

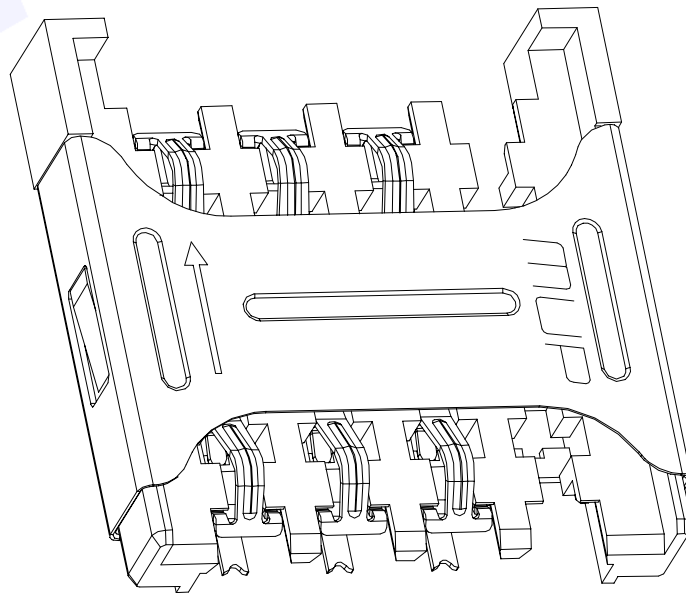
SAMPLE APPROVAL**Model No.: MUP-C790****Revision: 1.0****Issue Date: Oct.10.2013****MUP INDUSTRIAL CO., LTD****LingWu Industrial Park, Junzibu, Guanlan Street, Baoan District Shenzhen, China****TEL: 0755-29673656/57/58****FAX: 0755-29673655****E-Mail: sales@mupconnector.com****URL: [Http:// www.mupconnector.com](http://www.mupconnector.com)**

TABLE OF CONTENTS

1 INTRODUCTION

- 1.1 General
- 1.2 Features
- 1.3 Applications

2 TECHNICAL CHARACTERISTICS

- 2.1 General Characteristics
- 2.2 Electrical Characteristics
 - 2.2.1 Data contact
- 2.3 Mechanical Characteristics
- 2.4 Solder ability
- 2.5 Environmental Characteristics

3 INTERFACE

- 3.1 Signal Interface
- 3.2 Micro SIM Card Contact Location(ETSI.TS.102.221)
- 3.3 Recommended IR Reflow Condition

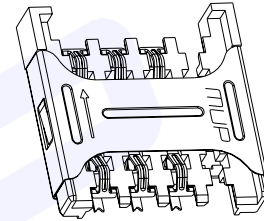
4 MECHANICAL OUTLINE DRAWING

5 PACKING INFORMATION

1. INTRODUCTION

1.1 General

The C790 is in strict accordance with
ETSI.TS.102. 221 international recognized standard,
It is designed for high performance and
flexibility to give prospective customers
a quick applications of the individual devices in their
product series, Other kinds of models are optional,
You need is our goal.



1.2 Features

- ◆ ETSI.TS.102.221 Standard Micro SIM Card
- ◆ Fast reaction capacity
- ◆ Broad application domain
- ◆ The superior performance
- ◆ Ideal stable performance

1.3 Applications

- ◆ Access Control Terminal
- ◆ Terminal identification module
- ◆ Telecommunication
- ◆ Handset
- ◆ Grasps pos machine
- ◆ Memory dense spoon management special-purpose
- ◆ Other Identification recognition

2. TECHNICAL CHARACTERISTIC

2.1 General Characteristics:

| No. | Items | Standard | Descriptions |
|----------|-------------------|-----------------|--------------------------|
| 1 | Dimensions | | 13.40LX13.40WX2.40H mm |
| 2 | Weight | | Approx. 0.40 ± 0.1 g |
| 3 | Card size | ETSI.TS.102.221 | 25.0×15.0×0.76mm |
| 4 | Contact principle | | Friction technology |
| 5 | Mounting System | | SMT(without post) |
| 6 | Durability | | 5,000 cycles Min. |
| Material | | | |
| 1 | Insulator | | Thermoplastic UL94V-0 |
| 2 | Shell | | SUS |
| 3 | Contact | | Phosphor bronze |
| 4 | Plating | | Gold over nickel |

2.2 Electrical Characteristics: according to standard IEC512

Data Contact

| No. | Items | Standard | Descriptions |
|-----|----------------------------------|-------------|------------------------------|
| 1 | Number of Contacts | | 6 Pins |
| 2 | Contact highly | | 0.70 ± 0.20 mm |
| 3 | Insulation resistance pin to pin | IEC512-2-3a | >1000 MΩ/500 VDC |
| 4 | Rated voltage | | 50V max |
| 5 | Rated current | | 1A max., 10μA min. |
| 6 | Contact resistance | IEC512-2-2a | 50 mΩ typical, 100mΩ max. |
| 7 | Dielectric withstanding voltage | IEC512-2-4a | 500V AC rms 1min.(sea level) |

2.3 Mechanical Characteristics:

| No. | Items | Standard | Descriptions |
|-----|------------------|------------------|--------------|
| 1 | Contact force | | 0.2 ~ 0.5N |
| 2 | Contact location | ETSI.TS.102. 221 | |

2.4 Solder ability:

| No. | Items | Standard | Descriptions |
|-----|-------------|-------------|------------------|
| 1 | Wave | IEC-68-2-20 | Not applicable. |
| 2 | Vapor phase | | 215℃, 30sec.Max |
| 3 | IR re-flow | | 250℃, 5 sec.Max |
| 4 | Manual | IEC-68-2-20 | 370℃, 3 sec.Max. |

2.5 Environmental Characteristics

| No. | Items | Standard | Descriptions |
|-----|-----------------------|------------|----------------------|
| 1 | Operation temperature | | -40℃ ~ +85℃ |
| 2 | Operating humidity | | 10% ~ 95%RH |
| 3 | Storage temperature | | -40℃ ~ +85℃, |
| 4 | Storage humidity | | 10% ~ 95%RH |
| 5 | Thermal shock | IEC68-2-14 | -40℃ ~ +85℃,5 cycles |
| 6 | Damp heat | IEC68-2-3 | 40℃,90%RH,500HR. |
| 7 | Salt-mist | IEC68-2-11 | 35℃,5% NaCl, 24HR |

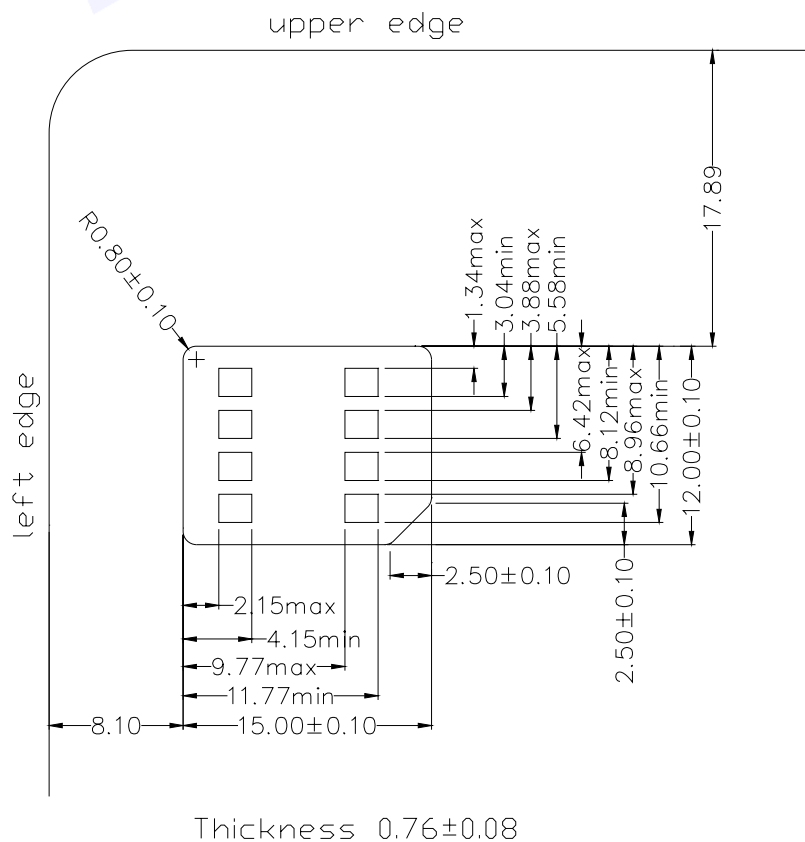
3. INTERFACE

3.1 Signal

Signal interface connections for C790 are shown below.

| Contact No. | Assignment | Description | Remark |
|-------------|------------|---------------------------|--------|
| C1 | Vcc | Power Voltage | |
| C2 | RST | Reset Signal | |
| C3 | CLK | Clock Signal | |
| C4 | RFU | Reserve for future use | |
| C5 | GND | Power and Signal Ground | |
| C6 | Vpp | Programming Voltage | |
| C7 | I / O | Serial Data input/ output | |
| C8 | RFU | Reserve for future use | |

3.2 MicroSIM Card Contact Location(ETSI.TS.102. 221)



3.3 Recommended IR Reflow Condition

temperature profile for lead free soldering
 Sn(3.0~4.0) Ag(0.5~0.9)Cu solder alloy
 temperature measured on solderable termination



| Parameter | Specification |
|--|---------------|
| Average temperature gradient in preheating | 2.5 °C/s |
| Preheating temperature | 150°C~200°C |
| Soak time | 120s~180s |
| Time above 217°C | 40s~120s |
| Peak temperature in reflow | 235°C~250°C |
| Time at peak temperature | 10s~50s |
| Temperature gradient in cooling | Max-5°C/s |

Technical drawing of a 3D printed part, showing top, front, and side views with dimensions.

Top View Dimensions:

- Overall width: 13.40 ± 0.25
- Overall height: 2.40 ± 0.20
- Internal width (between dashed lines): 10.50
- Internal height (between dashed lines): 2.10 Ref.
- Distance from left edge to first internal feature: 2.54
- Distance between internal features: 5.08
- Distance from right edge to last internal feature: 2.54
- Overall width (including internal features): $12.20^{+0.15}_{-0.10}$
- Overall height (including internal features): 13.40 ± 0.25

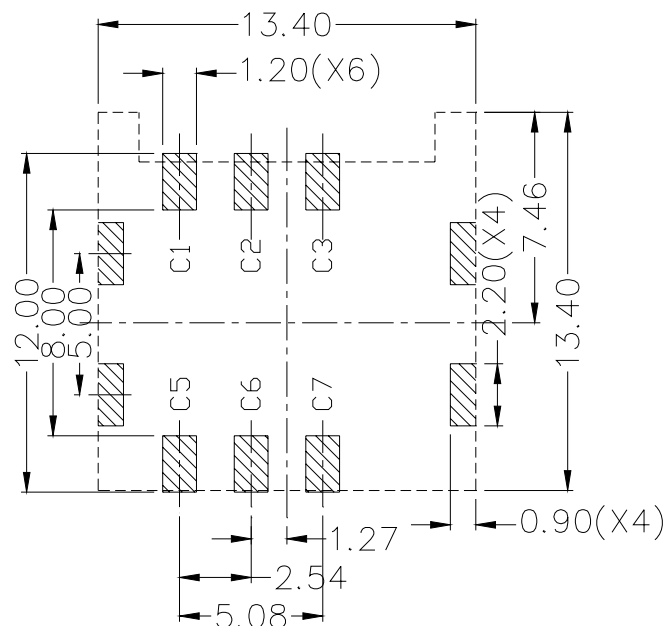
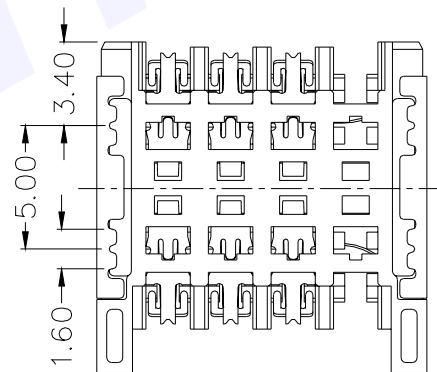
Front View Dimensions:

- Overall height: 0.90
- Internal width (between dashed lines): 10.50
- Internal height (between dashed lines): 2.10 Ref.
- Distance from left edge to first internal feature: 2.54
- Distance between internal features: 5.08
- Distance from right edge to last internal feature: 2.54
- Overall width (including internal features): $12.20^{+0.15}_{-0.10}$
- Overall height (including internal features): 13.40 ± 0.25

Side View Dimensions:

- Overall width: 11.00 ± 0.30
- Internal width (between dashed lines): 7.62 Ref.
- Internal height (between dashed lines): 7.46
- Distance from left edge to first internal feature: 0.70 ± 0.20
- Distance between internal features: 5.08
- Distance from right edge to last internal feature: 0.70 ± 0.20
- Overall width (including internal features): $12.20^{+0.15}_{-0.10}$
- Overall height (including internal features): 13.40 ± 0.25

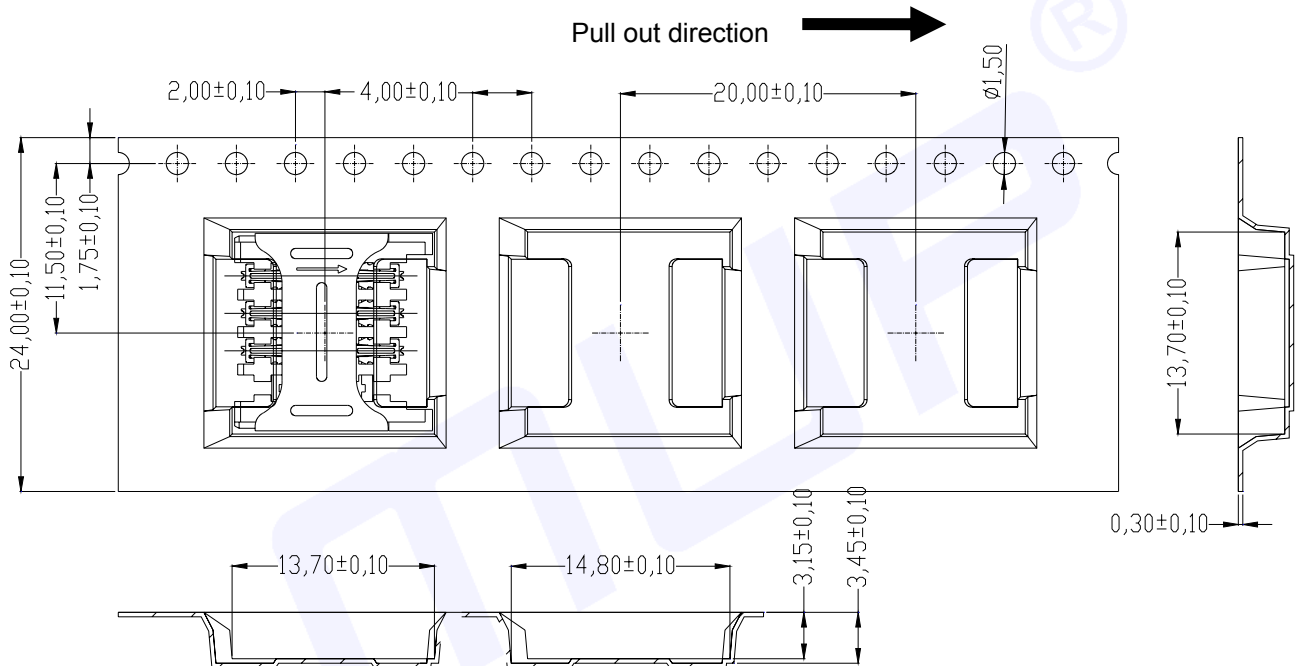
SECTION A-A



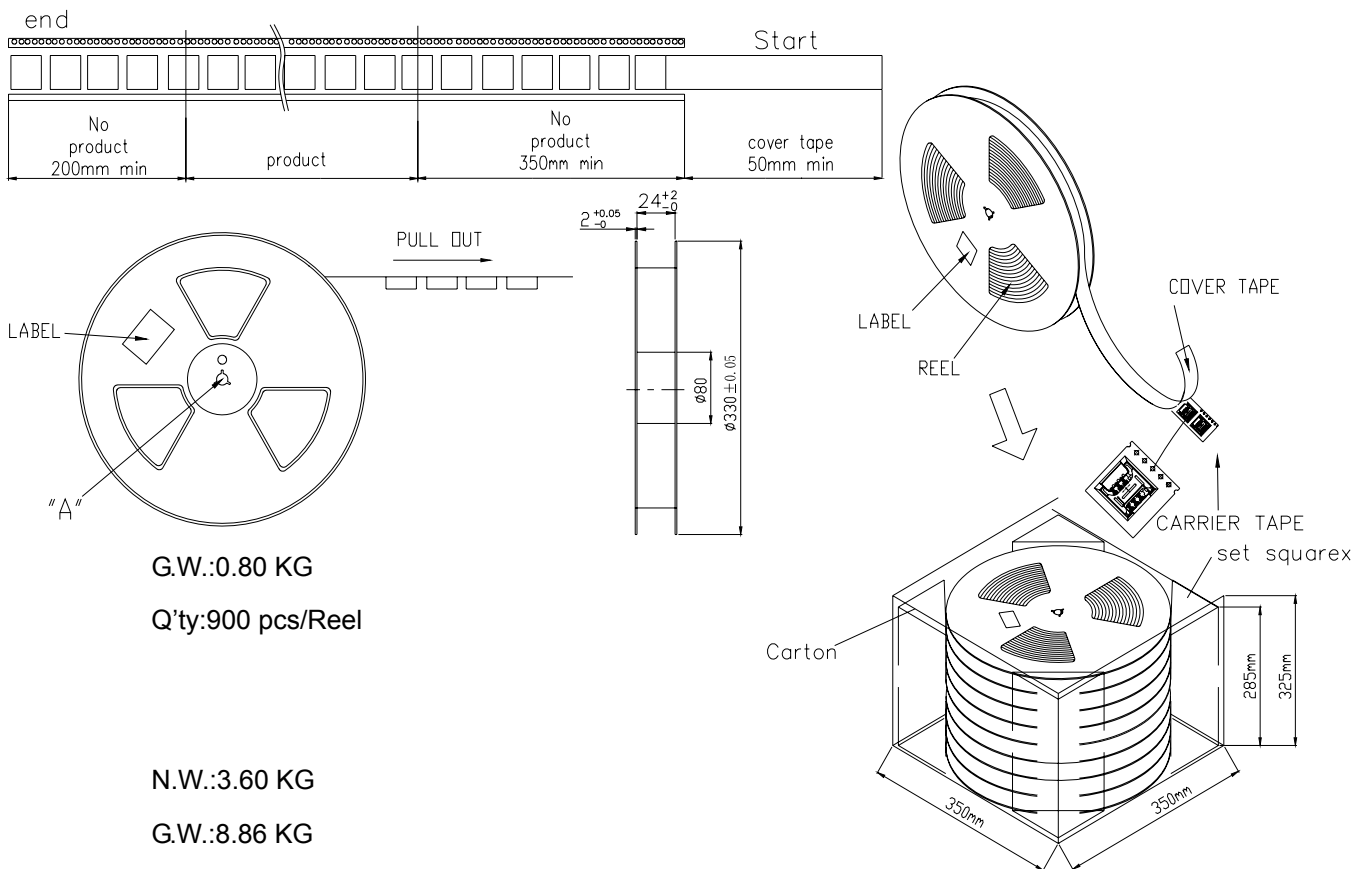
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5. PACKING INFORMATION

5.1 Carrier Dimensions Diagram



5.2 Reel Form Diagram



G.W.:0.80 KG

Q'ty:900 pcs/Reel

N.W.:3.60 KG

G.W.:8.86 KG

Q'ty : 9000 pcs per Carton (10 Reel set in order)

Meas : 35.00L×35.00W×31.50H cm