



明峯電子股份有限公司

品 名 Model Type	Nano SIM Socket Dual Tray Type
料 號 Part No.	KMCX1NSM640541
客戶料號 Customer Part No.	

ISSUE	DATE	WRN	CHKD	APVD	DESCRIPTIONS
	2023.08.18	李阮龍	李阮龍	郭遠峰	New Release

KUNMING ELECTRONICS CO., LTD,

SPECIFICATION

TITLE	SPC. NO.	DATE	Version
Nano SIM Socket Dual Tray Type	KMCX1NSM640541	2023.08.18	001

1. SCOPE

1.1. CONTENTS

This specification covers the performance, tests and quality requirements for the Nano SIM Connector, P/N : KMCX1NSM640541

2. APPLICABLE DOCUMENT

The following Kunming documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

3. REQUIREMENTS

3.1. DESIGN AND CONSTRUCTION

Product shall be of the design, construction and physical dimensions specified on the applicable product drawing.

3.2. MATERIALS

Refer to Kunming Product Drawing

3.3. RATINGS

- A. Voltage Rating : 50V Max.
- B. Current Rating : 0.5A
- C. Temperature : -40°C ~ +85°C

3.4. PERFORMANCE REQUIREMENT AND TEST DESCRIPTION

The product shall be designed to meet the electrical, mechanical and environmental performance requirements specified in "4. TEST METHOD AND PERFORMANCE".

4. TEST METHOD AND PERFORMANCE

4.1. INDUSTRY STANDARDS

Unless otherwise specified, all tests and measurement should be performed under the following conditions in accordance with EIA-364 : Electrical Connector/Socket Test Procedures Including Environmental Classifications

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4.2. TEST CONDITION

Temperature : 15°C ~ 35°C

Humidity : 45% ~ 75% RH.

Atmospheric Pressure : 86 ~ 106 kPa

4-3 APPEARANCE CHECK			
	TEST ITEM	REQUIREMENT	PROCEDURE
4-3-1	Appearance t	Must comply with product drawing.	Inspect and measure the contact.
4-4 ELECTRICAL REQUIREMENT			
4-4-1	Contact Resistance	100 mΩ max.	Subject mated contacts assembled in housing to 20mV Max open circuit at 10mA Max. EIA-364-6B
4-4-2	Dielectric Withstanding Voltage	No evidence of flash over or insulation shall take place. Current leakage:0.5mA Max.	500V AC for 1 minute. Test between adjacent circuits of unmated connector. EIA-364-20B
4-4-3	Insulation Resistance	1000 MΩ Min.	Impressed voltage 500V DC. Test between adjacent circuits of unmated connector. EIA-364-21C
4-5 MECHANICAL REQUIREMENT			
4-5-1	Insert Force	10N Max.	Insert Nano SIM Card into the holder and make it work, at a rate of 25.4mm per minute. EIA-364-13B
4-5-2	Unmating Force	0.5N Min.	Push out the working nano Sim Card from the holder, at rate of 25.4mm per minute

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4-5-3	Ejection Force	15N Max	Push out the Nano SIM tray form holder
4-5-4	Normal Force	30g Min.	Operation Speed : 25+3 mm/min. Measure the force required to mate connector.
4-5-5	Durability	See Note	Operation Speed : 10 cycle/min. Durability Cycles : 5000 Cycles
4-5-6	Vibration	No electrical discontinuity greater than 0.1 or 1μsec shall occur. See Note	Subject mated connectors to 10-55-10 Hz traversed in 1minutes at 1.52mm amplitude 2 Hours each of 3 mutually perpendicular planes. 100mA Max. EIA-364-28D
4-5-7	Mechanical Shock	No electrical discontinuity greater than 0.1 or 1μsec shall occur. See Note	Accelerate Velocity : 490m/s ² (50G) Waveform : Half-sine shock plus Duration : 11msec No. of Drops : 3 drops each to normal and reversed directions of X,Y and Z axes, totally 18 drops, passing DC 1mA current during the test. EIA-364-27B

4-6 ENVIRONMENTAL REQUIREMENTS

4-6-1	Solder ability	Wet solder coverage : 95% Min.	Solder Temperature : 245+/-5°C Duration : < 5.5 sec, J-STD-002B
4-6-2	Resistance to Reflow Soldering Heat	No physical damage shall occur.	Pre Heat : 150~200°C , 60~180sec. Heat : 230°C Max., 30±10sec. Peak Temp. : 260+0/-5°C, 5~8sec. Duration : 2 cycles

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4-6-3	Thermal Shock	See Note	Mated Connector -55+/-3°C (30 minutes) +85+/-2°C (30 minutes) Perform this a cycle, repeat 10cycles EIA-364-32C
4-6-4	Humidity- Temperature Cycle	See Note	Mated Connector 25~65°C , 90~95% RH, 10 Cycles EIA-364-31B.
4-6-5	Temperature Life (Heat Aging)	See Note	Mated Connector 85°C , 96 hours, EIA-364-17B.
4-6-6	Salt Spray	No detrimental corrosion allowed in contact area	Subject mated connectors to 35+/-2°C and 5+/-1% salt condition for 24hours. After test, rise the sample with water and recondition the room temperature for 1 hour. EIA-364-26B.

NOTE : Shall meet visual requirements, show no physical damage, and meet requirement of additional tests as specified in the test sequence in 4.7 test sequence.

Soldering condition shelf life about

Soldering condition shelf life about 6 months depend on storage condition of humidity, temperature and others factors.

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4.7. TEST SEQUENCE

	Test or Examination	Test Group						
		A	B	C	D	E	F	G
		Test Sequence (a)						
1	Examination of Product	1,17	1,7	1,11	1,5	1,3	1,3	1,3
2	Contact Resistance	2,10	2,4,6	2,6,8	2,4			
3	Withstanding Voltage	4,12		4,10				
4	Insulation Resistance	3,11		3,9				
5	Insert Force	5,13						
6	Unmating Force	6,14						
7	Ejection Force	7,15						
8	Normal Force	8,16						
9	Durability	9						
10	Vibration		3					
11	Mechanical Shock		5					
12	Solder Ability						2	
13	Resistance to Soldering Heat							2
14	Thermal Shock			5				
15	Humidity Temperature Cycling			7				
16	Temperature Life (Heat Aging)				3			
17	Salt Spray					2		
	Quantities of Samples	5	5	5	5	5	5	5

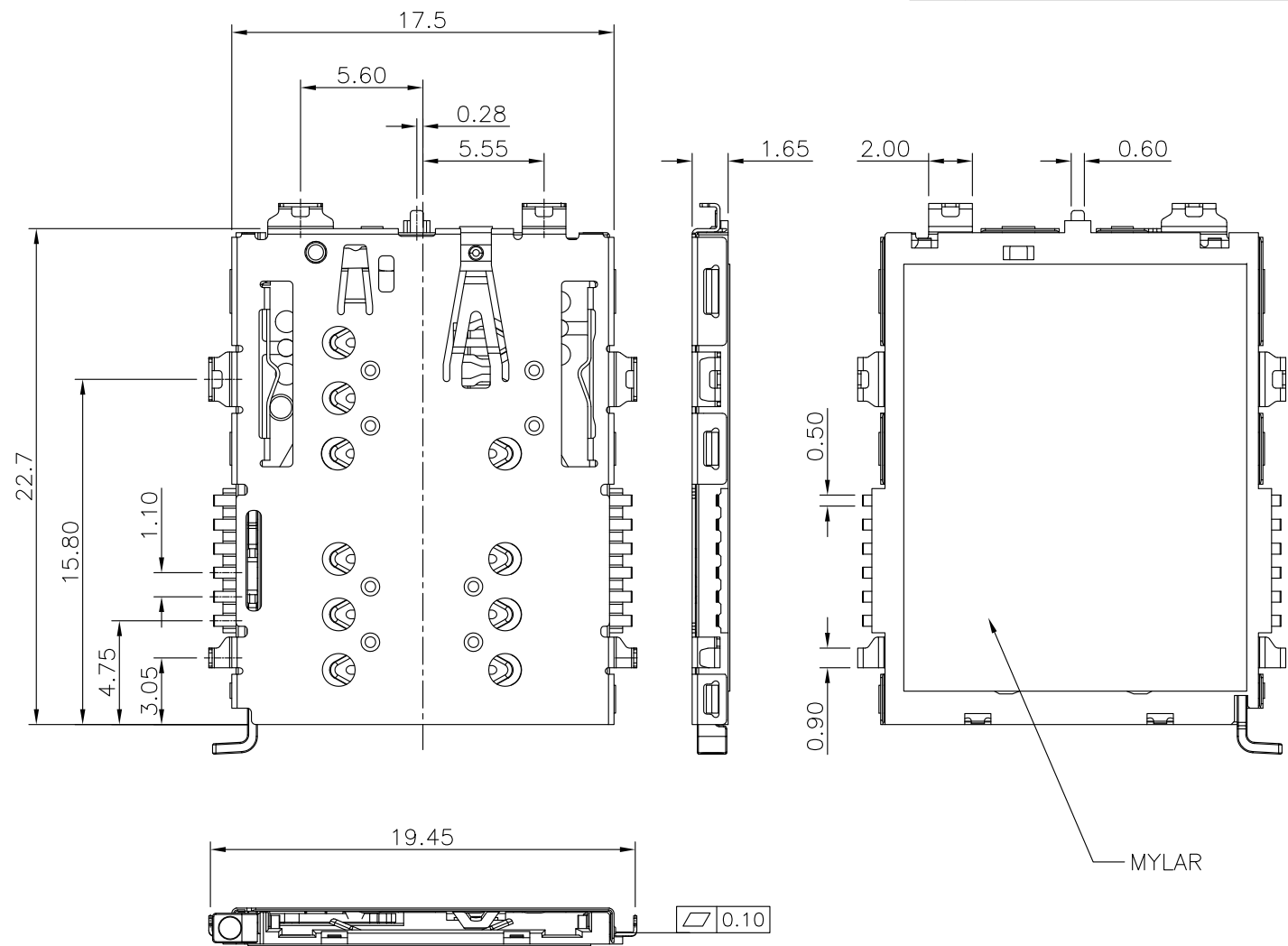
NOTE 2 :

- Numbers indicate sequence in which tests are performed.
- Discontinuities shall not take place in this test group, during tests.

1 2 3 4 5 6

REVISIONS					
LTR	DESCRIPTION	DATE	REV.	CHKD.	APVD.

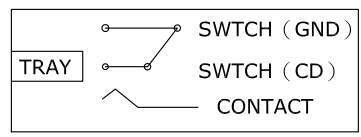
A
B
C
D
E



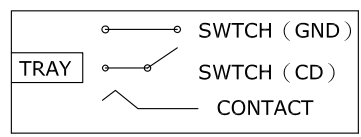
- SPECIFICATION:**
1. Current Rating : 0.5A
 2. Rated Voltage : 30V
 3. Insulation Resistance: 1000MΩ Min.
 4. Withstanding Voltage: 500V DC for 1 Minutes.
 5. Contact Resistance: 100mΩ Max.
 6. Insertion Force : 12N Max
 7. Push-out Force : 2N Min.
 8. Operating Temperature : -40°C ~ +75°C

CIRCUIT DIAGRAM FOR DETECT SWITCHES

SWTCH NORMAL CLOSE (TRAY NO INSERT)



SWTCH NORMAL OPEN (TRAY INSERTING)



6.	MYLAR	PET
5.	EJECT LEVER	Stainless
4.	EJECT BAR	Stainless
3.	SHELL	Stainless, Gold Flash on Solder Area, Ni Under-Plated
2.	CONTACT	Phosphor Bronze, Gold Flash on Contact Area and Solder Area, Ni Under Plated Over All
1.	HOUSING	LCP, UL 94V-0, Black
NO.	PART NAME	DESCRIPTION

120~315	±0.55	DWN	王淳新	DATE	2019.07.08	SCALE 3.125/1 PROJECTION UNIT:mm	NAME Nano SIM Socket Dual Tray Type CAT. NO. KMCX1NSM640541 DWN.NO. A-CX1NSM640541	
30~120	±0.45	DSND	王淳新	DATE	2019.07.08			
6~30	±0.35	CHKD	李阮龍	DATE	2019.07.08			
BELOW 6	±0.25	APVD	郭遠峰	DATE	2019.07.08			
DIMENSION	TOLERANCE	KUNMING ELECTRONICS CO.,LTD.						1/3 001

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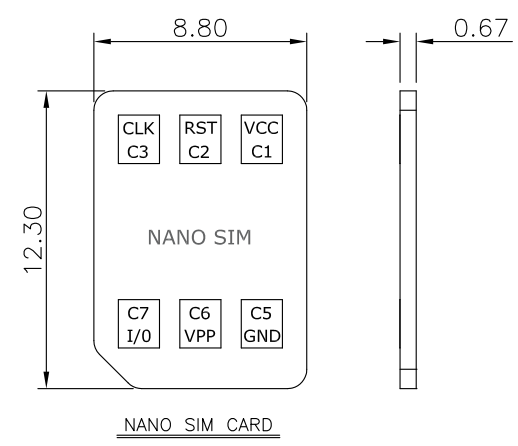
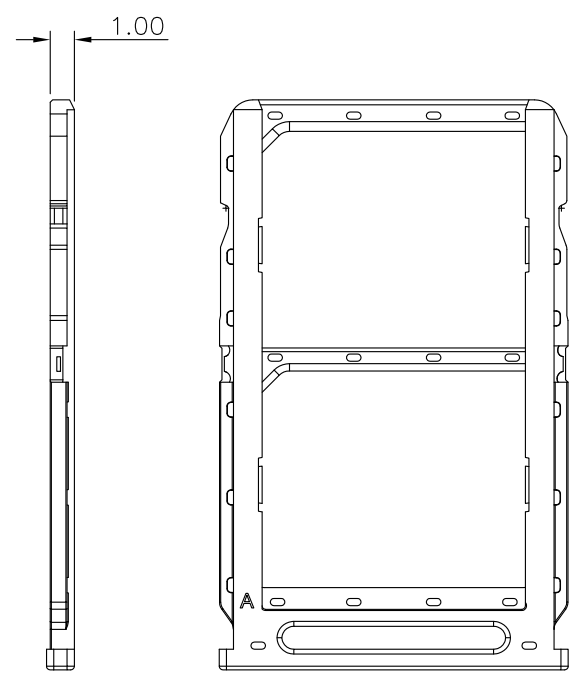
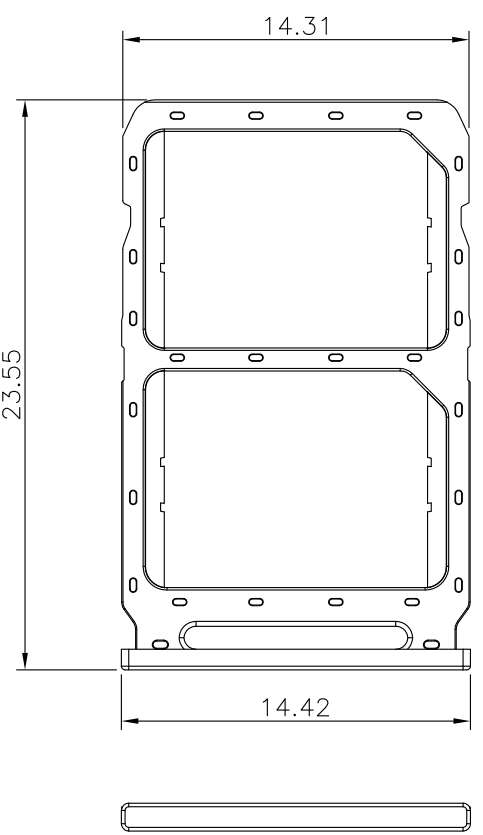
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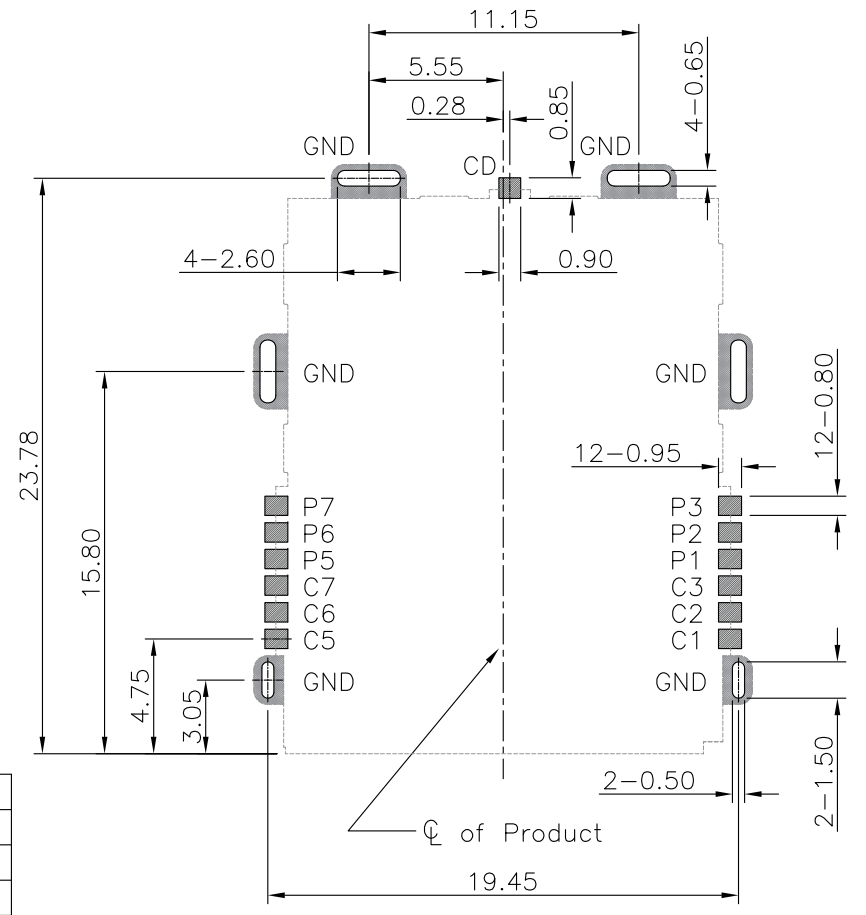
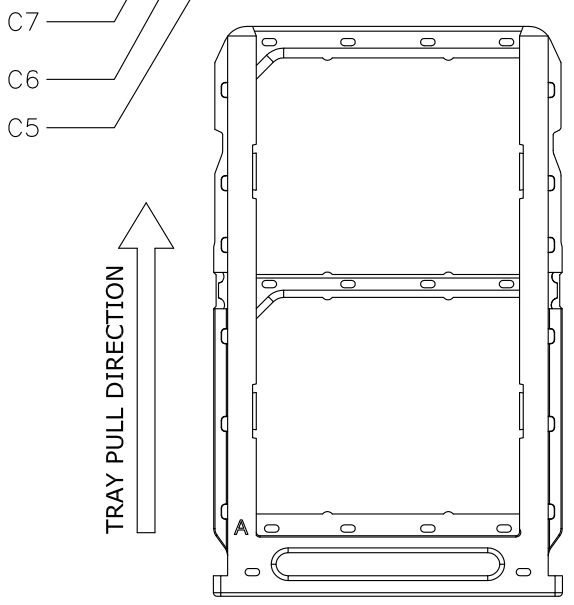
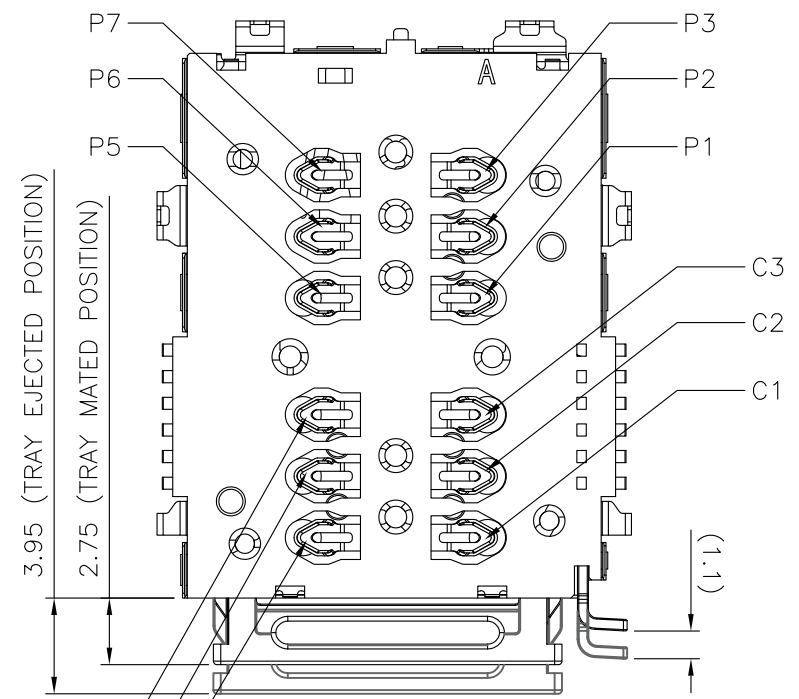
7.	TRAY	LCP, UL 94V-0, Black
NO.	PART NAME	DESCRIPTION

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DIMENSION	TOLERANCE	KUNMING ELECTRONICS CO.,LTD.					DWN.NO. A-CX1NSM640541	2/3 001

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REVISIONS					
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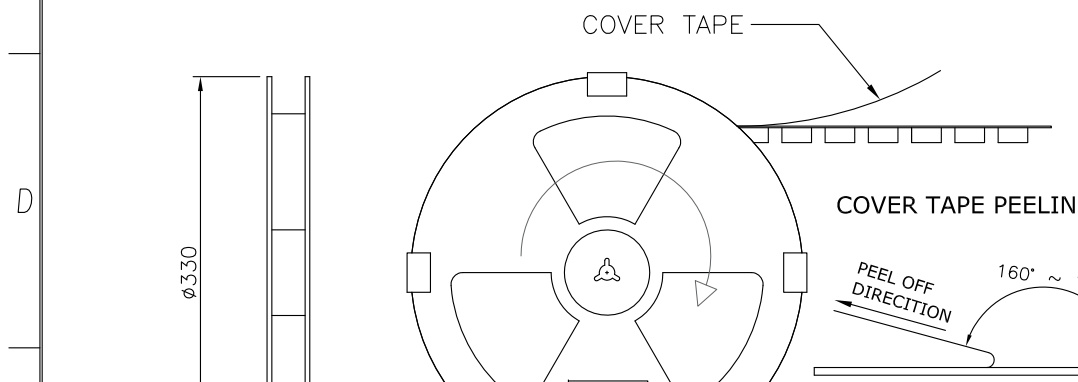
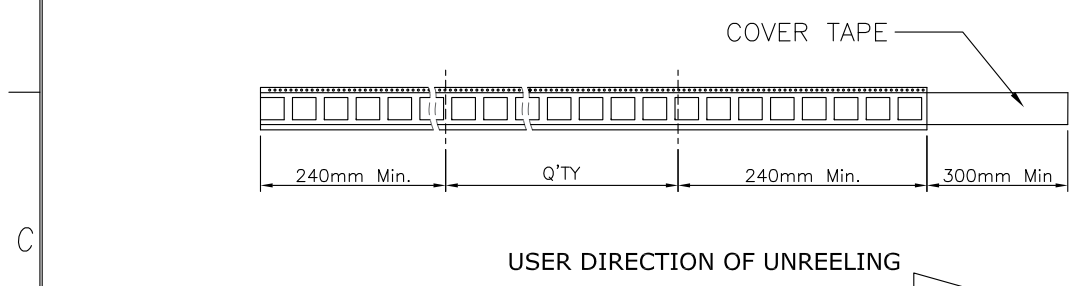
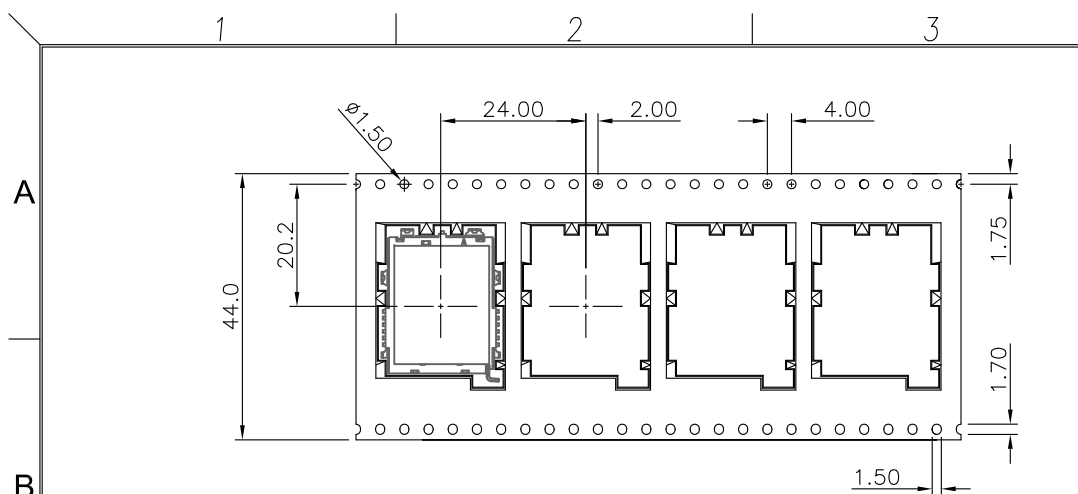
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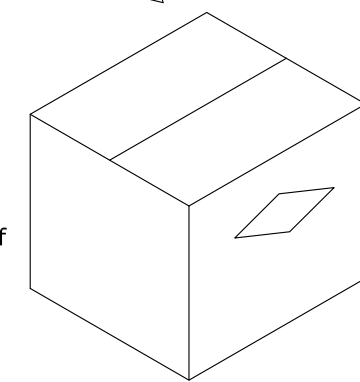
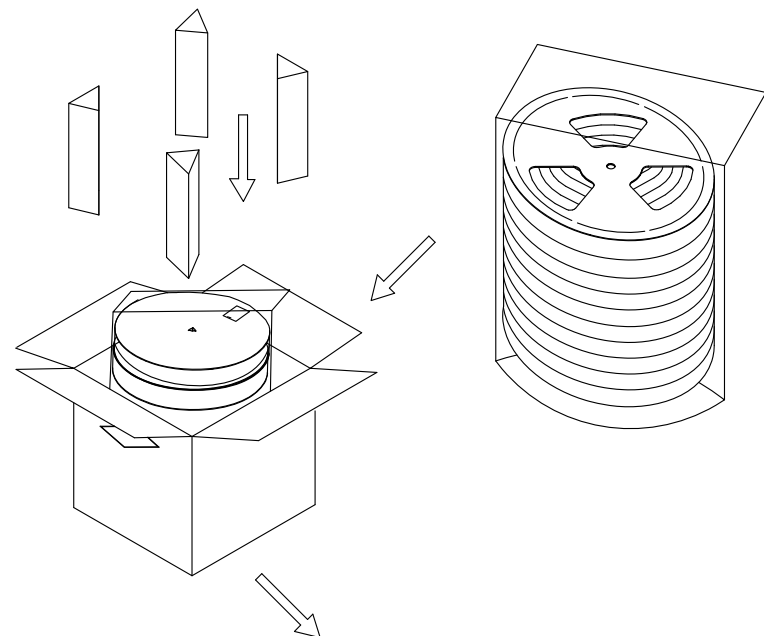
PIN NO.	DESCRIPTION
C1 / P1	VCC
C2 / P2	RST
C3 / P3	CLK
C5 / P5	GND
C6 / P6	VPP
C7 / P7	I/O
CD	Detect Switch

RECOMMENDED P.C.B LAYOUT
TOLERANCE ±0.03mm

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REVISIONS					
LTR	DESCRIPTION	DATE	REV.	CHKD.	APVD.



CARTON SIZE :
350mm x 350mm x 340mm

PACKAGING QUANTITY

QTY/REEL	REEL/CARTON	QTY/CARTON
600	6	3600

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NAME
Nano SIM Socket Dual Tray Type
CAT. NO.
KMCX1NSM640541

DIMENSION TOLERANCE KUNMING ELECTRONICS CO.,LTD.

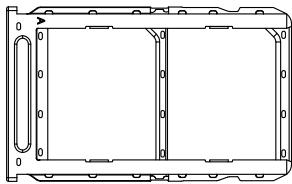
DWN.NO.
P-CX1NSM640541

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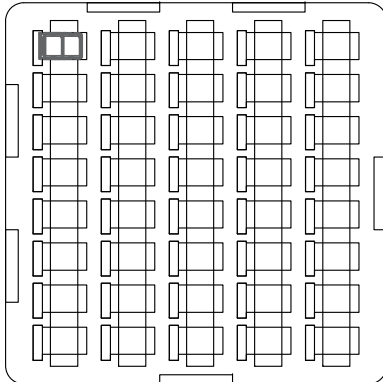
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REVISIONS					
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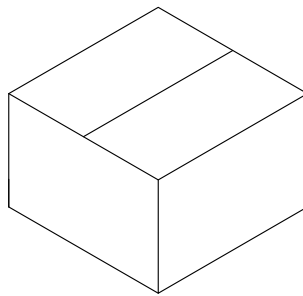
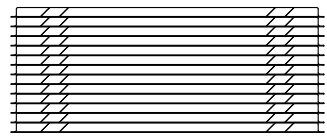
PRODUCT TRAY



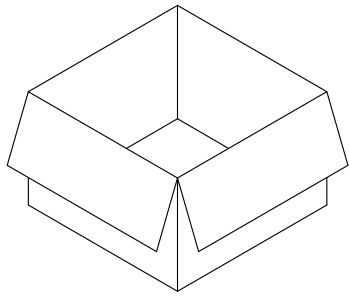
PACKING TRAY



21PCS / Box
An empty plate on top



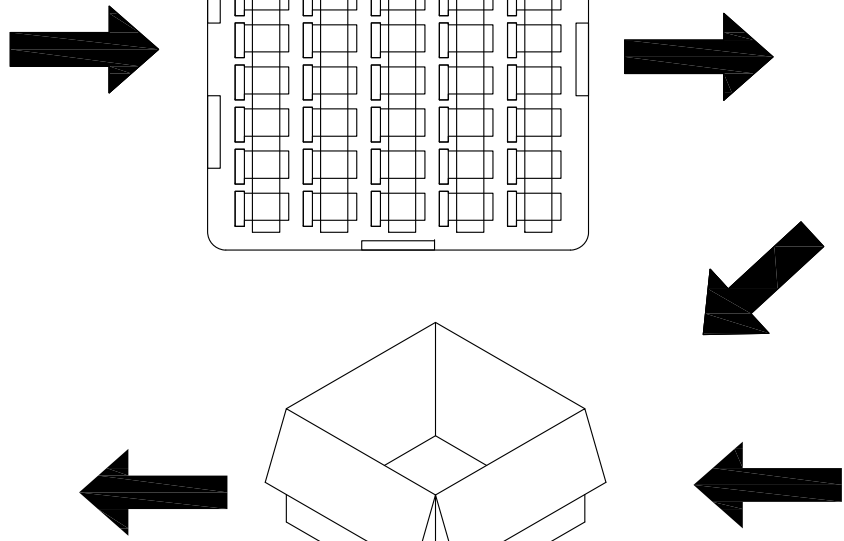
CARTON
SIZE : 225mm x 225mm x 200mm
QTY : 800 PCS



CARTON



PE Bag



120~315	±0.55	DWN	王淳新	DATE	2019.07.08	SCALE 3.125/1	NAME	Nano SIM Socket Dual Tray Type	
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DIMENSION TOLERANCE		KUNMING ELECTRONICS CO.,LTD.					P-CX1NSM640541		001