Travelling Merchant:_____

DATASHEET

Standard: **SAB-O22A-SBDV-14.40MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	
Amway.wei	Tony · Wang	Jason Zhao	
Date: 2023.05.09			Stamp, please! Thanks!

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

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	Amway	2023.04.18
1.1	The “Frequency Tolerance vs. Operating Temperature Range” “Reference Voltage” “Warm up current”“Mechanical Structure” changed	Amway	2023.05.09

Building 5, No.24, Industrial East Road,
Songshanhu Park, Dongguan,
Guangdong, P.R. China
TEL:0086-0769-88010888
FAX:0086-0769-81800098

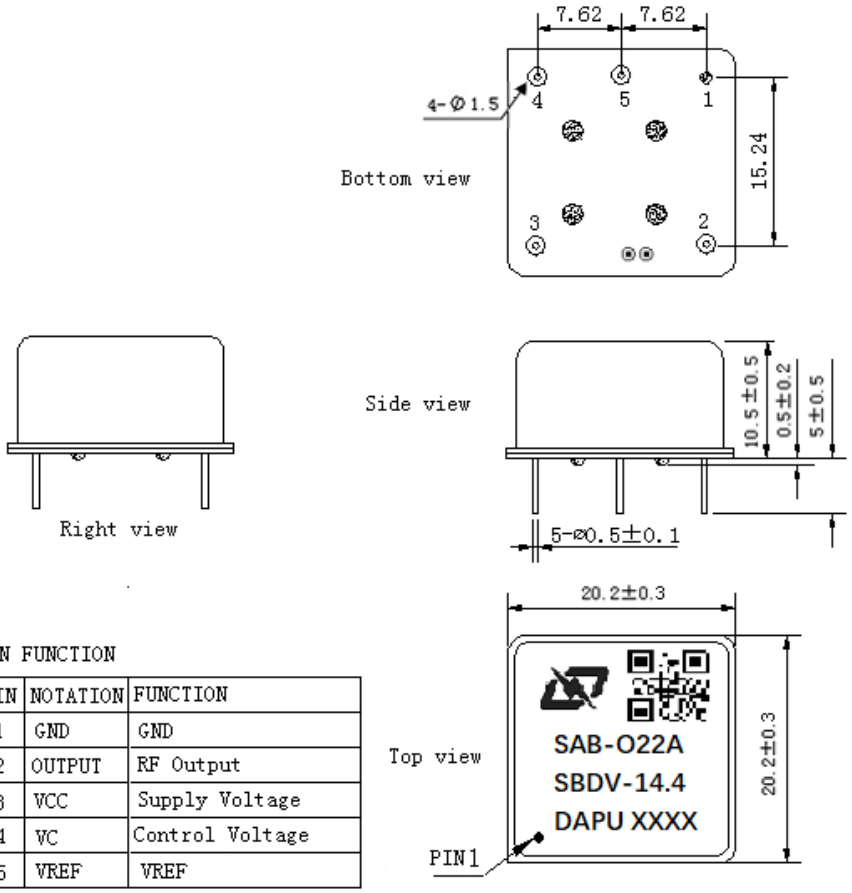
1. Electrical Parameters

MODEL: SAB-O22A-SBDV-14.40MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency		14.40		MHz	
	Output Waveform		HCMOS			
	Output Low Voltage			0.4	V	V_{cc}=5.0V, O_{load}=15pF
	Output High Voltage	3.9			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	-0.02		+0.02	$\times 10^{-6}$	T_A varied from -55℃ to 85℃, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2$, V_{cc}=5.0V, O_{load}=15pF, temperature rise speed less than 2℃per minute.
	Initial Frequency Tolerance	-0.2		+0.2	$\times 10^{-6}$	Measurement referenced to frequency observed with T_A=25℃, V_{cc}=5.0V, V_c=2.1V, and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-5		+5	$\times 10^{-9}$	measurement referenced to frequency observed T_A=25℃, V_{cc} varied from 4.75V to 5.25V, V_c=2.1V, and O_{Load}=15pF.
	Frequency Tolerance vs. Load	-5		+5	$\times 10^{-9}$	5% load change measurement referenced to frequency observed with T_A=25℃, V_{cc}=5.0V, V_c=2.1V ,and O_{Load}=15pF.
	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℃; 1s.
	Aging Tolerance Per Day	-0.5		+0.5	$\times 10^{-9}$	V_{cc}, T_A constant measurement referenced to frequency observed with T_A=25℃, V_{cc}=5.0V, after 30 days of operation.
	Aging Tolerance 1 Year	-0.06		+0.06	$\times 10^{-6}$	

Building 5, No.24, Industrial East Road,
Songshanhu Park, Dongguan,
Guangdong, P.R. China
TEL:0086-0769-88010888
FAX:0086-0769-81800098

Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Reference Voltage	4.1	4.2	4.41	V	
	Steady Consumption			200	mA	@25℃
	Warm up current			700	mA	
	Warm up Time			3	min	@25℃within $\pm 0.1\times 10^{-6}$ of final frequency with reference after 1 hour 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 14.40MHz
		+0.5			$\times 10^{-6}$	V_c=4.2V. measurement referenced to V_c=2.1V
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			KΩ	
Phase Noise	Phase Noise		-120		dBc/Hz	10Hz
			-145			100Hz
			-155			1KHz
			-160			10KHz
			-165			100KHz
Environmental Conditions	Operable Temperature	-55		+85	℃	
	Storage Temperature	-55		+105	℃	
	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	In accordance with the regulations of GJB150.16A-2009, the typical Spectral type of the caterpillar car				
	Shock	In accordance with the regulations of GJB150.18A-2009, ground equipment impact requirements				
Full Package Storage	Relative humidity (%)	20%～70%				
	Temperature (℃)	-10~35℃				

2. Mechanical Structure (mm)



PIN FUNCTION

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

Note1: Tolerance ± 0.20mm without mark

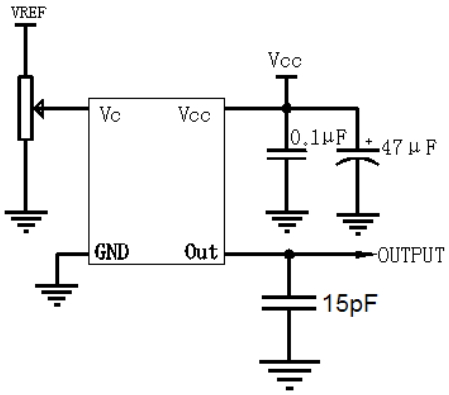
Note2: The first two xx representative: week
After two xx representative: year

Note3: Referential weight 8.0g

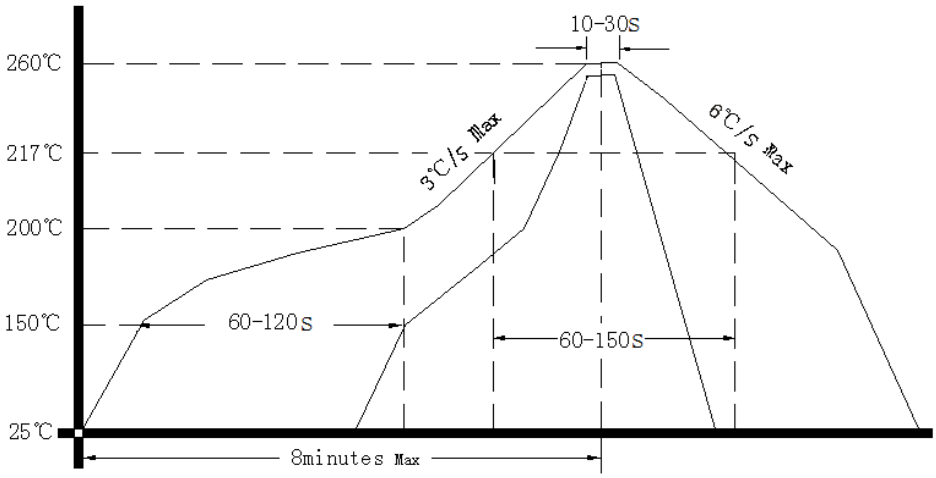
Note4: NC is not connect

Building 5, No.24, Industrial East Road,
Songshanhu Park, Dongguan,
Guangdong, P.R. China
TEL:0086-0769-88010888
FAX:0086-0769-81800098

4. Test Circuit



5. Reflow Soldering Curve (RoHS)



6. Package（mm）