

Travelling Merchant: _____

DATASHEET

Standard: **O23B-J413-20.00MHz-I**

P/N: _____

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2021.11.18			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2021.07.27
1.1	The “Mechanical Structure” changed	<i>Amway</i>	2021.11.18



1. Electrical Parameters

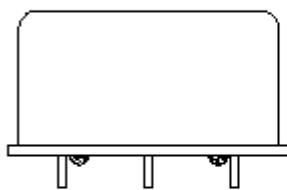
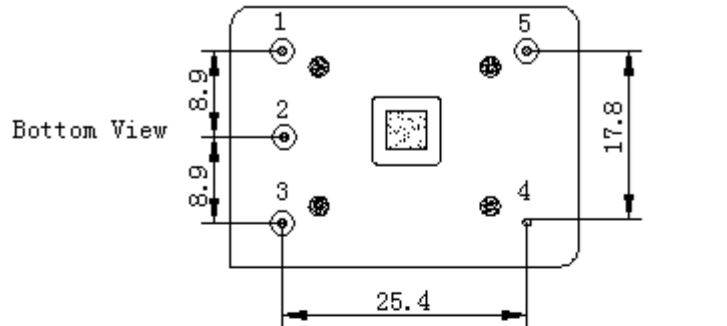
MODEL: O23B-J413-20.00MHZ-I						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	20.00			MHz	
	Output Waveform	Sine wave				
	Level	6		10	dBm	
	Load	50			Ω	
	Harmonics Suppression			-30	dBc	
	Spurious Suppression			-60	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-1		+1	$\times 10^{-9}$	T_A varied from -30°C to 75°C , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$, $V_{\text{cc}}=3.3\text{V}$, $V_c=1.65\text{V}$, $O_{\text{load}}=50\Omega$, temperature variable speed less than 2°C per minute.
	Initial Frequency Tolerance	-0.05		+0.05	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_{\text{cc}}=3.3\text{V}$, $V_c=1.65\text{V}$ and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. supply voltage	-0.5		+0.5	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^\circ\text{C}$, V_{cc} varied from 3.13V to 3.47V, $V_c=1.65\text{V}$, $O_{\text{load}}=50\Omega$.
	Frequency Tolerance vs. Load	-0.5		+0.5	$\times 10^{-9}$	5% Load Change Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_{\text{cc}}=3.3\text{V}$, $V_c=1.65\text{V}$, $O_{\text{load}}=50\Omega$.
	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	-0.5		+0.5	$\times 10^{-9}$	V_{cc}, V_c, T_A constant Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_{\text{cc}}=3.3\text{V}$, $V_c=1.65\text{V}$, $O_{\text{load}}=50\Omega$ and after 30 days of operation.
	Aging Tolerance 1 Year	-0.05		+0.05	$\times 10^{-6}$	
Power Supply	Supply Voltage	3.13	3.3	3.47	V	
	Current Consumption			500	mA	@ 25°C
	Current Consumption during warm up			1400	mA	



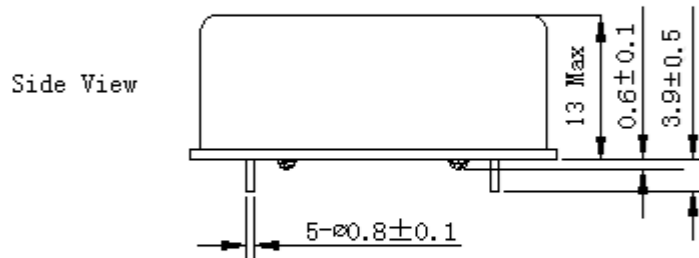
Voltage Control Characteristics	Frequency Tuning Range	-1		-0.7	$\times 10^{-6}$	$V_c=0V$. measurement referenced to $V_c=1.65V$.
		-0.05		+0.05	$\times 10^{-6}$	$V_c=1.65V$. measurement referenced to exactly 20.00MHz.
		+0.7		+1	$\times 10^{-6}$	$V_c=3.3V$. measurement referenced to $V_c=1.65V$.
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100				K Ω
Phase Noise	Phase Noise @25°C		-115	-105	dBc/Hz	10Hz
			-140	-130		100Hz
			-152	-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	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.					



2. Mechanical Structure (mm)



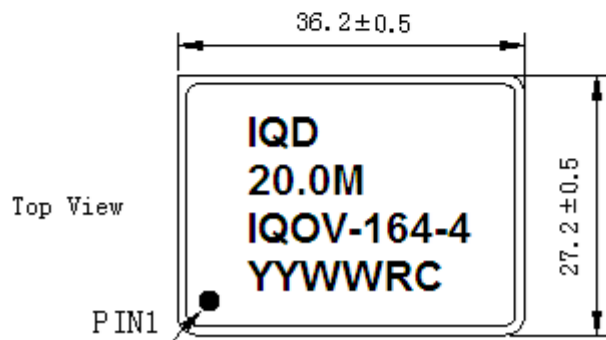
Right View



Side View

PIN FUNCTION

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



Top View

Note1: Tolerance ± 0.2 mm without mark

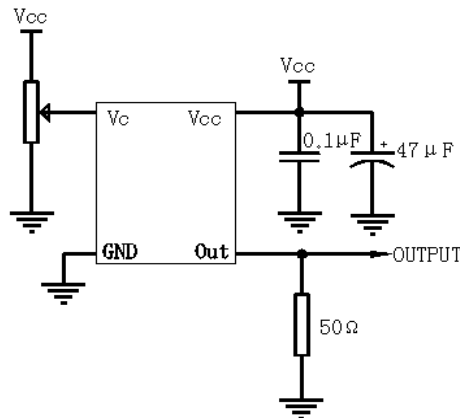
Note2: The YY representative: year
The WW representative: week

Note3: Referential Weight 20.7g

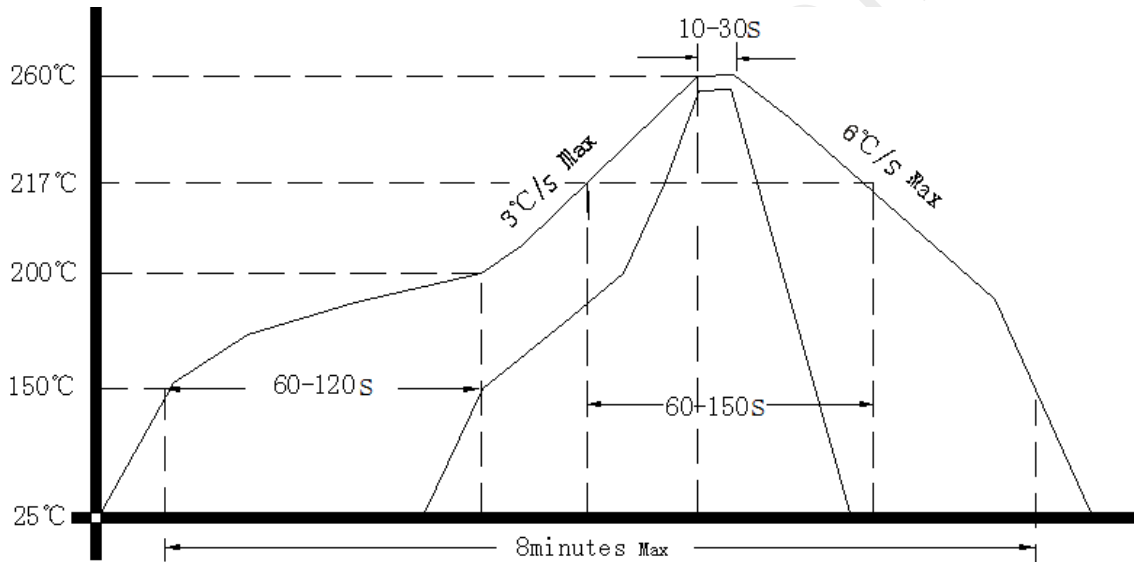
Note4: NC is not connect



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package(mm)

