)	-10~35 $^{\circ}C$				

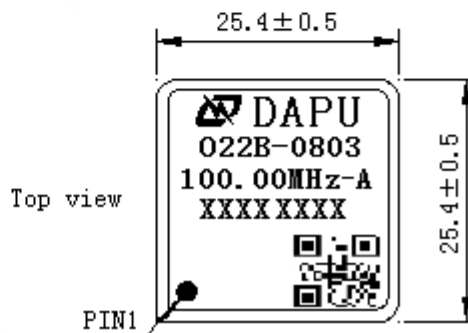


2. Mechanical Structure (mm)



PIN FUNCTION

PIN	NOTATION	FUNCTION
1	OUTPUT	RF Output
2	GND	GND
3	VC	Control Voltage
4	NC	Not Connect
5	VCC	Supply Voltage



Note1: Tolerance $\pm 0.30\text{mm}$ without mark.

Note2: The first two xx representative: year.

After two xx representative: week.

At last four xxxx representative: serial number.

Two dimensional code marking rules:

Material code + space + brand + space + batch (year week) + space + serial number.

The customer's material code is 030062000046.

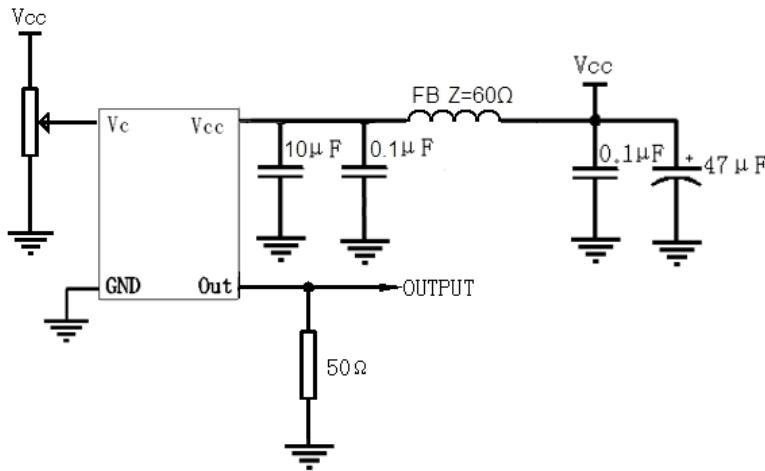
Take 62 in the middle and the last three digits as the material code number in the two dimensional code.

Note3: Referential weight 13.6g.

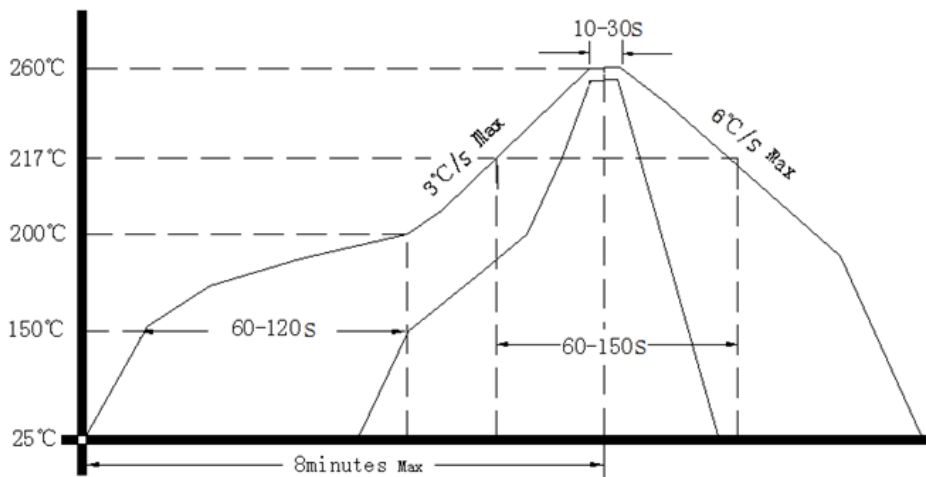
Note4: NC is not connect.



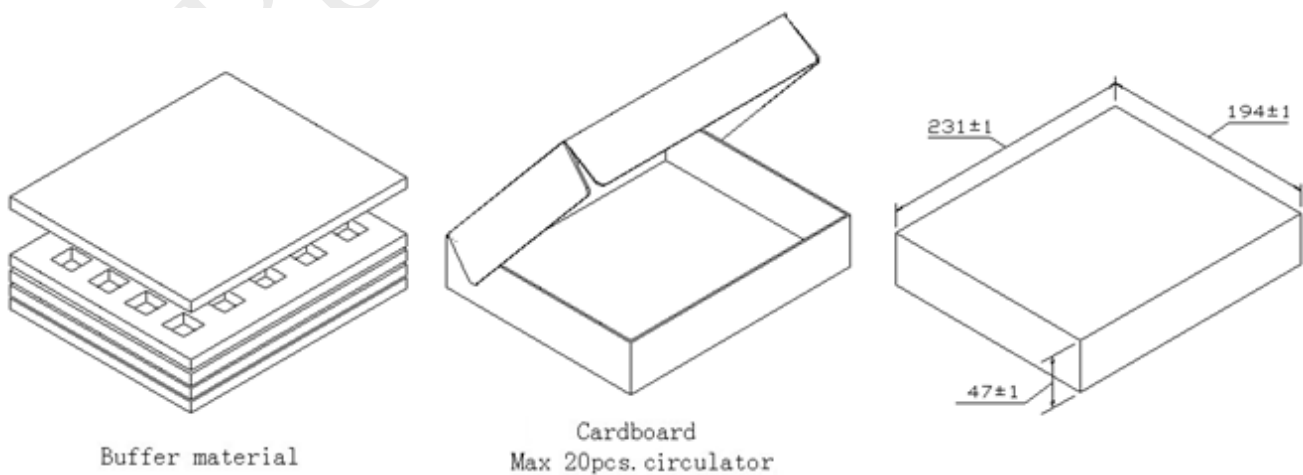
3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package(mm)



Buffer material

Cardboard
Max 20pcs. circulator