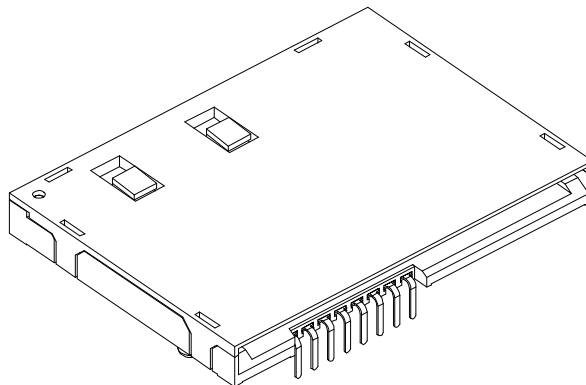


**SPECIFICATION
OF
IC CARD ACCEPTOR**

Model No.: ICA-702
Revision: 1.0
Issue Date: Jan 20, 2003



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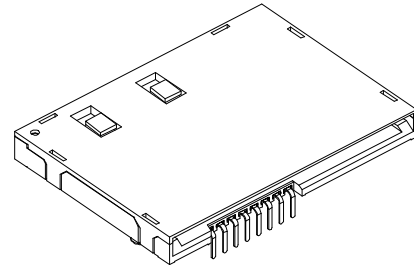
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1. INTRODUCTION

General :

The ICA-702 is an interface device for ISO based IC CARD or SMART 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 :

- ◆ ISO 7816 Standard IC Card or SMART Card. ^(note)
- ◆ Compact Physical Size for Multi-Purpose Application.
- ◆ Module Type IC Contact Compatible with CP8. ^(note)
- ◆ High Reliability Low-Friction Contact Extension operation Life of Contact.
- ◆ Friction Contact Technology.
- ◆ EMV Approval.

Applications :

- ◆ Access Control Terminals.
- ◆ Terminal Identification module.
- ◆ Telecommunication.
- ◆ Vending 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		55.5L x 40.0W x 5.8 H mm
Weight		Approx. 12 g
Card size	ISO 7816 part 2	85.6 x 54 x 0.76 mm
Contact principle		Landing technology
Operating position		Shaft up / Down / Horizontal
Mounting System (Optional)		Thru-Hole (standard) or SMT
Durability		200,000 cycles min.

2.2 Electrical Characteristics : According to Standard IEC512

Items	Standard	Descriptions
2.2.1 Data Contacts		
Number of Contacts (Optional)		8, 16 Pins
Contact resistance	IEC512-2-2a	50 m Ω typical, 100 m Ω max.
Insulation resistance Pin to pin	IEC512-2-3a	> 1000 M Ω / 500 Vdc
Rated voltage		50 V max.
Rated current		1 A max. , 10 μ A min.
Dielectric withstanding voltage	IEC512-2-4a	500 V AC rms 1min. (sea level)
2.2.2 Card Detector & Switch		
Switch type		Blade
Operation (Optional)		Normal Open or Closed
Contact resistance	IEC512-2-2a	50 m Ω typical, 100 m Ω max.
Insulation resistance Pin to pin	IEC512-2-3a	> 1000 M Ω / 500 Vdc
Rated voltage		50 V max.
Rated current		1 A max., 10 μ A min.
Dielectric withstanding voltage	IEC512-2-4a	500 V AC rms 1min. (sea level)

2.3 Mechanical Characteristics :

Items	Standard	Descriptions
Card Insertion force		10N max.
Card Withdrawal force		7N max.
Contact force		0.2N ~ 0.6N
Contact location	ISO 7816 part 2	
Data Contacts		
Material		Phosphor bronze
Plating		Gold or Pd over Nickel
Card Detector & Switch		
Material		Phosphor bronze
Plating		Gold or Pd over Nickel
Insulation material		Thermoplastic, UL 94V-0

2.4 Solderability : According to Standard IEC68

Items	Standard	Descriptions
Wave	IEC68-2-20	260°C, 5 sec. Max.
Vapor phase		215°C, 30 sec. Max.
IR re-flow		230°C, 10-15 sec. Max.
Manual	IEC68-2-20	360°C, 3 sec. Max.

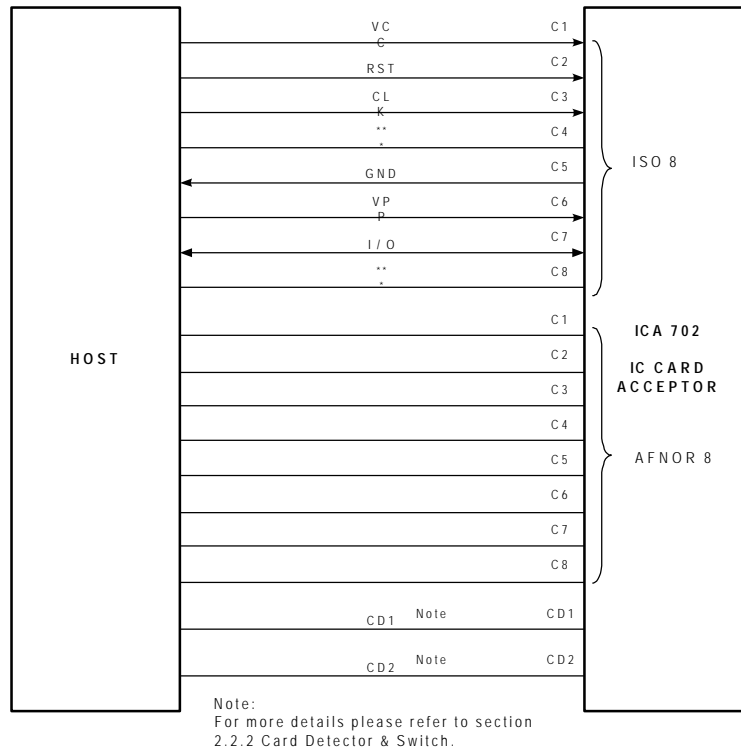
2.5 Environmental Characteristics : According to Standard IEC68

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 ISO 7810 PVC Smart 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

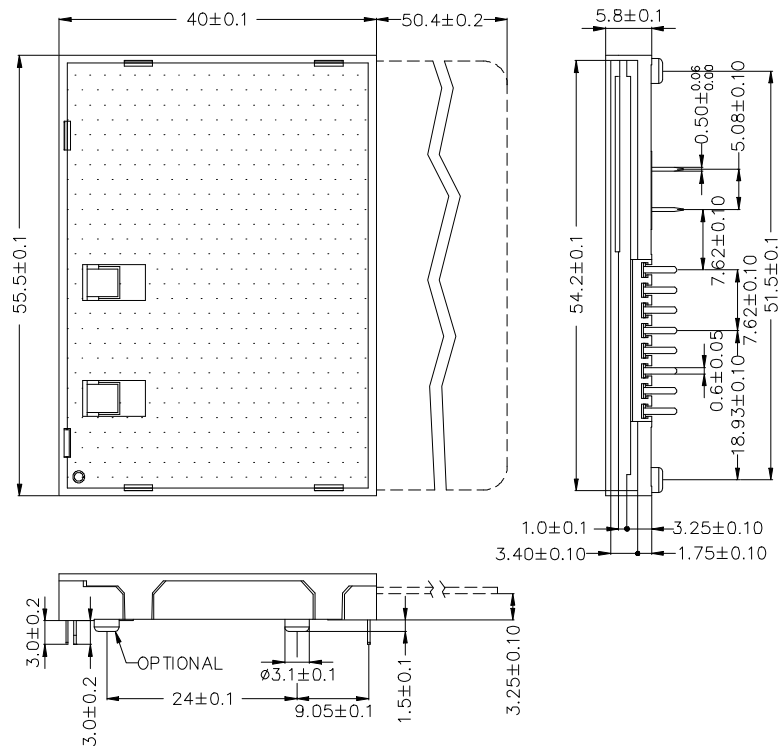


3.1 Signals :

Signal interface connections for ICA-702 are shown below.

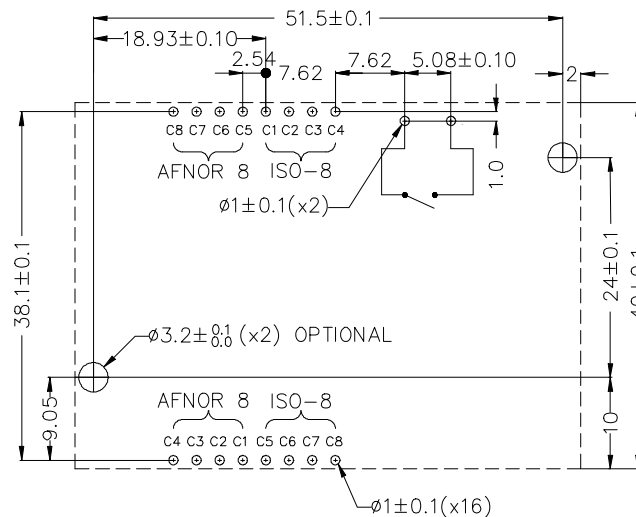
Contact No.	Assignment	Description	Remark
C1	Vcc	Power Voltage	
C2	RST	Reset Signal	
C3	CLK	Clocking Signal	
C4	***	Reserved for feature use	
C5	GND	Power and Signal Ground	
C6	Vpp	Programming Voltage	
C7	I/O	Serial Data input/output	
C8	***	Reserved for feature use	
C1		AFNOR 8, pin 1	
C2		AFNOR 8, pin 2	
C3		AFNOR 8, pin 3	
C4		AFNOR 8, pin 4	
C5		AFNOR 8, pin 5	
C6		AFNOR 8, pin 6	
C7		AFNOR 8, pin 7	
C8		AFNOR 8, pin 8	
CD1	CD1	Switch contact 1 of card detector	
CD2	CD2	Switch contact 2 of card detector	

4. MECHANICAL OUTLINE DRAWING



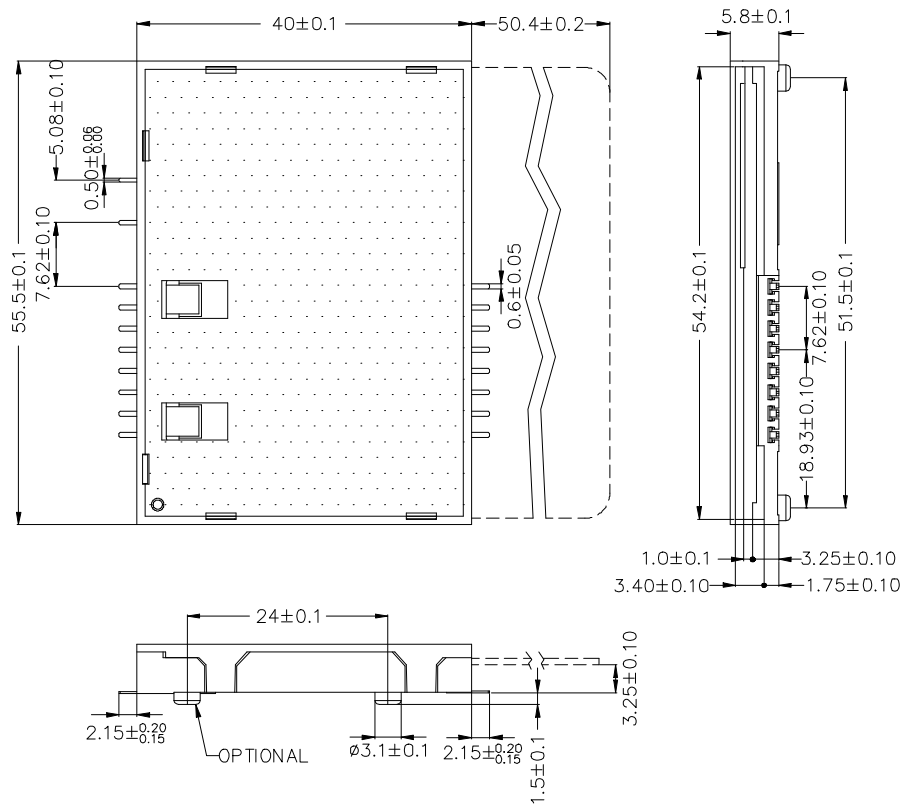
Unit : mm; Tolerances : ± 0.1 mm

Figure 4.1 Mechanical outline dimension (THRU-HOLE TYPE).



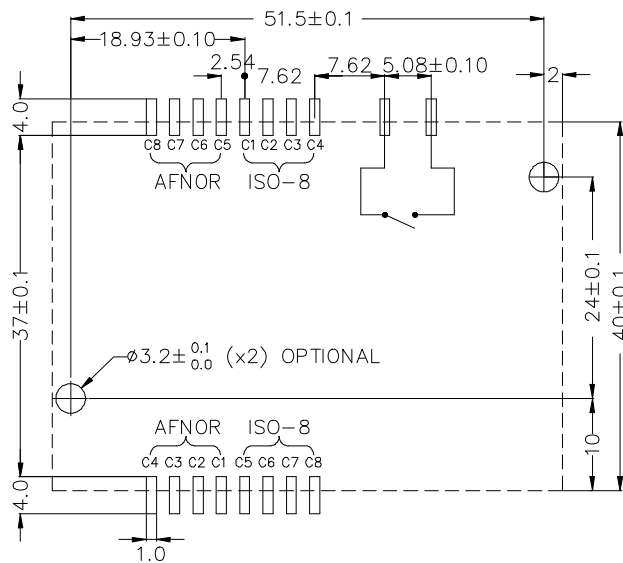
Unit : mm; Tolerances : ± 0.1 mm

Figure 4.2 Reference dimension for PCB layout (THRU-HOLE TYPE).



Unit : mm; Tolerances : ± 0.1 mm

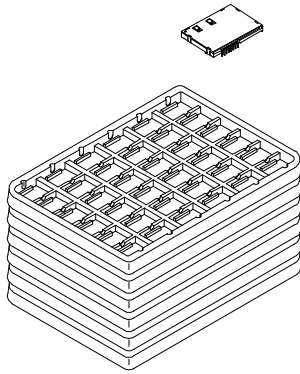
Figure 4.3 Mechanical outline dimension (SMT TYPE).



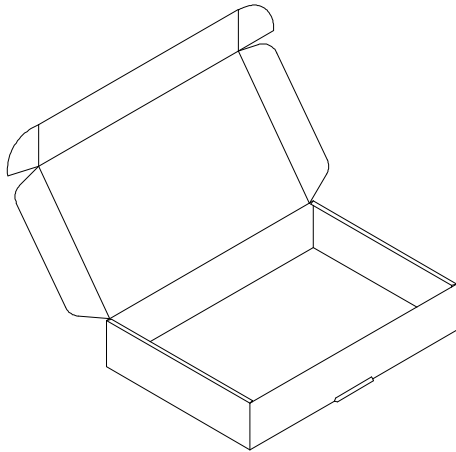
Unit : mm; Tolerances : ± 0.1 mm

Figure 4.4 Reference dimension for PCB layout (SMT TYPE).

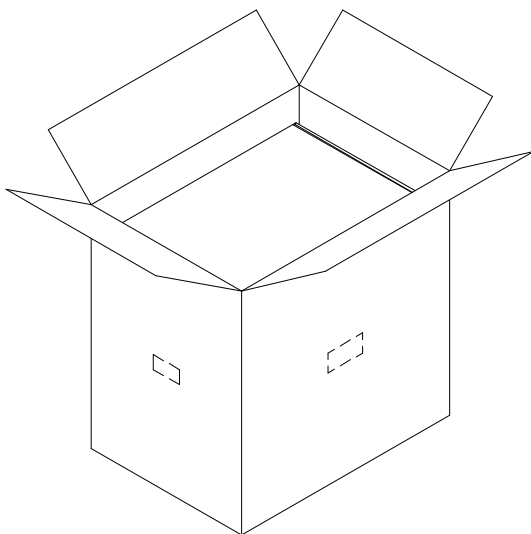
5. PACKING INFORMATION



Q'TY : 36 PCs per tray
Meas. : 44.0L x 32.0W x 2.0H CM



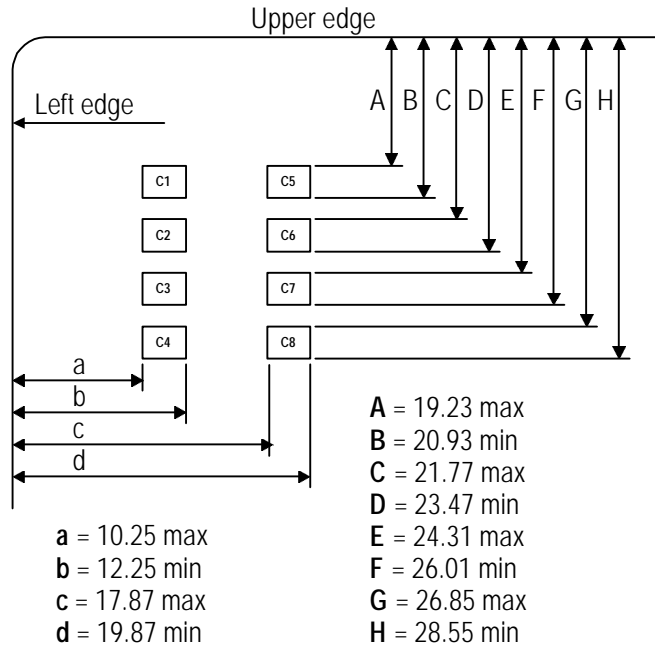
N.W. : 2.2 KGS
G.W. : 3.4 KGS
Q'TY : 180 PCs per box
(5 trays set in order
plus one empty tray)
Meas. : 46.0L x 32.5W x 8.8H CM



N.W. : 11 KGS
G.W. : 18 KGS
Q'TY : 900 PCs per carton
(5 boxes set in order)
Meas. : 48.0L x 35.0W x 48.0H CM

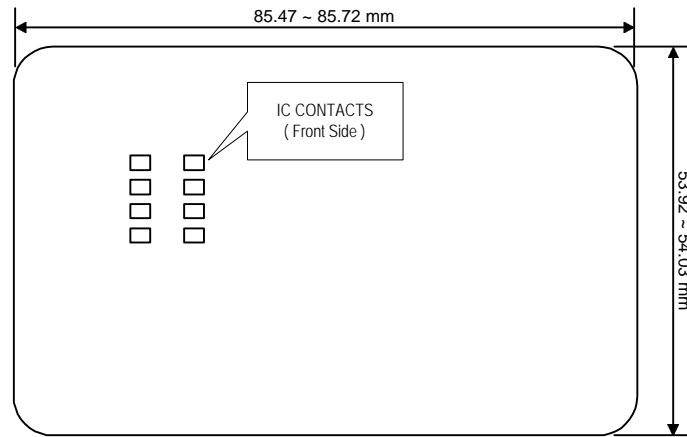
APPENDIX A : CARD SPECIFICATION (ISO 7816-2 Part 2)

Dimensions in millimeters (mm)



APPENDIX B : IC CARD CONTACT LOCATION (ISO 7816-2 Part 2)

Dimensions in millimeters (mm)



Thickness : 0.76 +/- 0.08 mm