

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

# DATASHEET

Standard: VC936J-AEAD-122.88MHzP/N: VC-0010

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2016.07.28			

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### Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2009.01.06
2.0	Template Updated	<i>Amway</i>	2012.03.05
2.1	“Mechanical Structure” change	<i>Amway</i>	2014.04.18
2.2	“Mechanical Structure” changed	<i>Amway</i>	2016.07.28



## 1. Electrical Parameters

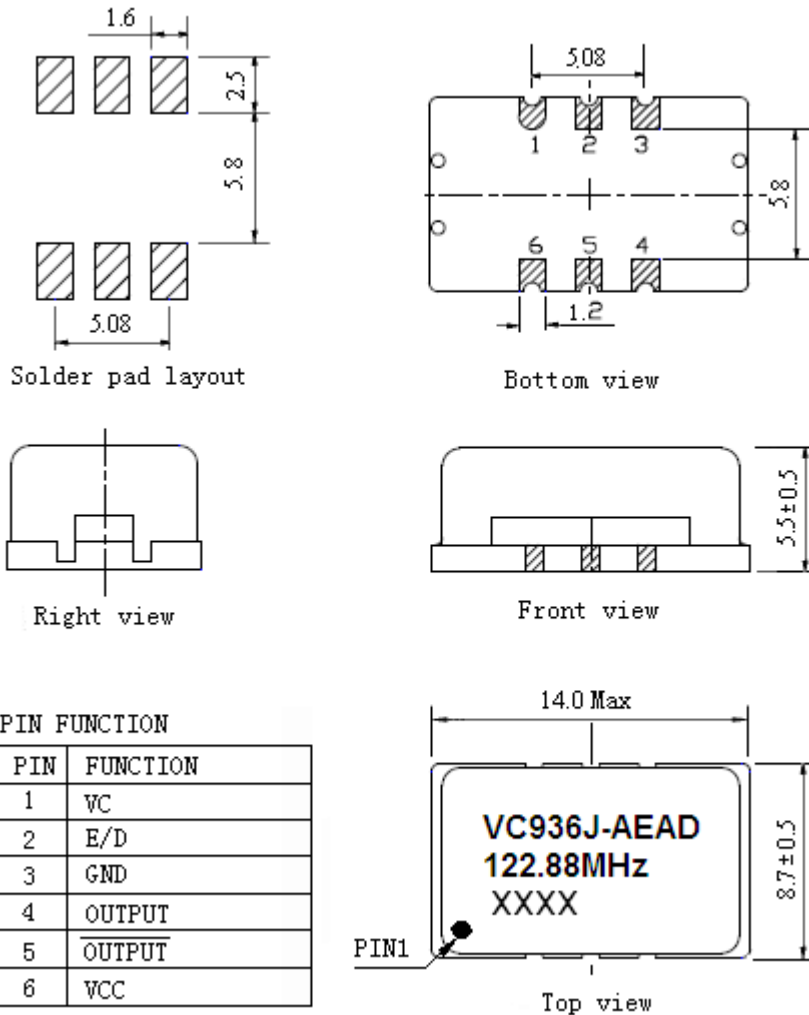
MODEL: VC936J-AEAD-122.88MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	122.88			MHz	
	Output Waveform	LVPECL				
	Output Low Voltage			1.8	V	@25°C, V <sub>cc</sub> =3.3V
	Output High Voltage	2.2			V	@25°C, V <sub>cc</sub> =3.3V
	Duty Cycle	45	50	55	%	@50%, measurement at V <sub>c</sub> =1.65V
	Rise / Fall Time (20%~80%)			1	ns	@25°C
	Load	50			Ω	Connect to V <sub>cc</sub> -2.0V
	Jitter			1	ps	RMS (12KHz ~20MHz)
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-30		+30	× 10 <sup>-6</sup>	T <sub>A</sub> varied from -40°C to 85°C, measurement referenced to frequency observed with T <sub>A</sub> =25°C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.65V, O <sub>load</sub> =50Ω Connect to V <sub>cc</sub> -2.0V, temperature variable speed less than 2°C per minute.
	Initial Frequency Tolerance	-15		+15	× 10 <sup>-6</sup>	Measurement referenced to frequency observed with T <sub>A</sub> = 25°C, V <sub>cc</sub> = 3.3V, V <sub>c</sub> =1.65V within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-5		+5	× 10 <sup>-6</sup>	measurement referenced to frequency observed T <sub>A</sub> =25°C, V <sub>cc</sub> varied from 3.13V to 3.47V, V <sub>c</sub> =1.65V and O <sub>Load</sub> =50Ω Connect to V <sub>cc</sub> -2.0V.
	Frequency Tolerance vs. Load	-3		+3	× 10 <sup>-6</sup>	5% load change measurement referenced to frequency observed with T <sub>A</sub> =25°C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.65V and O <sub>Load</sub> =50Ω Connect to V <sub>cc</sub> -2.0V.
	Aging Tolerance 1 Year	-3		+3	× 10 <sup>-6</sup>	T <sub>A</sub> =25°C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.65V and after 1h of operation.
Power Supply	Current Consumption			90	mA	@25°C, O <sub>Load</sub> =50Ω Connect to V <sub>cc</sub> -2.0V.
	Supply Voltage	3.13	3.3	3.47	V	



Voltage Control Characteristics	Frequency Tuning Range	-200		-75	$\times 10^{-6}$	$V_c=0V$ . measurement referenced to $V_c=1.65V$
		-15		+15	$\times 10^{-6}$	$V_c=1.65V$ . measurement referenced to exactly 122.88MHz
		+75		+200	$\times 10^{-6}$	$V_c=3.3V$ . measurement referenced to $V_c=1.65V$
	Linearity			15	%	
	Slope	Positive				
	Input Impedance	1				MΩ
Phase Noise	Phase Noise		-70	-65	dBc/Hz	10Hz
			-100	-95		100Hz
			-125	-120		1KHz
			-145	-140		10KHz
			-148	-143		100KHz
			-150	-145		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; ANSI/ESDA/JEDEC JS-001-2010.				
	Moisture Sensitivity Level	Level 2.				
	Vibration	Test Condition: 0.75mm ;acceleration:10g;10Hz~2000Hz, one cycle per 30 min, test 2 hour. (3 times for each 3 directions X , Y , Z), IEC 68-2-06 Test Fc.				
Shock	100g; 6ms; half sine wave (3 times for each 3 directions X , Y , Z ),IEC 68-2-27 Test Ea/Severity 50A.					



## 2. Mechanical Structure (mm)



Note1: The first two xx representative: week  
After two xx representative: year

Note2: Referential Weight 1.4g

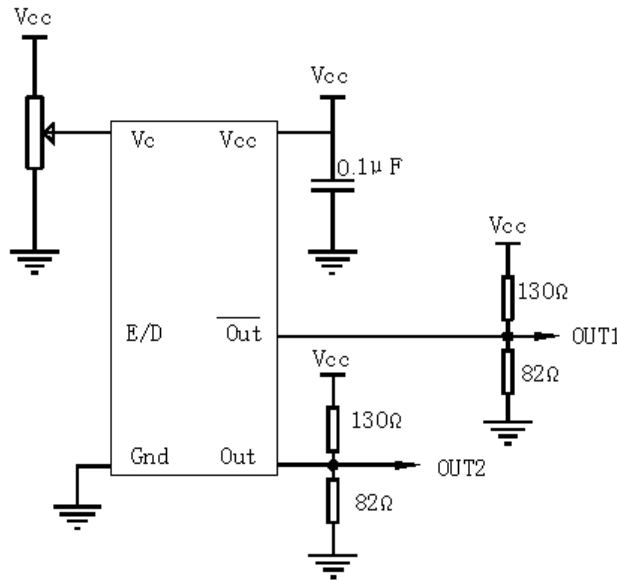
Note3: Enable:  $V_{il} \leq V_{cc} - 2.0V$

Disable:  $V_{ih} \geq V_{cc} - 1.025V$

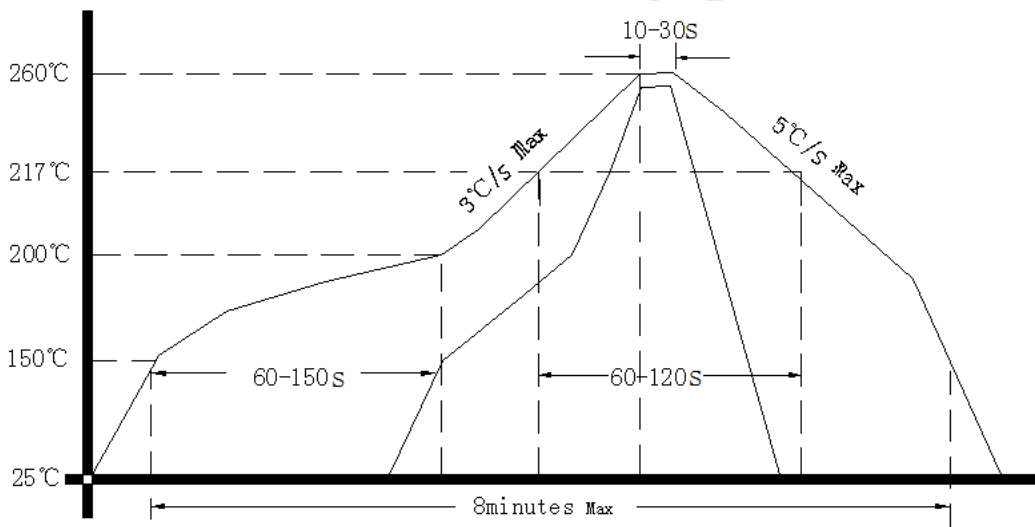
E/D	OUT1	OUT2
low level, open	data	data
high level	no data	no data



### 3. Test Circuit



### 4. Reflow Soldering Curve (RoHS)



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

