Travelling Merchant:_____

DATASHEET

Standard: **CM55F-K119-10.00MHz**

P/N: **CM-0019**

Plot			The Label
Drew	Audited	Approved	
Amway.wei	Steven.Sun	James.Liu	
Date: 2011.06.22			Stamp, please! Thanks!

Guangdong Dapu Telecom Technology Co.,Ltd

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	Amway	2011.06.22

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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.	Test Condition
	Lock	2.7			V	<5mA Load
	Holdover			0.4	V	<5mA Load
	Connector	Pin 8				
RF Output	Parameters	Min.	Typ.	Max.	Unit.	Test Condition
	Nominal Frequency	10.00			MHz	
	Waveform	Sine wave				
	Level	6		10	dBm	
	Load	50			Ω	
	Harmonics Suppression			-30	dBc	
	Spurious Suppression			-60	dBc	
	Accuracy	-1		+1	$\times10^{-12}$	24 hours average when locked to 1 PPS
	Short-term Stability			0.02	$\times10^{-9}$	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	$\times10^{-9}$	V_{cc},T_A constant measurement referenced to frequency observed with T_A=25℃,V_{cc}=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	-113	dBc/Hz	10Hz
			-138	-133		100Hz
			-148	-143		1KHz
			-150	-145		10KHz
			-150	-145		100KHz
			-150	-150		1MHz
	Connector	Pin 14				

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Holdover Capability	Holdover Time	Min.	Typ.	Max.	Unit.	Test Condition
	24 Hours	-1.5		+1.5	μs	ΔT=±2℃, 24 hours holdover after turn on 7days
Supply Voltage	Parameters	Min.	Typ.	Max.	Unit.	Test Condition
	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.	Test Condition
	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.	Test Condition
	Lock	2.7			V	<5mA Load
	Holdover			0.4	V	<5mA Load
	Connector	Pin 5				
Serial Interfaces	Parameters	Min.	Typ.	Max.	Unit.	Test Condition
	Rx high-level Input Voltage (VH)	2.7			V	
	Rx low-level Input Voltage (VL)			0.4	V	
	Tx high-level Output Voltage (VH)	2.7			V	
	Tx low-level Output Voltage (VL)			0.4	V	
	Serial Protocol	9600-N-8-1				
	Connector	Pin6 and Pin7				
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.				

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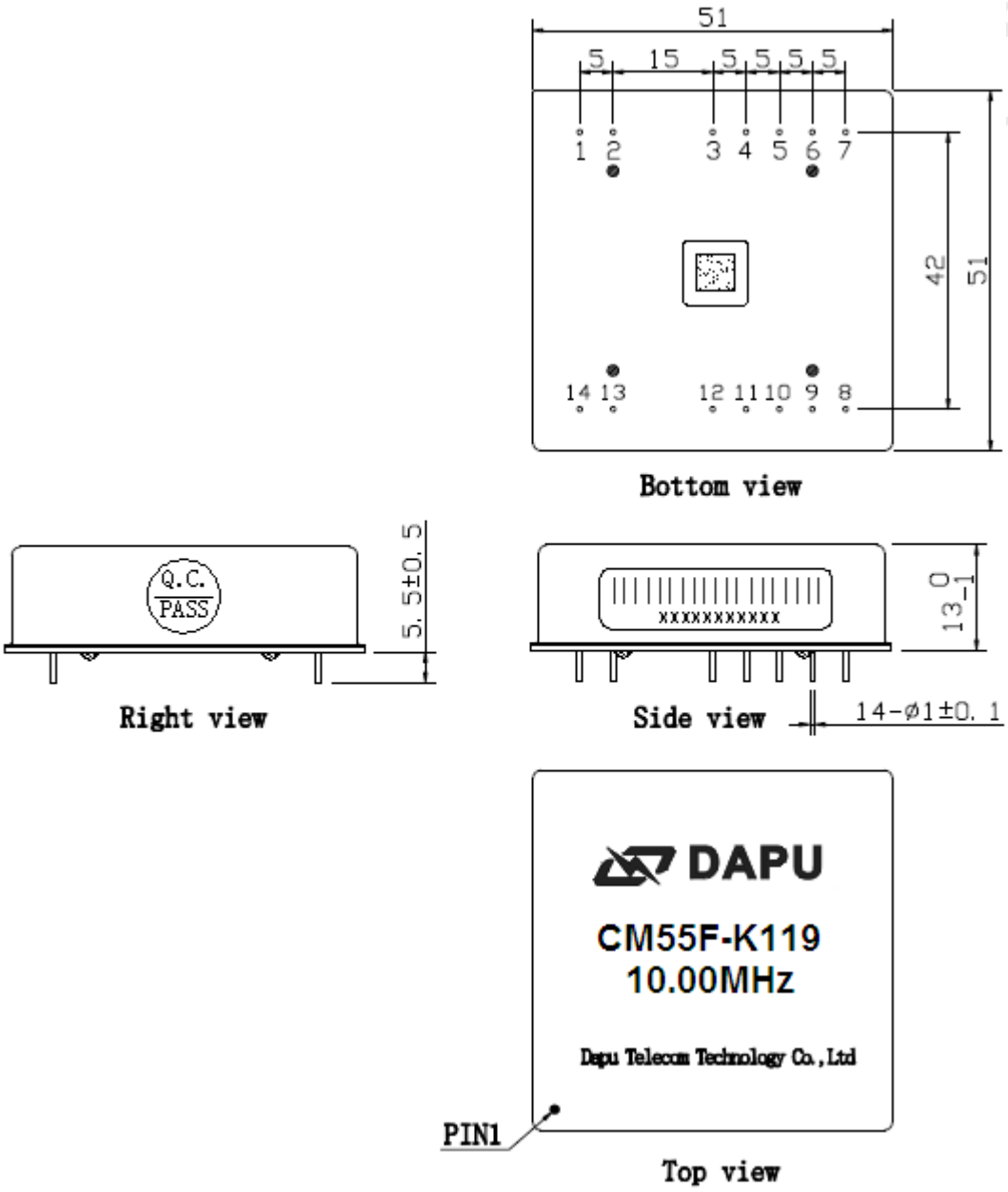
Environmental Compliance	Parameter	Conditions
	Mechanical Shock	MIL-STD-2002, Method 213 condition B
	Mechanical Vibration	MIL-STD-2002, Method 204 condition A
	Resistance To Solvents	MIL-STD-2002, Method 215

2. Mechanical Structure(mm)



Note1: Tolerance ±0.2mm without mark

Note2: Referential Weight 52±5g

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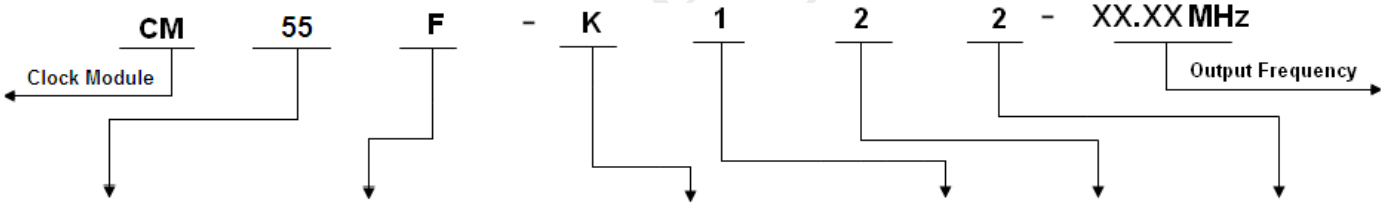
PIN DEFINITION			
PIN	**NAME**		**DESCRIPTION**
3	VCC		Power supply input, 4.75V to 5.25V.
5	State OUTPUT		State output. Output high level when the CM is locked and stable, others low level.
6	RX INPUT		Asynchronous serial data input. 9600-N-8-1.
7	TX OUTPUT		Asynchronous serial data output.9600-N-8-1.
8	State INPUT	H: Lock	The work state is set to normal operation when the state input is high.
		L: Holdover	The work state is set to hold over when the state input is low.
10	PP1S INPUT		PP1S reference input.
12	PP1S OUTPUT		The clock module PP1S output .
14	10MHz OUTPUT		10MHz OCXO frequency output .
1、2、9	NC		Not connected.
4、11、13	GND		GND

3. Coding Rules



55	50×50 (mm)
66	60×60 (mm)
65	65×65 (mm)

A	19mm External GPS Receiver
B	19mm internal GPS Receiver
F	13mm External GPS Receiver
G	13mm internal GPS Receiver

A	±1.5μs	0℃~60℃	24hours
B	±3.0μs	0℃~60℃	24hours
C	±8.0μs	0℃~60℃	24hours
D	±1.5μs	ΔT=±5℃	24hours
E	±3.0μs	ΔT=±5℃	24hours
F	±8.0μs	ΔT=±5℃	24hours
G	±1.5μs	ΔT=±5℃	8hours
H	±3.0μs	ΔT=±5℃	8hours
I	±8.0μs	ΔT=±5℃	8hours
K	±1.5μs	ΔT=±2℃	24hours
M	±3.0μs	ΔT=±2℃	24hours
N	±8.0μs	ΔT=±2℃	24hours
O	±1.5μs	ΔT=±2℃	8hours
P	±3.0μs	ΔT=±2℃	8hours
Q	±8.0μs	ΔT=±2℃	8hours

1	5.0V

1	Sine Wave
2	HCMOS

1	0℃~80℃
2	-10℃~70℃
9	-20℃~75℃

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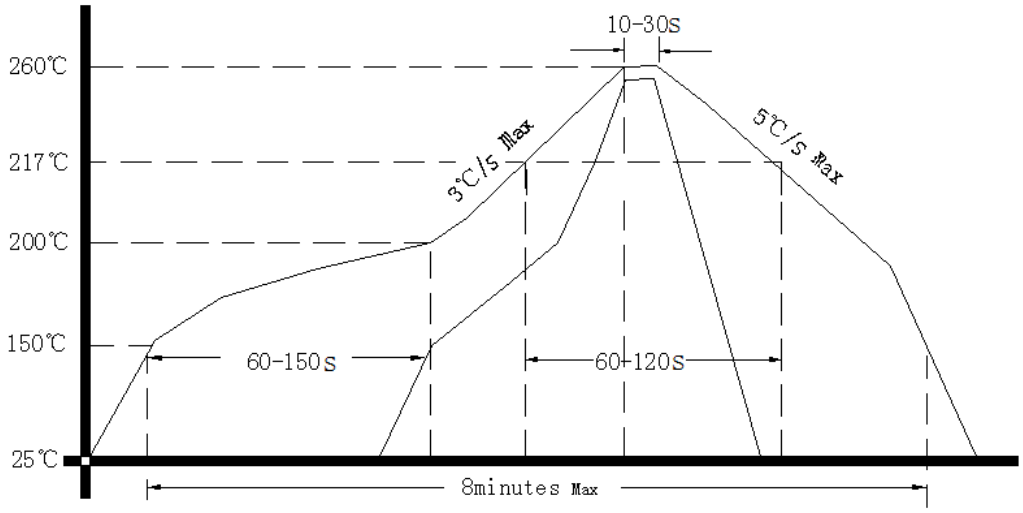
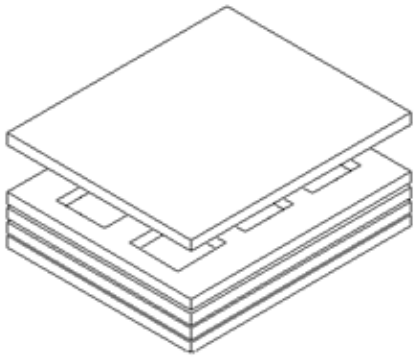
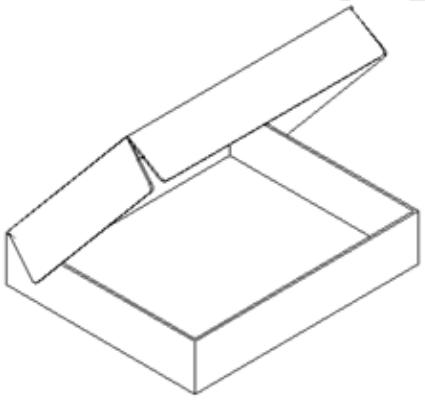
4. Reflow Soldering Curve (RoHS)



5. Package（mm）



Buffer material



Cardboard
Max 6pcs. circulator