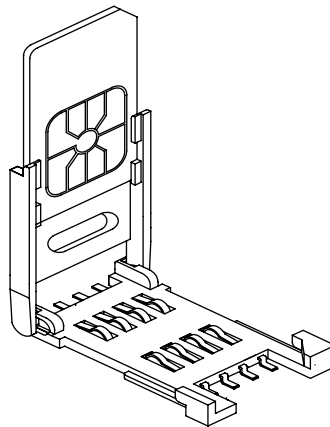


**SPECIFICATION  
OF  
SIM CARD CONNECTOR**

Model NO.: ICA-521  
Revision: 1.1  
Issued Date: JAN. 20, 2005



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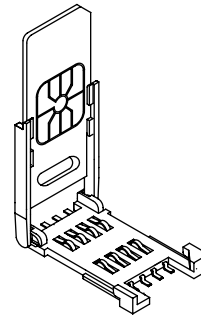
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## 1. INTRODUCTION

### General :

The ICA-521 is an interface device for GSM11.11 SIM card. It is designed for high performance and flexibility to give prospective customers a quick applications of the individual devices in there product series, and to facilitate selection if the device it decides that are best-suited to intended target applications.



### Features :

- ◆ GSM11.11 Standard SIM Card. <sup>(note)</sup>
- ◆ Extreme Low profile.
- ◆ Compact Physical Size for Multi-Purpose Application.
- ◆ High Reliability Low-Friction Contact Extension operation Life of Contact.

### Applications :

- ◆ Access Control Terminals.
- ◆ Terminal Identification module.
- ◆ Telecommunication.
- ◆ Palm Top Machines.
- ◆ Other Identification recognition.

**Note:** All trademarks mentioned herein are the property of their respective companies.

## 2. TECHNICAL CHARACTERISTICS

### 2.1 General Characteristics :

Items	Standard	Descriptions
Dimensions		29.7L x 17.2W x 2.2H mm
Weight		Approx. 0.80 g
Card size	GSM 11.11	25.0 x 15.0 x 0.76 mm
Contact principle		Friction technology
Operating position		Shaft up / Down / Horizontal
Mounting System		SMT ( post optional )
Durability		10,000 cycles min.

### 2.2 Electrical Characteristics : According to Standard IEC512

Items	Standard	Descriptions
Number of data contacts ( Optional )	GSM 11.11	6, 8 pins
Contact resistance	IEC512-2-2a	50 m $\Omega$ typical, 100 m $\Omega$ max.
Insulation resistance Pin to pin	IEC512-2-3a	> 1000 M $\Omega$ / 500 VDC
Rated current		1 A max. , 10 $\mu$ A min.
Dielectric withstanding voltage	IEC512-2-4a	500 VAC RMS 1min. (sea level )

### 2.3 Mechanical Characteristics :

Items	Standard	Descriptions
Contact force		0.2 ~ 0.6N
Contact location	GSM 11.11	
Data Contacts		
Material		Phosphor bronze
Plating		Gold over Nickel
Insulation material		Thermoplastic, UL 94V-0

### 2.4 Solderability : According to Standard IEC68

Items	Standard	Descriptions
Wave		Not applicable
Vaporphase		215°C, 30 sec. Max
IR reflow		260°C, 10 sec. Max.
Manual	IEC68-2-20	360°C, 3 sec. Max.

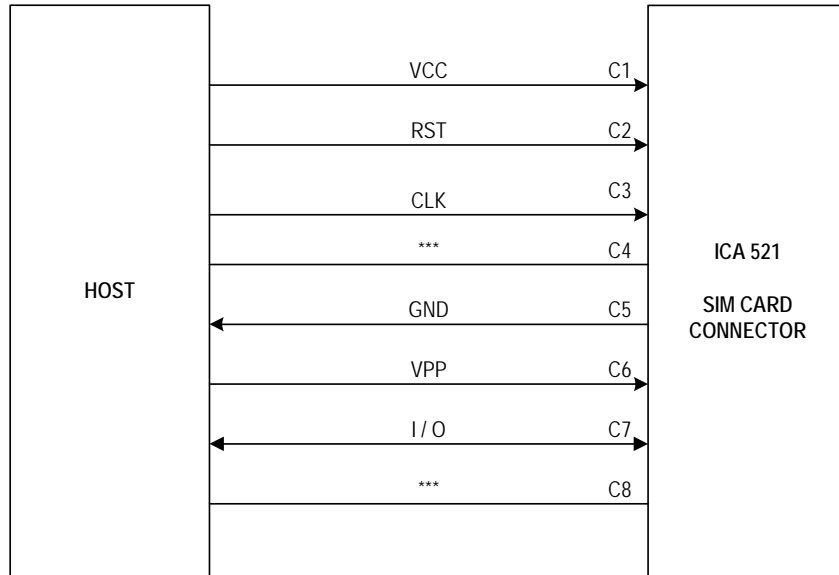
## 2.5 Environmental Characteristics : According to Standard IEC68

Items	Standard	Descriptions
Operating temperature		- 40°C ~ + 85°C
Operating humidity		10 % ~ 95 % RH
Storage temperature		- 40°C ~ + 85°C
Storage humidity		10 % ~ 95 % RH
Thermal shock	IEC68-2-14	- 40°C ~ + 85°C, 5 cycles
Damp Heat	IEC68-2-3	40°C, 90 % RH, 500HR.
Random vibration	See Note 1	No discontinuities of 1us or longer
Mechanical shock	See Note 2	No discontinuities of 1us or longer
Salt-mist	IEC68-2-11	35°C, 5%, NaCl , 48HR.

**Note 1.** Subject samples mated to GSM 11.11 SIM Cards to 10-500 HZ. 20 minutes in each of 3 mutually perpendicular planes.

**Note 2.** Subject mated samples to 10G's half-sine shock pulse of 11 ms duration. 3 shock in each direction applied along 3 mutually perpendicular planes, expect 4 G's shock pulses in direction of card withdrawal, 18 total shock.

### 3. INTERFACE

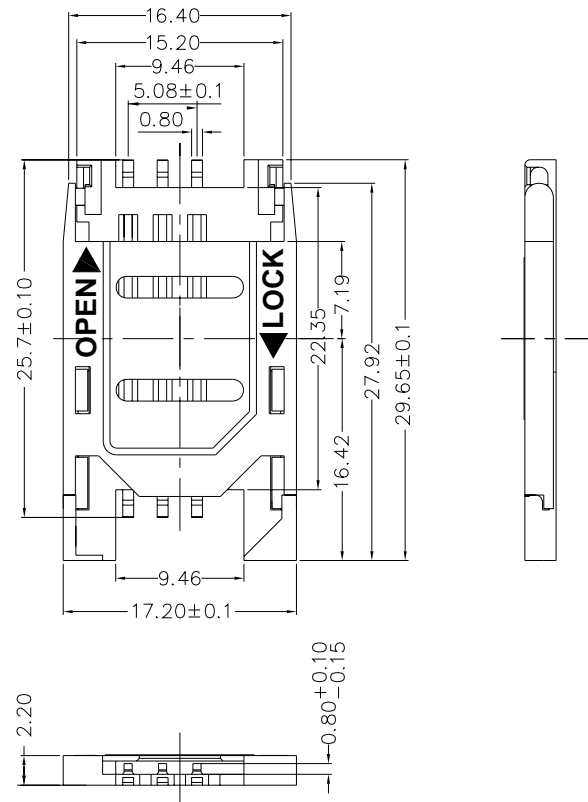


#### 3.1 Signals

Signal interface connections for ICA-521 are shown below.

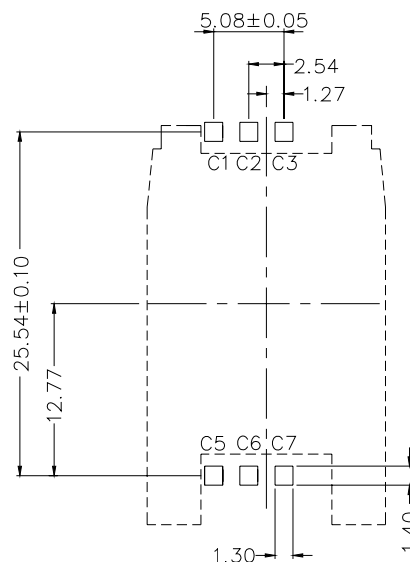
Contact No.	Assignment	Description	Remark
C1	Vcc	Power Voltage	
C2	RST	Reset Signal	
C3	CLK	Clocking Signal	
C4	***	Reserved for feature use	
C5	GND	Power and Signal Ground	
C6	Vpp	Programming Voltage	
C7	I/O	Serial Data input/output	
C8	***	Reserved for feature use	

## 4. MECHANICAL OUTLINE DRAWING



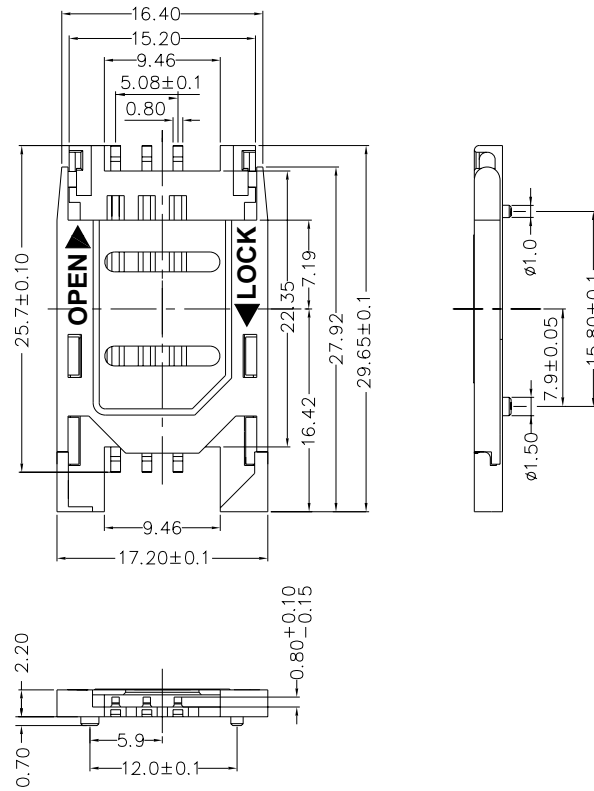
UNIT: mm, TOLERANCES : ± 0.10mm

Figure 4.1 Mechanical outline dimension (6pin)



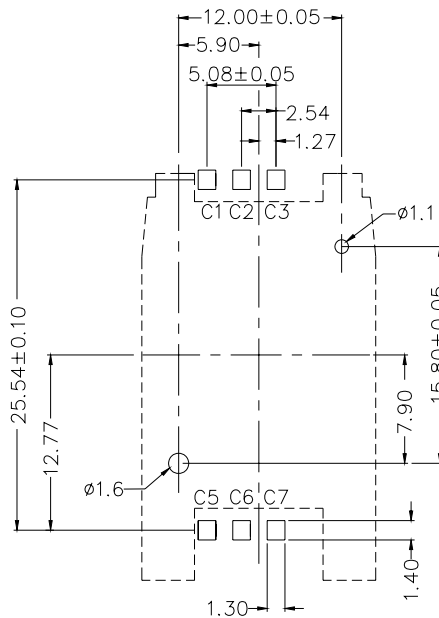
UNIT: mm, TOLERANCES : ± 0.10mm

Figure 4.2 Reference dimension for PCB layout (6pin)



UNIT: mm, TOLERANCES : ± 0.10mm

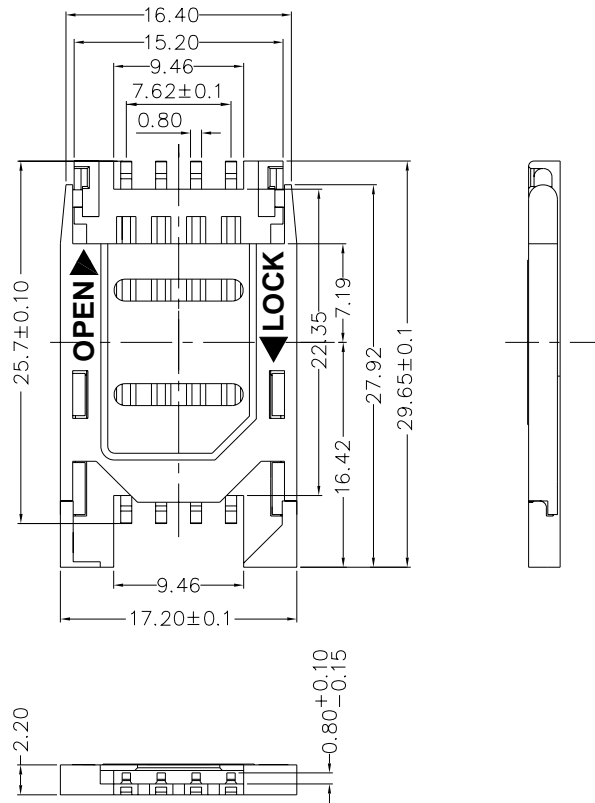
Figure 4.3 Mechanical outline dimension (6pin+ post)



UNIT: mm, TOLERANCES : ± 0.10mm

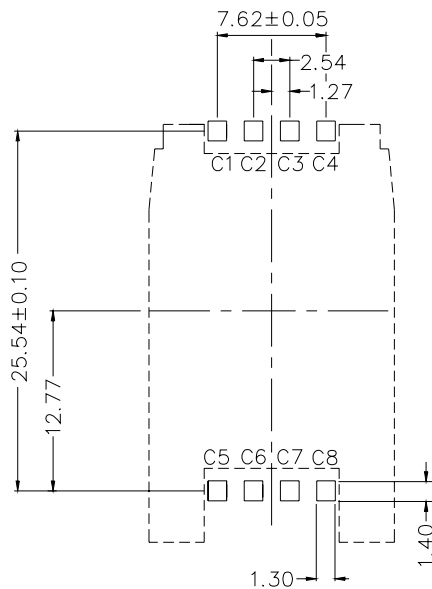
Figure 4.4 Reference dimension for PCB layout (6pin+ post)





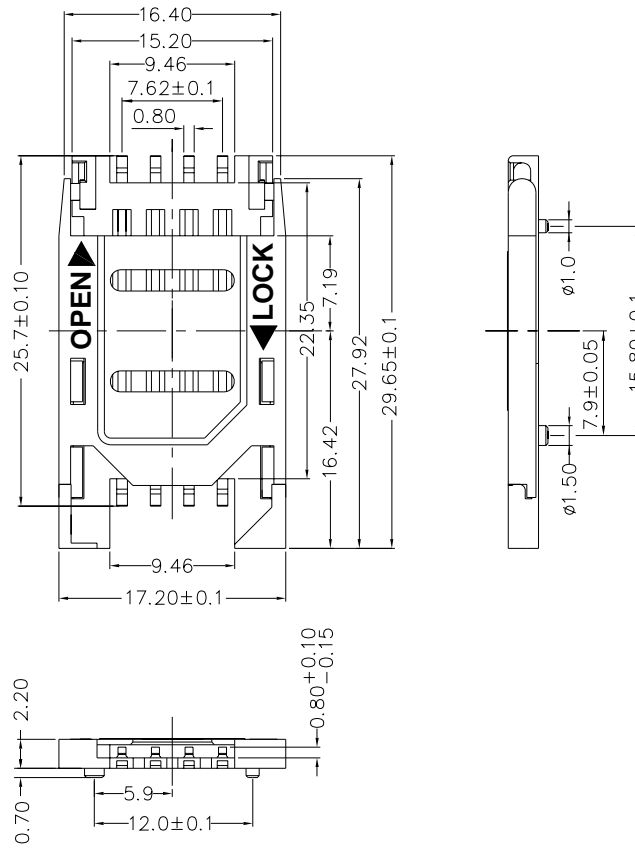
UNIT: mm, TOLERANCES : ± 0.10mm

Figure 4.5 Mechanical outline dimension (8pin)



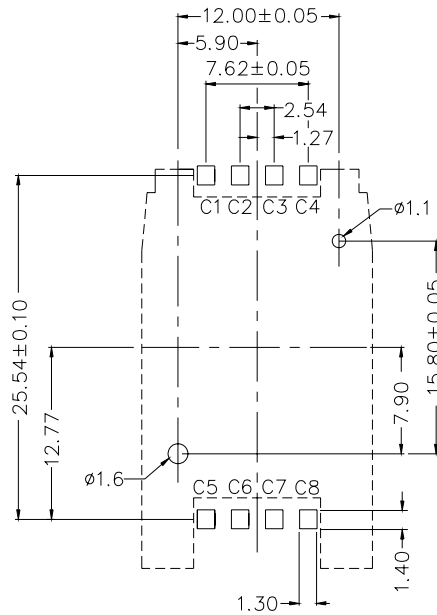
UNIT: mm, TOLERANCES : ± 0.10mm

Figure 4.6 Reference dimension for PCB layout (8pin)



UNIT: mm, TOLERANCES : ± 0.10mm

Figure 4.7 Mechanical outline dimension (8pin+ post)

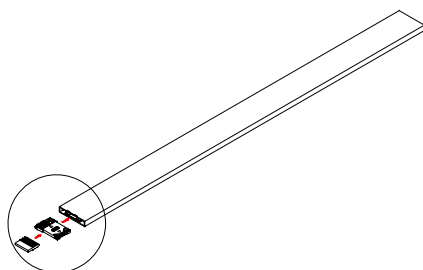
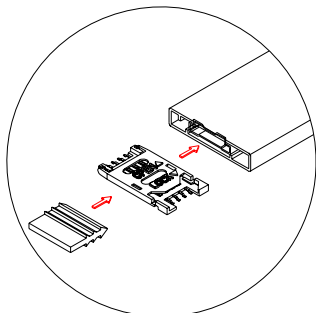


UNIT: mm, TOLERANCES : ± 0.10mm

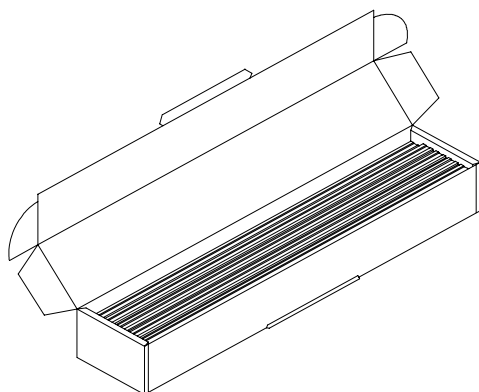
Figure 4.8 Reference dimension for PCB layout (8pin+ post)

APPENDIX A : PACKING INFORMATION

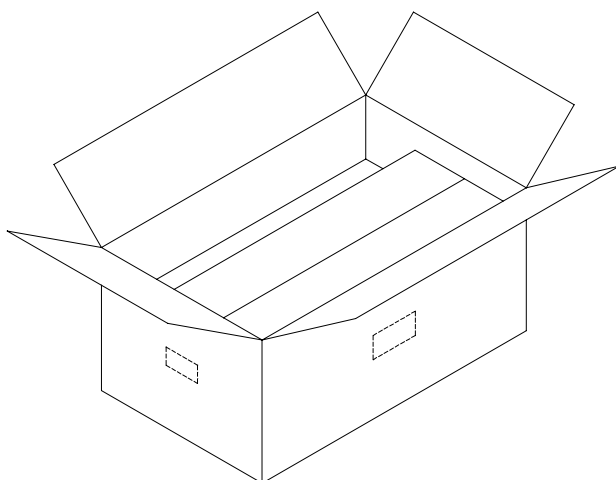
A1 : Carrier Tube



Q'ty : 25 PCs per tube  
Meas. : 46.0Lx3.4Wx0.7H CM

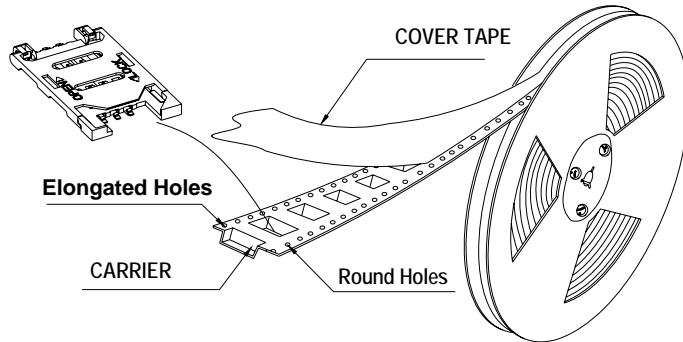


N.W.: 1.0 KGS  
G.W.: 1.1 KGS  
Q'ty: 475 PCs per box  
(19 tubes set in order)  
Meas.: 49.0Lx9.4Wx6.1H CM

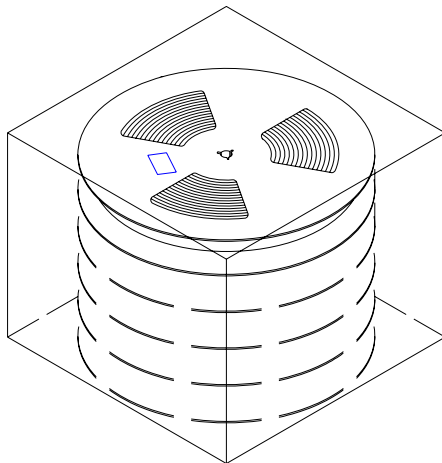


N.W.: 9.8 KGS  
G.W.: 10.8 KGS  
Q'ty: 4,275 PCs per carton  
(9 boxes set in order)  
Meas.: 51.0Lx31.0Wx21.0H CM

**A2 : Carrier Tape ( Meet EIA-481 Standard )**



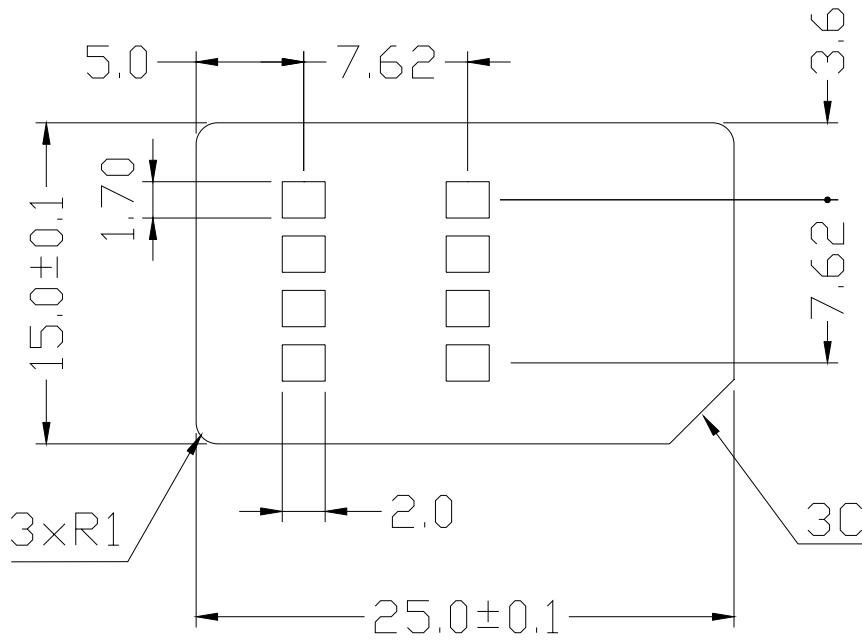
G.W.: 1.2 KGS  
Q'ty: 600 PCs per reel  
Meas.: dia. 33 CM, W 4.4 CM



N.W.: 6.4 KGS  
G.W.: 7.4 KGS  
Q'ty: 3,600 PCs per carton  
( 6 reels set in order)  
Meas.: 35.0Lx35.0Wx32.5H CM

APPENDIX B : SIM CARD DIMENSION ( According to Standard GSM 11.11 )

Dimensions in millimeters ( mm )



Thickness : 0.76 +/-0.08mm