Customer Code : _____

DATASHEET

DAPU P/N: **CM19F-K129-24.00MHz**

Customer P/N: _____

DAPU			Customer Approval
Drew	Audited	Approved	
Amway.wei	Steven.Sun	James.Liu	
Date: 2015.07.21			Stamp, please! Thanks!

Guangdong Dapu Telecom Technology Co.,Ltd

Bldg 16,.N.Ind.Zone,SSL Industry Park, Dongguan City, Guangdong Province, China

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Amway	2015.07.21

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1、Electrical Parameters

1 PPS Reference Input	Parameters	Min.	Typ.	Max.	Unit.	Test Condition
	Waveform		HCMOS			
	High-Level Output Voltage (V_{IH})	2.7			V	50Ω
	Low-Level Output Voltage (V_{IL})			0.4	V	
	Pulse Width	10			μs	
	Connector		Pin 10			
State Input	Parameters	Min.	Typ.	Max.	Unit.	
	Lock Enable	2.7			V	<5mA Load
	Lock Disable			0.4	V	<5mA Load
	Connector		Pin 8			
RF Output	Parameters	Min.	Typ.	Max.	Unit.	Test Condition
	Nominal Frequency		24.00		MHz	
	Waveform		HCMOS			
	High-level Output voltage (V_{OH})	2.7			V	<5mA Load
	Low-level Output voltage (V_{OL})			0.4	V	<5mA Load
	Rise/Fall Time			8	ns	<5mA Load
	Duty Cycle	45	50	55	%	<5mA Load
	Accuracy	-1		1	$\times10^{-12}$	24 hour average when locked to 1 PPS
	Short-term stability			2	$\times10^{-11}$	Temperature stability, no EMI\EMC or other interference , test after power for 1 hour ref. to 25℃; 1s, using PN9000 equipment.
	Aging Tolerance Per Day	-0.2		+0.2	$\times10^{-9}$	Vcc, TA constant measurement referenced to frequency observed with TA=25℃,Vcc=5.0V, in FREE RUN condition and after 30 days of operation.
	Aging Tolerance 1 Year	-0.01		+0.01	$\times10^{-6}$	
	Phase noise (All conditions)		-118		dBc/Hz	10Hz
			-138			100Hz
			-148			1KHz
			-150			10KHz
			-150			100KHz
			-150			1MHz
	Connector		Pin 14			

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Holdover Capability	Holdover Time	Min.	Typ.	Max.	Unit.	
	24 hours	-1.5		+1.5	μs	ΔT=±2℃, 24 hours holdover after turn on 7days and lock 3days. Temperature variable speed less than 1℃per minute
Supply Voltage	Parameters	Min.	Typ.	Max.	Unit.	
	Supply voltage	4.75	5.0	5.25	V	
	Current consumption			1400	mA	During Warm-up
				600	mA	During steady state operation @25℃
	AC ripple			50	mVpk-pk	10Hz to 1MHz
	Connector	Pin 3				
1 PPS Output Waveform Characteristics	Parameters	Min.	Typ.	Max.	Unit.	
	Waveform	HCMOS				
	High-Level Output Voltage(V_{OH})	2.7			V	50Ω
	Low-level Output voltage (V_{OL})			0.4	V	
	Pulse width	10			μs	
	Connector	Pin 12				
State Output	Parameters	Min.	Typ.	Max.	Unit.	
	Lock	2.7			Vdc	<5mA Load
	Holdover			0.4	Vdc	<5mA Load
	Connector	Pin 5				
Environmental Conditions	Parameter	Conditions				
	Operating temperature	-20℃ to +75℃				
	Storage Temperature	-55℃ to +105℃				
	Storage humidity	30%~80%				
	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	Not humidity sensitive.				
	Vibration	Test Condition: 0.75mm ;acceleration:10g;10Hz～500Hz, one cycle per 30 min, test 2 hours. (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 (℃)	-10~35℃				

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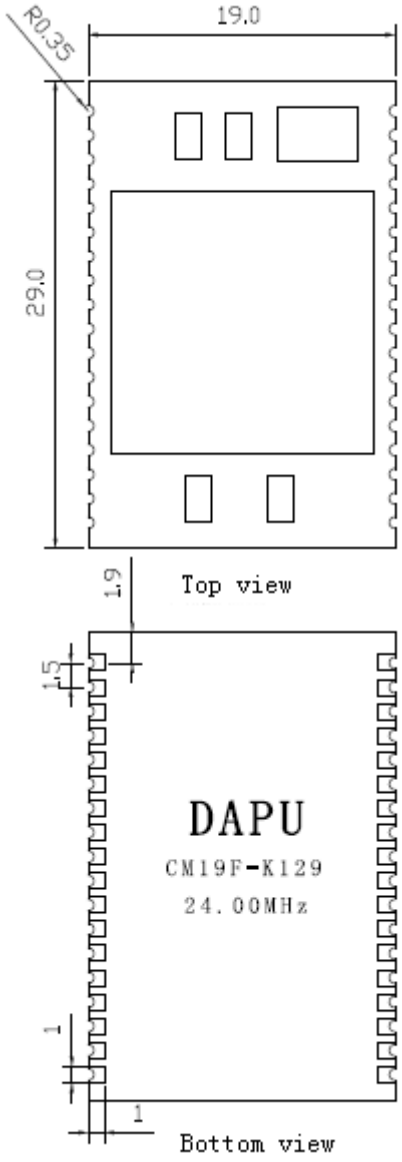
2、Mechanical Structure(mm)



Note: Tolerance ±0.2mm without mark

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PIN DEFINITION			
PIN	**Name**		**DESCRIPTION**
3	Vcc +5.0Vdc		Power supply input,4.75V to 5.25V.
5	Lock OUTPUT		State output. Output high level when the work state is Run2(See section 4),others low level.
9	RX INPUT		Asynchronous serial data input.9600-N-8-1.
11	TX OUTPUT		Asynchronous serial data output(See section 5).9600-N-8-1.
8	State INPUT	H: Lock Enable	The work state is set to normal operation when the state input is high.
		L: Lock Disable	The work state is set to hold over when the state input is low.
15~28,30,32,35	NC		Not connected.
10	1PPS INPUT		1PPS reference input.
12	1PPS OUTPUT		The clock module 1PPS output.
14	10MHz OUTPUT		Frequency output.
1,2,6,7	NC		Not connected.
4,11,13,29,31,33,34,36	GND		GND

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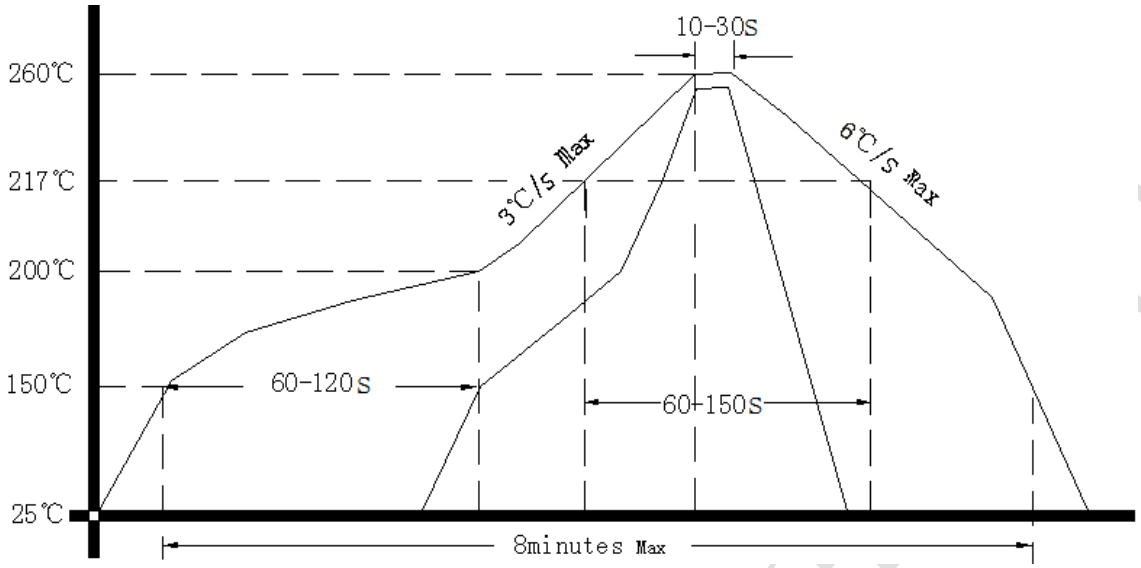
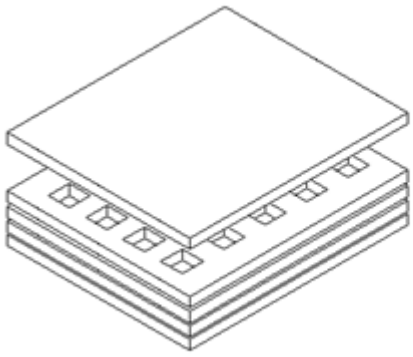
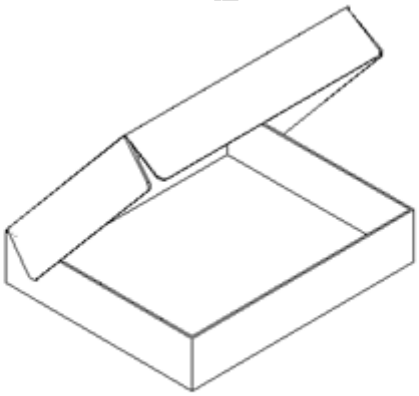
3、Reflow Soldering Curve (RoHS)



4、Package（mm）



Buffer material



Cardboard
Max 20pcs. circulator