

Travelling Merchant: \_\_\_\_\_

# DATASHEET

Standard:           **O22S-B329-10.00MHz-B**          

P/N: \_\_\_\_\_

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2021.01.29			

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### Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2015.05.19
1.1	“Aging Tolerance Per Day” changed Add “Holdover Capability”	<i>Amway</i>	2016.06.24
1.2	“Aging Tolerance Per Day” “Aging Tolerance 1 year” “Mechanical Structure” “Package: Tape & Reel” changed	<i>Amway</i>	2021.01.29



## 1. Electrical Parameters

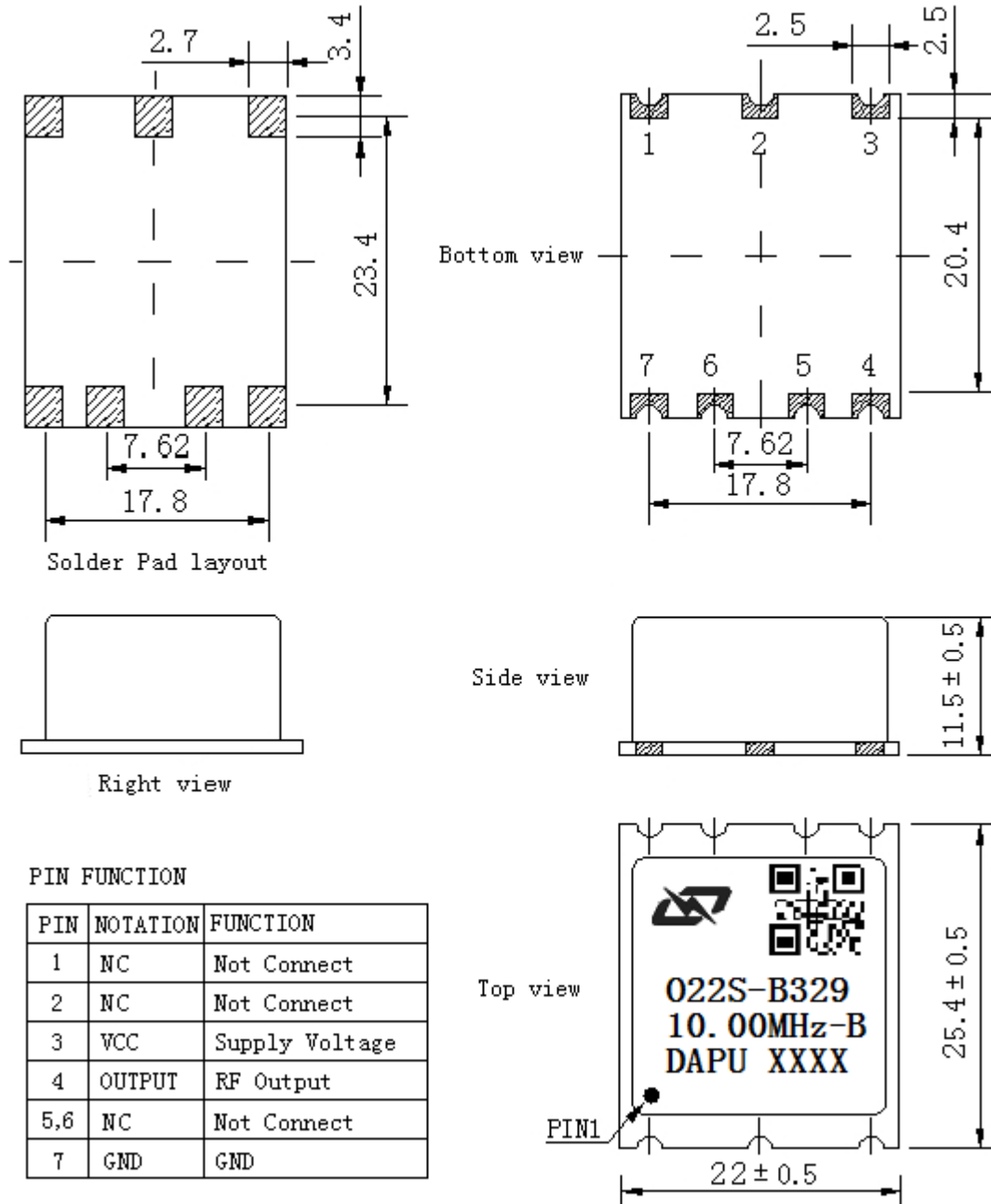
MODEL: O22S-B329-10.00MHZ-B						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=5.0V, O_{load}=15pF$
	Output High Voltage	2.4			V	$V_{cc}=5.0V, O_{load}=15pF$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			10	ns	
	Load	15			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-3		+3	$\times 10^{-9}$	$T_A$ varied from $-40^{\circ}C$ to $85^{\circ}C$ , 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	-0.1		+0.1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V$ , and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-1		+1	$\times 10^{-9}$	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	-1		+1	$\times 10^{-9}$	5% load change measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V$ , 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 $25^{\circ}C$ ; 1s, using PN9000 equipment.
	Aging Tolerance Per Day	-0.5		+0.5	$\times 10^{-9}$	$V_{cc}, T_A$ constant measurement referenced to frequency observed with $T_A=25^{\circ}C, V_{cc}=5.0V$ , and after 30 days of operation.
	Aging Tolerance 1 Year	-0.05		+0.05	$\times 10^{-6}$	
Power Supply	Supply Voltage	4.75	5.0	5.25	V	
	Steady Consumption			350	mA	@ $25^{\circ}C$
	Warm up current			750	mA	
	Warm-Up Time			10	minutes	@ $25^{\circ}C$ within $\pm 0.015 \times 10^{-6}$ of final frequency with reference after 1 hour on.



Holdover Capability	24 hours	-20		+20	μs	@25°C, 24 hours holdover after lock 2 hours (note: Firstly power on more than 3 days, then power off less than one day)
Phase Noise	Phase Noise @25°C		-125	-115	dBc/Hz	10Hz
			-145	-135		100Hz
			-150	-145		1KHz
			-155	-150		10KHz
			-155	-150		100KHz
			-155	-150		1MHz
Environmental Conditions	Operable Temperature	-40		+85	°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	Level 2.				
	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				



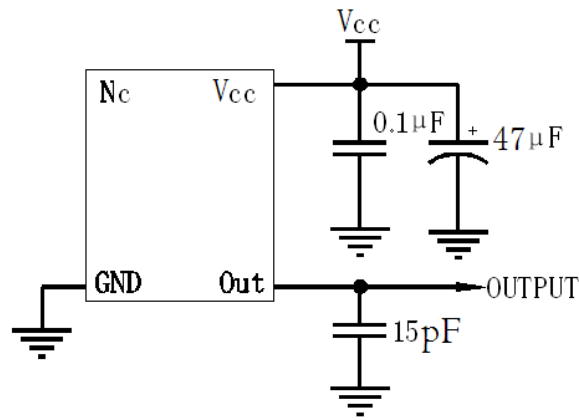
## 2. Mechanical Structure (mm)



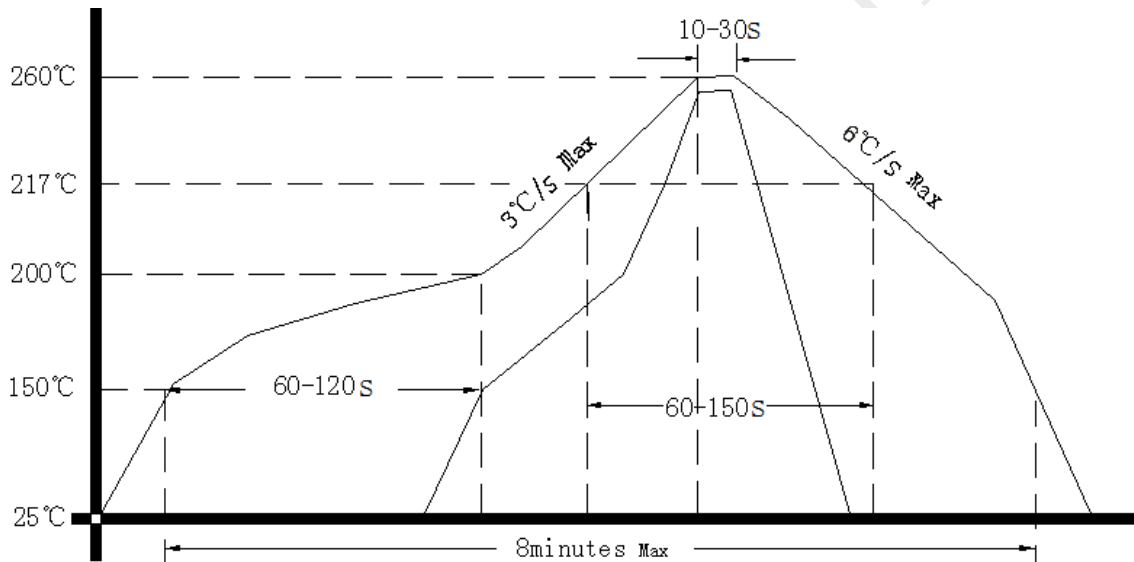
- Note1:** Tolerance  $\pm 0.20\text{mm}$  without mark
- Note2:** The first two xx representative: week  
After two xx representative: year
- Note3:** Referential Weight 7.8g
- Note4:** NC is not connect



### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



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

