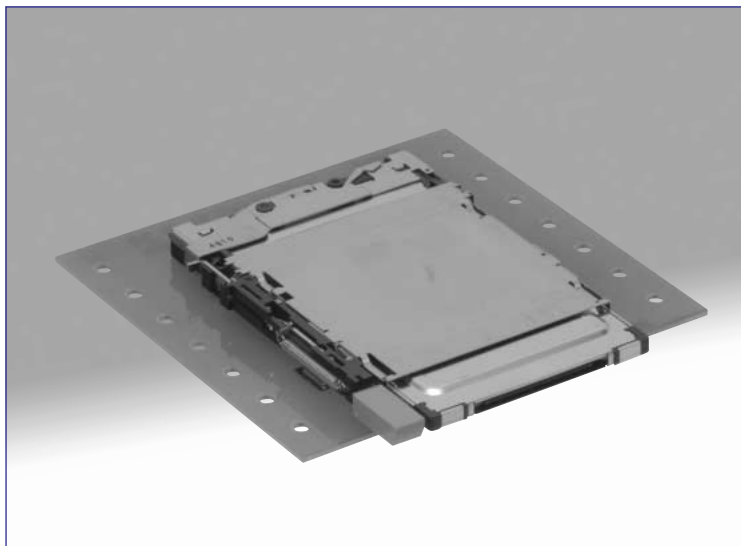
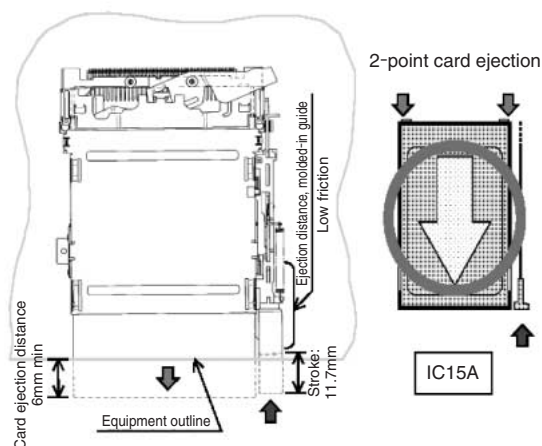


# PC Card Single Slot SMT Connectors for the AV Market (that Support 5 V Cards)

## IC15 Series



### Reliable card ejection



## ■ Features

### 1. Reliable card ejection

Designed for the front mounted Audio/Visual equipment the connectors eject the inserted card by applying force equally at each edge of the card (distance of 6 mm minimum), allowing easy hold of the card for the final removal.

### 2. New three-stage “Pop-Up” card ejection mechanism

The button does not protrude without the card being inserted, preventing it's damage when carrying the portable devices.

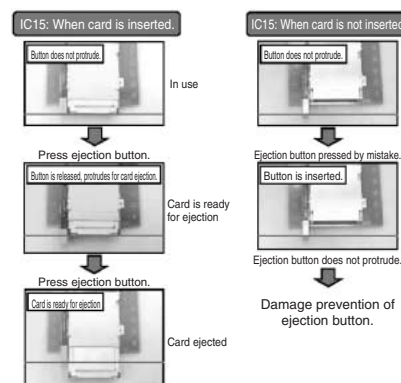
### 3. Secure board retention

Built-in 4 points of board retention posts assure that the card insertion shock is not transferred to the solder joints.

### 4. Supports lead-free environments

All components use lead-free materials.

### Three-stage card ejection



## ■ Applications

DVD recorders, LCD TVs, PDP and other digital AV equipment



## ■Product Specifications

Ratings	Current rating	0.5A	Operating temperature range	-55°C to +85°C (Note 1)	Storage temperature range	-40°C to +70°C (Note 1)
	Voltage rating	125V AC	Operating humidity range	Relative humidity 95% max. (No condensation)	Storage humidity range	40% to 70% (Note 1)

Item	Specifications	Conditions
1. Insulation resistance	100 MΩ min.	500 V DC
2. Withstanding voltage	No flashover or insulation breakdown.	500 V AC / one minute
3. Contact resistance	60 mΩ max. (Initial value)	1mA DC
4. Vibration	No electrical discontinuity of 100 ns or more.	Frequency: 10 to 2000 Hz, single amplitude of 1.52 mm or acceleration of 147m/s <sup>2</sup> (peak), 4 hours / 3 axis
5. Humidity	Insulation resistance: 100 MΩ min.	96 hours at temperature of 40°C±2°C and humidity of 90% to 95%
6. Temperature cycle	Insulation resistance: 100 MΩ min.	Temperature: -55°C → +5°C to +35°C → +85°C → +5°C to +35°C Duration: 30 → 5 max. → 30 → 5 max. (Minutes) 5 cycles
7. Durability (mating/unmating)	Contact resistance: 20mΩ max. from initial value	10000 cycles at 400 to 600 cycles per hour
8. Resistance to soldering heat	No deformation of any component. No affect on contacts.	Reflow: At the recommended temperature profile Manual soldering: 300 °C for 3 seconds

Note 1: Includes temperature rise caused by current flow.

Note 2: The term "storage" refers to products stored for long period of time prior to mounting and use. Operating Temperature Range and Humidity range covers non- conducting condition of installed connectors in storage, shipment or during transportation.

## ■Materials/Finish

### SMT unit

Component	Material	Finish	Remarks
Insulator	Heat resistant thermoplastic compound	Color: Black	UL94V-0
Contacts	Brass	Contact area: Gold plated Termination area: Tin plated	_____
Ground/eject metal fittings	Stainless steel	_____	_____
Positioning pin	Brass	Tin plated	_____

### Guide unit

Component	Material	Finish	Remarks
Frame	PBT	Color: Black	UL94V-0
Cover/Metal components	Stainless	_____	_____
Spring	Stainless steel	_____	_____
Ejection button	ABS	Color: Gray	UL94V-HB

Note: Lead free products



## ■ Ordering information

### ● SMT unit

**IC15**   **A**   -   **PDR**   -   **SF**   **M**   -   **EJL**  
①   ②   ③   ④   ⑤   ⑥

① Series name: IC15	④ SF: Right angle surface mount
② Stand off height A: 2.2mm	⑤ M: With Vacuum pick-up plate
③ Terminal type PDR: Reverse type (5V type)	⑥ Ejection button type EJL: Left button eject

### ● Guide unit

**IC15**   **A**   -   **G**   -   **P**   **EJL**  
⑦   ⑧   ⑨   ⑩   ⑪

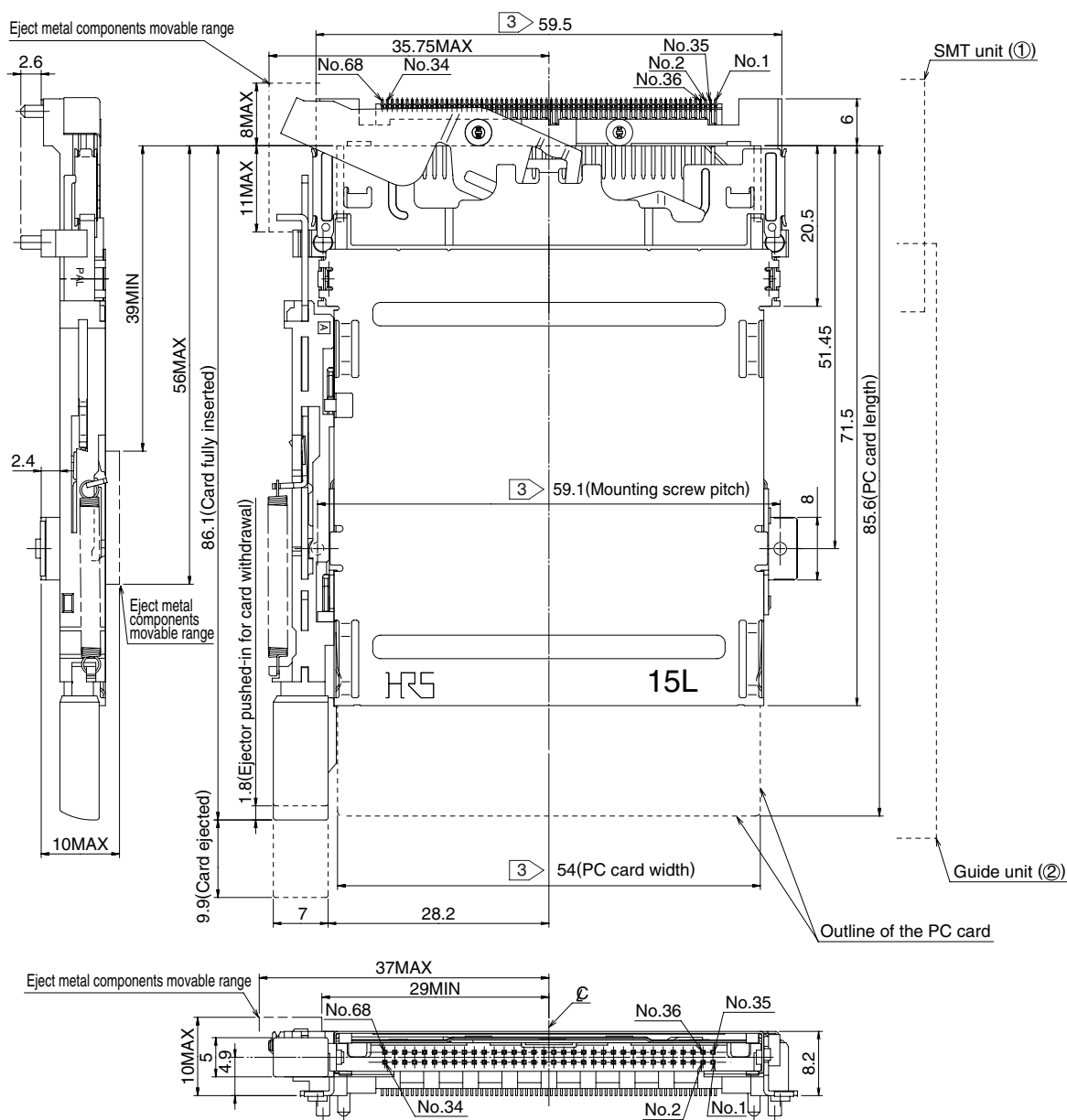
⑦ Series name: IC15	⑩ Eject mechanism codes P: Pop-up button
⑧ Stand off height A: 2.2mm	⑪ Ejection button type EJL: Left button eject
⑨ G: Guide unit	

Note: One SMT unit and one Guide unit constitute one assembly. They can not be ordered separate.



## ■Reverse type

### Left Pop-up button type



Stand off height	SMT unit (1)		Guide unit (2)		Weight (g)
	Part Number	CL No.	Part Number	CL No.	
2.2mm	IC15A-PDR-SF-EJL	CL640-1500-7	IC15A-G-PEJL	CL640-1503-5	18.4
	IC15A-PDR-SFM-EJL	CL640-1502-2			18.7

1: Above illustration shows the SMT unit and the Guide unit connected together.

2: Dimensions for card fitting are in accordance with "PC card standard".

③ Indicated dimensions are symmetrical to the center of the card insertion slot.







## ◆Method of Attachment to the Board and Precautions

(1) Exercise caution when handling the Guide unit.

If needed, re-position the push rod or the stroke arm as indicated in Fig.1

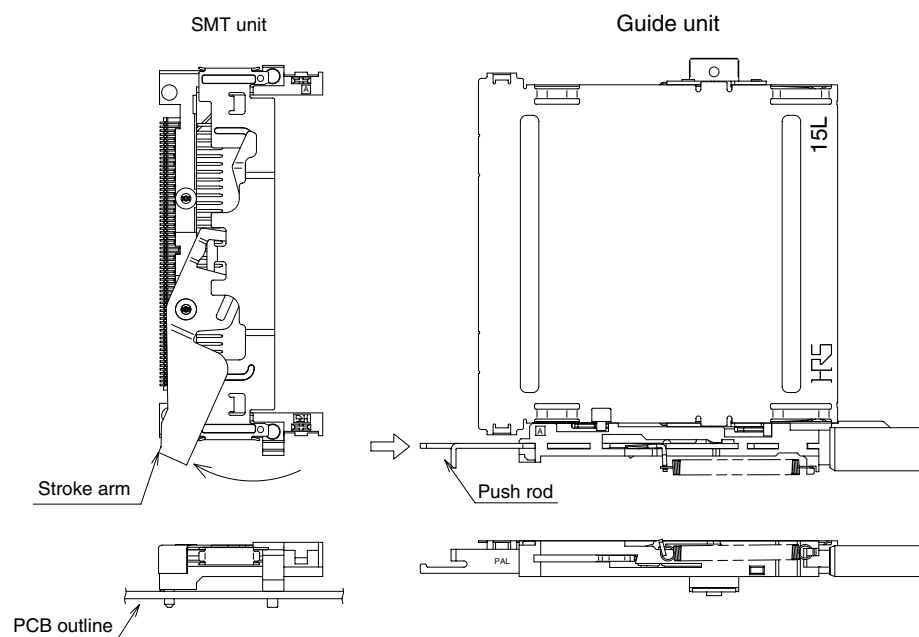


Fig. 1



Fig. 2



(2) Align the left and right locking tabs (Fig. 4) of the Guide unit shield plate with the left and right openings on the SMT unit insulator. (Fig. 3)

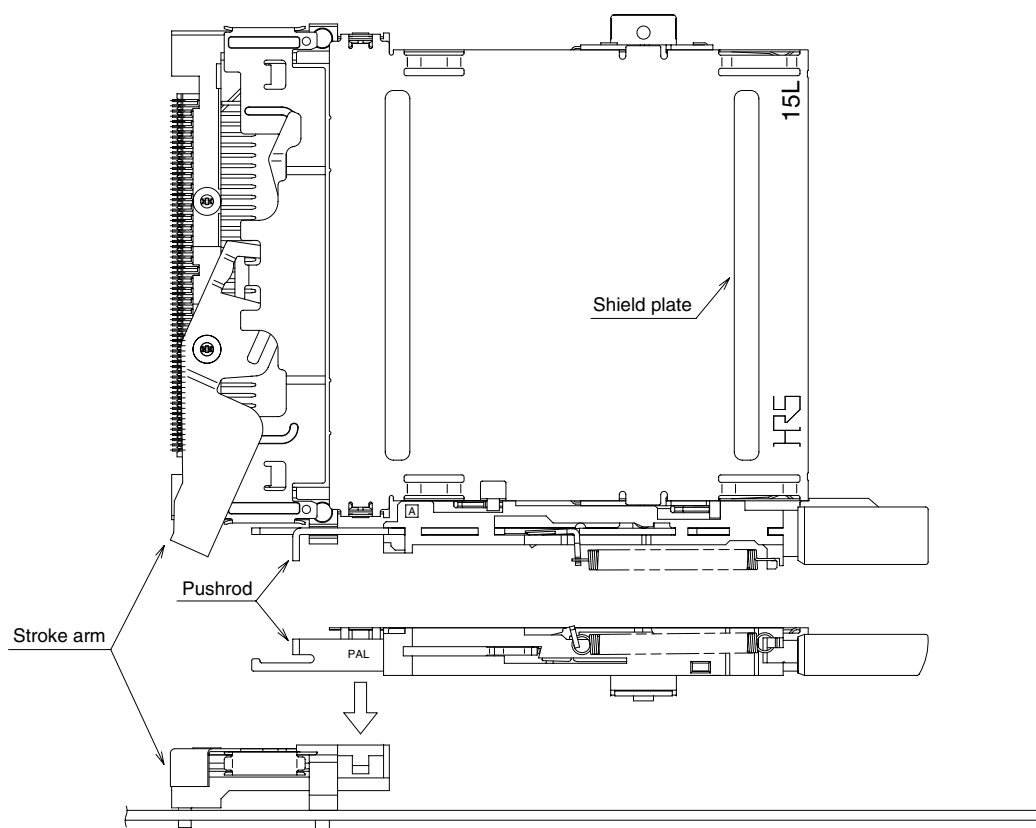


Fig. 3

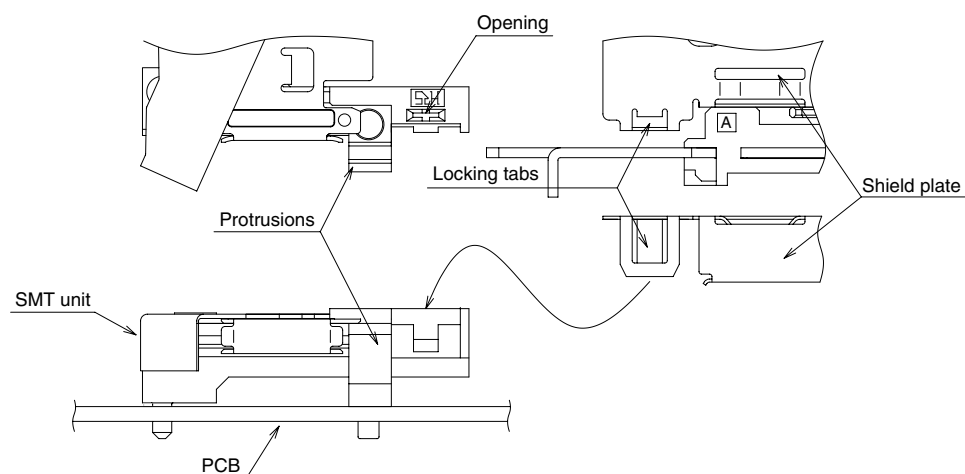
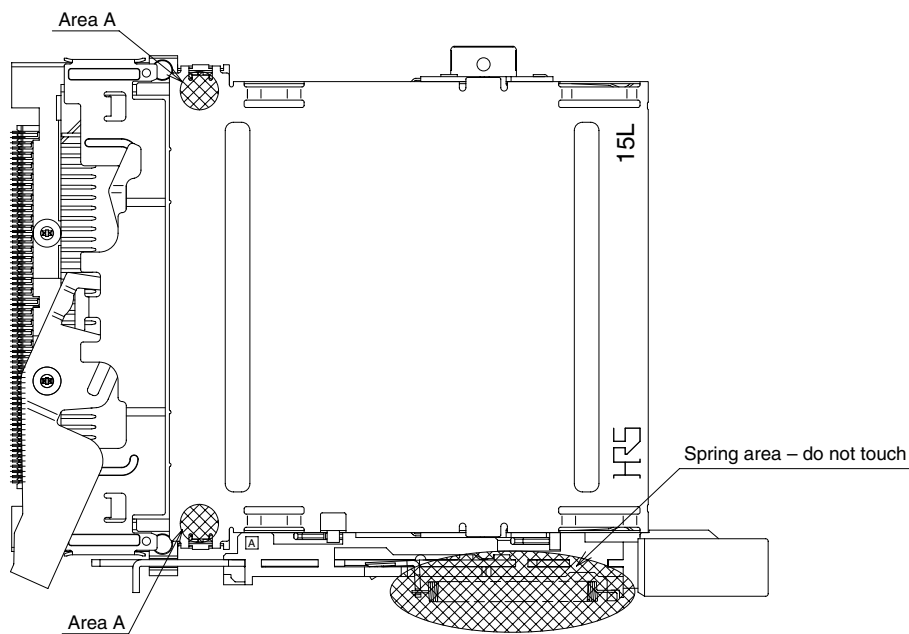


Fig. 4

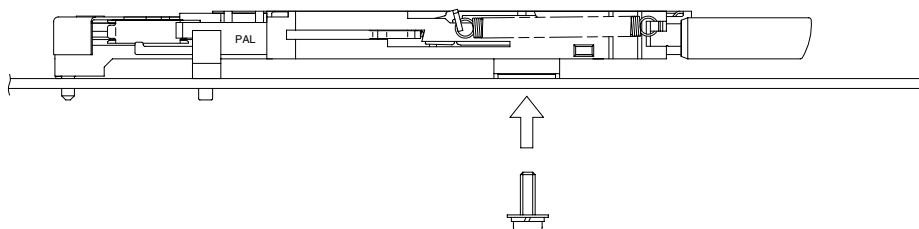


- (3) Assuring the correct alignment firmly press-down the shield plate of the Guide unit (at the areas “A”) into the SMT unit until a loud “click” sound is heard. Both units should be now firmly locked together.



Note 1: When placing the Guide unit over the SMT unit, DO NOT press on any other area than “A”.

- (4) Attach the Guide unit in two places using recommended screws (Not supplied).



Screw description	Recommended Fastening Torque
M2×0.4	0.12~0.16 (N · m)

Note 2: When attaching the screws exercise caution not to deform the shield plate.

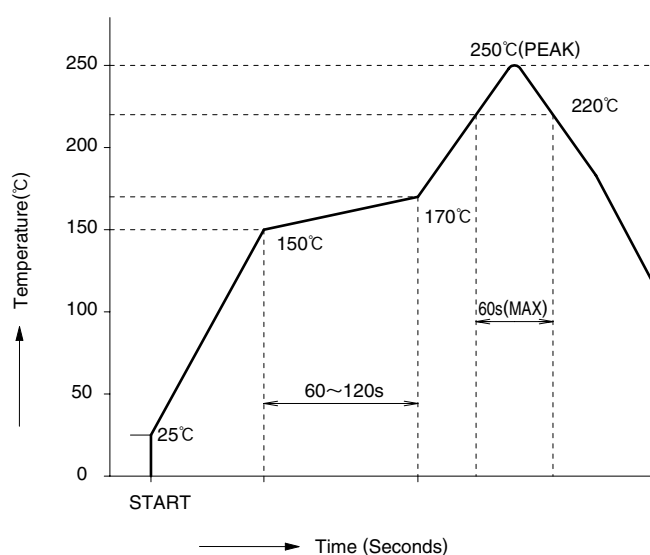
Note 3: Do not insert/eject the PC card before the SMT unit and the Guide unit are fully mounted and locked.

Note 4: Metal components of these connector assemblies have sharp edges. Use caution when handling and assembling.

Note 5: Slight tool marks or cleaning fluid residue on the surfaces of the Guide unit will not affect form, fit or function of the assemblies.



## ◆ Recommended temperature profile



## ● Recommended conditions

- Reflow system: IR reflow
- Solder composition: Paste, 96.5%Sn/3.0%Ag/0.5%Cu (Flux content 10.5wt%)
- Test board: Glass epoxy 80mm×125mm×1.6mm thick
- Metal mask: 0.15mm thick

The temperature profiles are based on the above conditions.

In individual applications the actual temperature may vary, depending on solder paste type, volume/thickness and board size/thickness. Consult your solder paste and equipment manufacturer for specific recommendations.



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