CUSTOMER APPROVAL SHEET

CUSTOMER：

CUSTOMER P/N：

DESCRIPTION：

OUR ITEM： **PIC1207CMT-220M**

QUANTITY： **10 PCS**

DATE： **2020/12/30**

SPECIFICATION

	" ✓ "	CUSTOMER'S SIGNATURE	NOTE
FULL APPROVAL			
CONDITIONAL APPROVED			
REJECTED			

DRAWN BY	CHECKED BY	APPROVED BY
Mandy	Nady	DEMI

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Lead-Free RoHS compliant

Shielded Power Inductor

.Revision History

Part No. : PIC1207CMT-220M

REV. No	Revised Date	Reason and Detail of Revision	Prepared	Checked	Approved
1.0	2020/12/30	First Edition	Mandy	Nady	DEMI

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.Feature

1.Low profile very effective in space-conscious applications.

2.Low resistance and high energy storage.

.Applications

VTR, OA equipment, digital camera, LCD TV,Notebook PC, portable communication equipments, DC/DC converters, power supply etc.

.Product Identification

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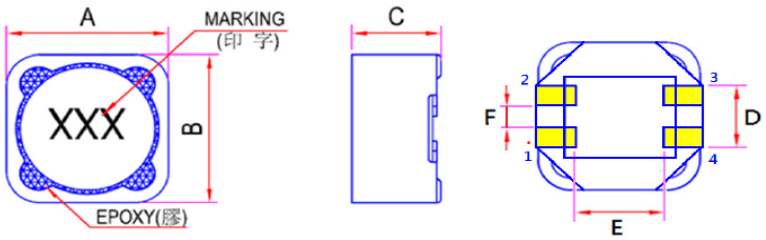
1 2 3 4 5

Series Name	Dimensions (W x L x H)		Internal Code	
PIC	1207	12.0 x 12.0 x 8.0 mm	CMT	4Pad,Stagger,Tube

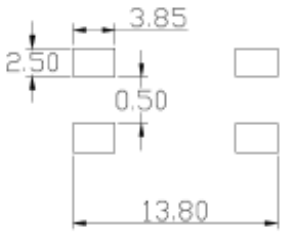
Inductance		Tolerance	
220	22μH	K	10%
		M	20%

.Shape and Dimension



※ 線包外加套管。

.Recommended PCB Pattern



Dimensions(mm)

Part No.	A	B	C	D	E	F
PIC1207CMT-220M	12.00	12.00	8.00	5.00	6.50	1.60
	± 0.4	± 0.4	Max.	Ref.	Ref.	Ref.

.Electrical Characteristics

Test Item	Inductance (μH) N1=N2	DCR (mΩ) N1=N2	Rated Current (A) N1=N2	Test Frequency
PIC1207CMT-220M	22	92	6.2	100 KHz / 0.1V
	± 20%	Max.	Max.	

Note

1.Rated Current：Lower Inductance by 25 %

2.Test Instrument：L(TH2816B)、DCR(VR131)、R.Curremt(TH2816B&VR7210)

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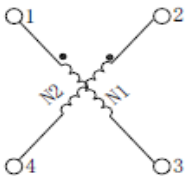
.Equivalent Circuit Schematic

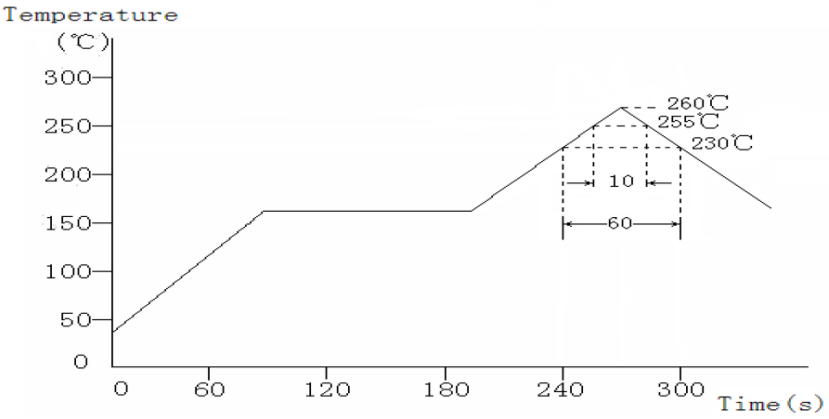


.Rating

1.Operating Temperature : -25℃ ~ +85℃

2.Storage conditions : -25℃ ~ +85℃

.Reflow Soldering Heat Endurance

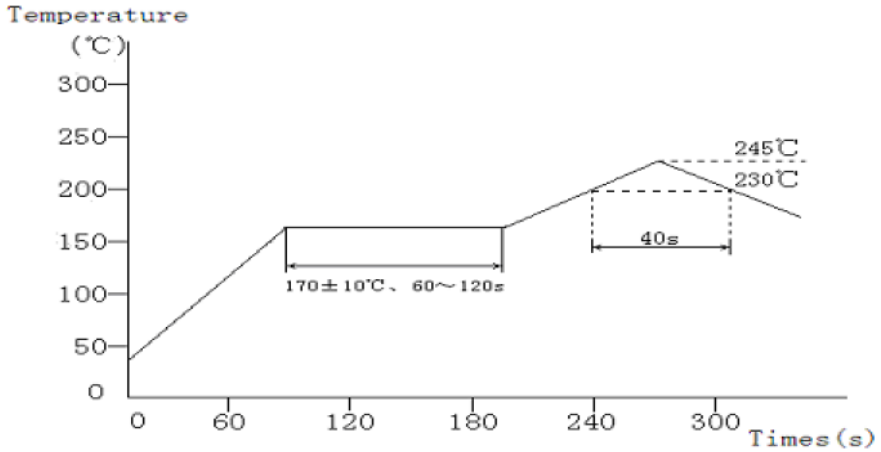


No mechanical and electrical defects are found after testing based on the above profile and keeping under the conditions of room temperature and humidity for 2 hours.

Twice reflow test is acceptable with the test interval remaining 1 hour under the normal conditions.

The reflow test profile may vary with the testing instruments.

.Recommended Reflow Conditions



The recommended reflow profile is based on the testing instruments used. Solder ability will depend on the testing equipments, reflow conditions, testing method, etc. So it is necessary to make a confirmation of them when the reflow conditions are set up.

However halogen lamp shall be used, side heat will be beyond range of resistance heat, so we can't recommend it.

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.Test Data

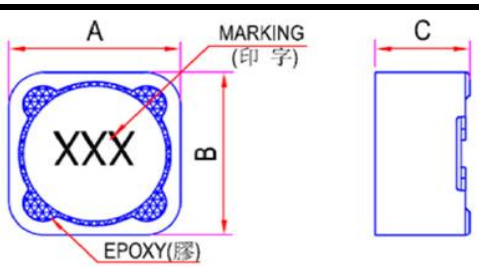
Customer		Data	2021/3/2
Description	PIC1207CMT-220M	Quantity	10 PCS

Test Item	L(N1=N2) (μH)	DCR(N1=N2) (mΩ)		A (mm)	B (mm)	C (mm)			
SPEC	22.0	92		12.0	12.0	8.00			
Upper	26.4	92		12.3	12.3	8.00			
Lower	17.6	-		11.7	11.7				
Tolerance	20%	Max		0.3	0.3	Max			
Test Frequency	100KHz / 0.1V								
1	23.46	77.5		12.04	12.02	7.72			
2	22.50	76.8		12.02	12	7.74			
3	22.56	75.3		12.02	12	7.78			
4	22.58	77.7		12.04	12.02	7.74			
5	23.65	75.6		12.02	12.02	7.82			
6	22.42	76.6		12.00	12	7.88			
7	22.58	76.2		12.02	12.04	7.76			
8	22.50	77.2		12.02	12.02	7.9			
9	22.56	77.4		12.02	12.02	7.86			
10	22.48	76.5		12.04	12	7.9			
Average	22.73	76.68		12.02	12.01	7.81			
Max	23.65	77.70		12.04	12.04	7.90			
Min	22.42	75.30		12.00	12.00	7.72			
Range	1.23	2.4		0.04	0.04	0.18			
Test Condition	Temp	25 ℃		R.H.		62%			

Material	SPEC	Test Instrument
Core		1. LCR : TH2816B
Test Wire		2. DCR : VR131
Test Winding		3. IDC : TH2816B&VR7210

Note.

Configuration



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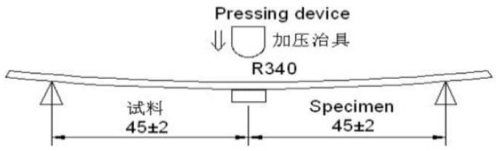
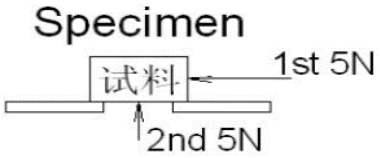
.Reliability and Test Conditions

ITEM	Conditions	Specification
Temperature Drift	To be measured in the range of -40℃ to 125℃.	Inductance temperature coefficient 2000 ppm/℃ or less
Storage Temperature	With taping.	- 40℃ ~ +125℃
Operating Temperature	Including self temperature rise.	- 40℃ ~ +125℃
Bending Test	Apply pressure gradually in the direction of the arrow at a rate of about 0.5mm/s until bent depth reaches 3mm and hold for 30±5s.  Board : 40 X 100 mm Thickness : 1.0mm	Change from an initial value L : within±10%
Adhesion Strength	A static load using a R0.5 pressing tool shall be applied the arrow and to the body of the specimen in the direction of the arrow and shall be hold for 60±5s. Measure after removing pressure.  	Change from an initial value L : within±10%
Vibration	The specimen shall be subjected to a vibration of 1.5mm amplitude, sweep frequency 10~55Hz (10Hz to 55Hz to 10Hz in a period of one minute) for 1 h in each of 3(X,Y,Z) axes.	Change from an initial value L : within±10%
Mechanical Shock	Peak acceleration: 981 m/S2 Duration of pulse : 6ms 3 times in each of 3(X,Y,Z)axes. The specimen must be fixed on test board. Three successive shock shall be applied in the perpendicular direction of each surface of the specimen.	Change from an initial value L : within±10%

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.Reliability and Test Conditions

ITEM	Conditions	Specification
Free fall Test	The specimen must be fixed on test board. It must be equipped with instruments of which weight is 500g. Then it shall be fallen freely from 1m height to rigid wood 3 times in each of three axes.	Change from an initial value L : within±10%
Solderability	Terminals shall be immersed for 5 to 10 seconds in flux at room temperature. Dip sample into solder bath containing molten solder at 245±5℃ for 3±0.5 seconds.	New solder shall cover 90% minimum of the surface immersed.
Dielectric Strength	100V DC shall be applied for 60s between the terminal and the core.	Without damage.
Resistance to Soldering Heat	Test method : Reflow soldering method Preheat 150~180℃ 90±30s Peak temp 250(+ 5,-0)℃ (230℃min ,30±10s) The specimen shall be subjected to the reflow process under the above condition 2 times. Test board shall be 0.8mm thick. Base material shall be glass epoxy resin. Measurement The specimen shall be stored at standard atmospheric conditions for 1h in prior to the measurement.	Change from an initial value L : within±10%
Insulation Resistance	100V DC shall be applied between the terminal and the core.	100mΩ or more.
Low Temperature	The specimen shall be stored at a temperature of -40±3℃ for 500 ±12h. Then it shall be stabilized under standard atmospheric conditions for 1h before measurement. Measurement shall be made within 1h.	Change from an initial value L : within±10%

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.Reliability and Test Conditions

ITEM	Conditions	Specification
Dry Heat	The specimen shall be stored at a temperature of 125 ± 2℃ for 500± 12h. Then it shall be stabilized under standard atmospheric conditions for 1h before measurement. Measurement shall be made within 1h.	Change from an initial value L : within±10%
Dump Heat	The specimen shall be stored at a temperature of 60±2℃ with relative humidity of 90 ~ 95% for 500 ± 2h. Then it shall be stabilized under standard atmospheric conditions for 1h before measurement. Measurement shall be made within 1h.	Change from an initial value L : within±10%
Temperature Cycle	The specimen shall be subjected to 500 continuous cycles of temperature change of -40℃ for 30 min and 125℃ for 30 min with the transit period of 2min or less. Then it shall be stabilized under standard atmospheric conditions for 1h before measurement. Measurement shall be made within 1h.	Change from an initial value L : within±10%

.Standard atmospheric conditions

Unless otherwise specified, the standard range of atmospheric conditions in making measurements and test as follows.

1. Ambient temperature : 5℃ to 35℃
2. Relative humidity : 45% to 85%
3. Air pressure : 86kPa to 106kPa

If more strict measurement is required, measurement shall be made within following limits.

1. Ambient temperature : 20±2℃
2. Relative humidity: 65±5%
3. Air pressure: 86kPa to 106kPa

.Standard atmospheric conditions

We confirm that our products and our production process accord with "rule of RoHS".

All mater used in this product are registered material under the law concerning the examination and Regulation of Manufacture of Chemical Substances.

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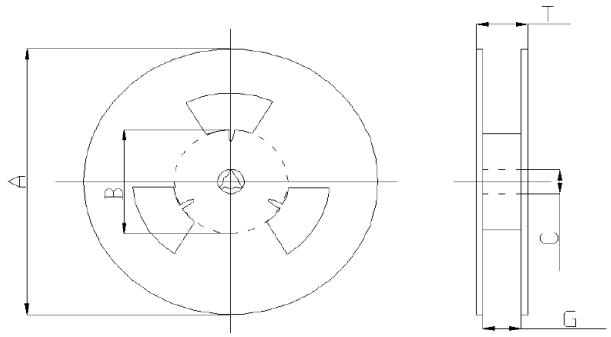
.Packing Specifications

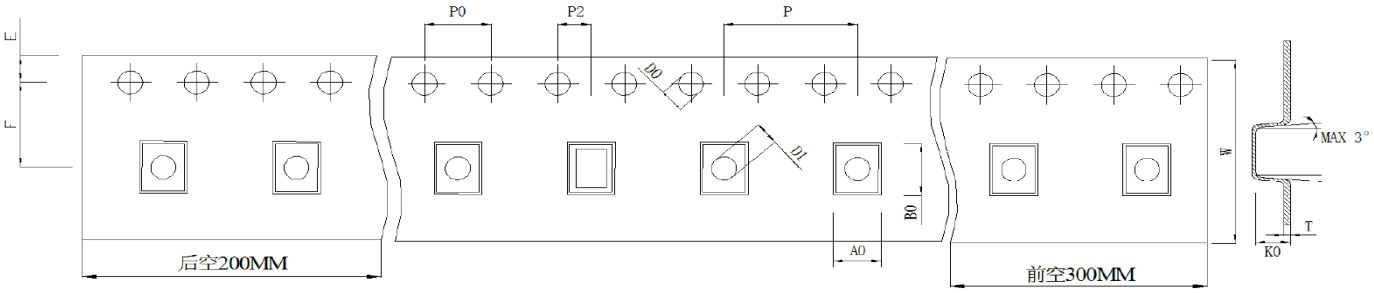
1.Reel Dimension



Dimensions(mm)

Item	A	B	C	G	T
13"x24	330	100	13.0	24.5	28.5

2.Taping Dimension

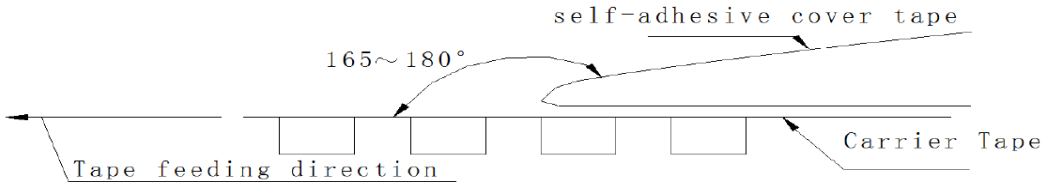


Dimensions(mm)

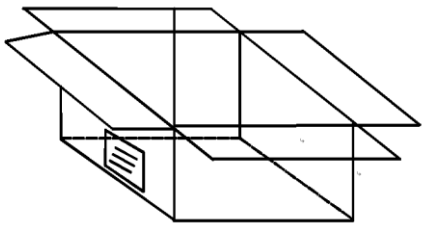
Item	W	A0	B0	K0	E	F	P	P0	P2	D0	D1	T
24mm	24	12.30	12.30	8.05	1.75	11.5	16.0	4.0	2.0	1.50	1.50	0.40
	±0.3	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.3	±0.05

3.Tape Peel off Strength

The force to tear off cover tape: 10~130g.f



4.Packaging Carton



Reel Packing Unit	Inner Box Packing	Carton Packing Unit
500 PCS / Reel	1000 PCS / Reel	2000 PCS / Box