

# IC149 Series (SMT)

# QFP/TQFP - 100 Pins (25x25) 0.5mm pitch

## Specifications

Insulation Resistance:	500MΩ at 150V DC	
Withstanding Voltage:	100V <sub>eff</sub> to 700V <sub>eff</sub> for 1 minute	
Contact Resistance:	30mΩ max. at 10mA and 20mV	
Operating Temp. Range:	-25°C to +85°C	
Reflow-soldering Temp.:	220°C for 60 seconds	
Mating Cycles:	20 insertions maximum	
Solvent Durability:	Freon	
Allowable Torque (max.):	- for 1-time screw connection	= max 0.147 Nm
	- for repetitive screw connection	= min 0.078 Nm max 0.098 Nm

## Materials and Finish

Housing: Polyphenylenesulfide (PPS) glass filled UL94V-0  
 Contact: Beryllium Copper (BeCu)  
 Plating: SnPb 2.0 ~ 4.0μm over 2.5 ~ 4.5μm Ni = S5  
 Au 0.3μm min. over 2.5 ~ 4.5μm Ni = B5

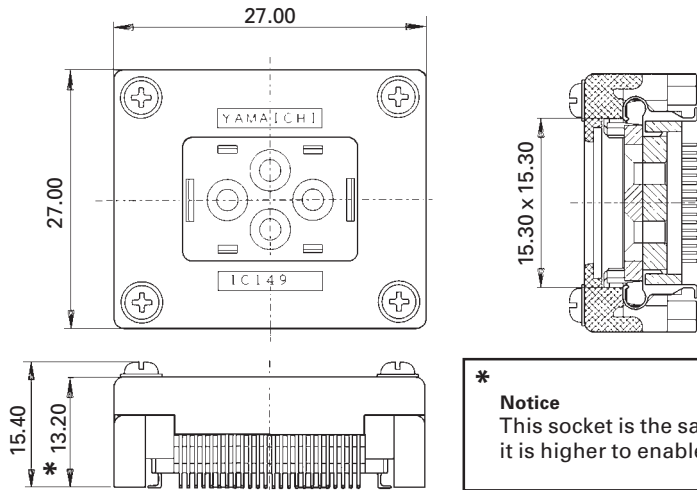
## Part Number (Details)

IC149 - 100 - \*54 - \*5 1

Series No.	54
No. of Contact Pins	100
Positioning Pins:	5
0 = Without Pins	
1 = With Pins	
Contact Plating:	S5
S = SnPb (for IC-socket Use)	
B = Gold (for Adapter Use)	
0 = without Screws	1 = with Screws

## Compatible Emulation-Adapter ICP-100-5

## Outline Socket Dimensions (Reference Only)



### Remarks

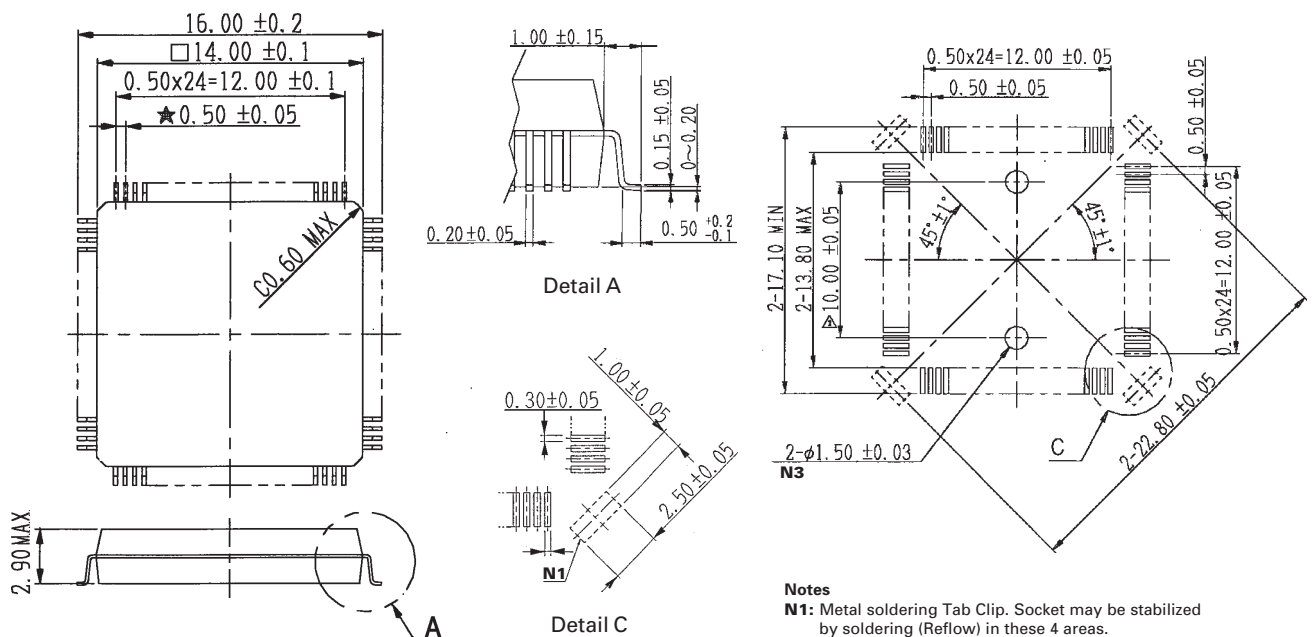
1. Ensure a clean contact area. Fluxes, dust and other impurities may cause corrosion and contact problems.
2. This Socket is not for automatic production. It is particularly suitable for the development of software stored in ROM and for testing LSI-IC's.
3. Careful attention must be taken when fixing the Socket, since it is entirely made from thermoplastic material. If the max. torque is exceeded, the Socket will be damaged beyond repair.
4. If using the Socket with an Adapter, please use the gold-plated Socket version.

**\* Notice**  
 This socket is the same as IC149-100-\*25-S5, except it is higher to enable an easier soldering by hand

## IC - Dimensions

## Socket PCB-Layout

## Top View from Socket



### Notes

- N1:** Metal soldering Tab Clip. Socket may be stabilized by soldering (Reflow) in these 4 areas.  
**N3:** These holes are only necessary for use with positioning pins.

# IC149 Series (SMT)

# QFP/TQFP - 100 Pins (25x25) 0.5mm pitch

## Specifications

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Mating Cycles:	20 insertions maximum	
Solvent Durability:	Freon	
Allowable Torque (max.):	- for 1-time screw connection	= max 0.147 Nm
	- for repetitive screw connection	= min 0.078 Nm max 0.098 Nm

## Materials and Finish

Housing: Polyphenylenesulfide (PPS) glass filled UL94V-0  
 Contact: Beryllium Copper (BeCu)  
 Plating: SnPb 2.0 ~ 4.0μm over 2.5 ~ 4.5μm Ni = S5  
 Au 0.3μm min. over 2.5 ~ 4.5μm Ni = B5

## Part Number (Details)

**IC149 - 100 - \*25 - \*5**

Series No.

No. of Contact Pins

Positioning Pins:

0 = Without Pins

1 = With Pins

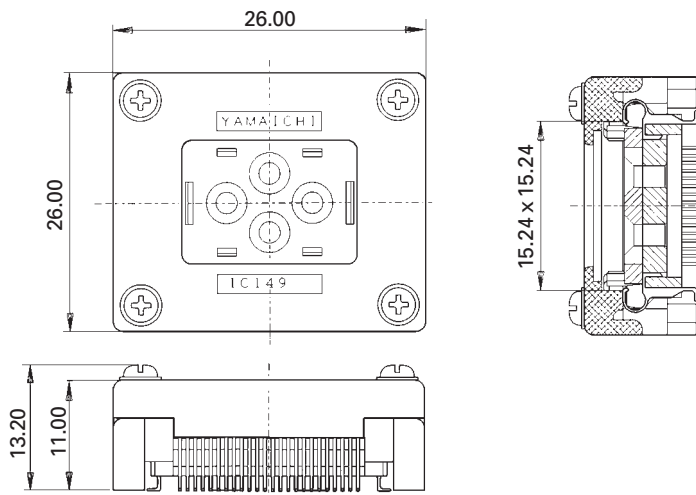
Contact Plating:

S = SnPb (for IC-socket Use)

B = Gold (for Adapter Use)

## Compatible Emulation-Adapter ICP-100-5

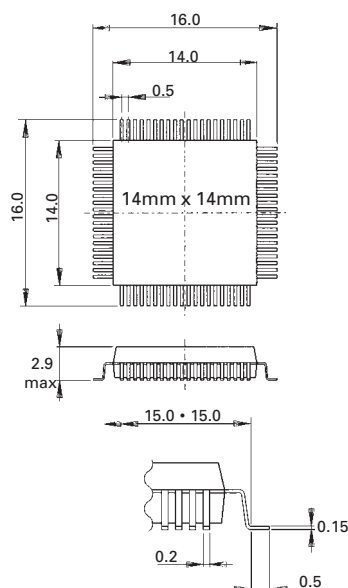
## Outline Socket Dimensions (Reference Only)



### Remarks

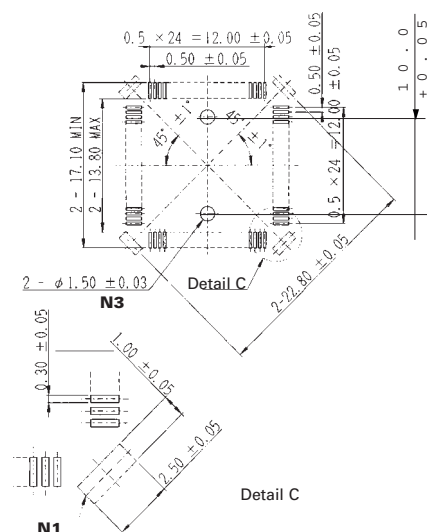
1. Ensure a clean contact area. Fluxes, dust and other impurities may cause corrosion and contact problems.
2. This Socket is not for automatic production. It is particularly suitable for the development of software stored in ROM and for testing LSI-IC's.
3. Careful attention must be taken when fixing the Socket, since it is entirely made from thermoplastic material. If the max. torque is exceeded, the Socket will be damaged beyond repair.
4. If using the Socket with an Adapter, please use the gold-plated Socket version.

## IC - Dimensions



## Socket PCB-Layout

Top View from Socket



### Notes

- N1:** Metal soldering Tab Clip. Socket may be stabilized by soldering (Reflow) in these 4 areas.  
**N3:** These holes are only necessary for use with positioning pins.

# IC149 / ICP Series

# Emulation-Adapter (100 pins)

## Specifications

Insulation Resistance:	500MΩ at 150V DC	
Withstanding Voltage:	700V AC for 1 minute	
Contact Resistance:	30mΩ max. at 10mA and 20mV	
Operating Temp. Range:	-25°C to +85°C	
Reflow-soldering Temp.:	220°C for 60 seconds	
Mating Cycles:	20 insertions maximum	
Allowable Torque (max.):	- for 1-time screw connection	= max 0.147 Nm
	- for repetitive screw connection	= min 0.078 Nm max 0.098 Nm

## Adapter Part Number

ICP-100-5

## Compatible Socket (Part No.)

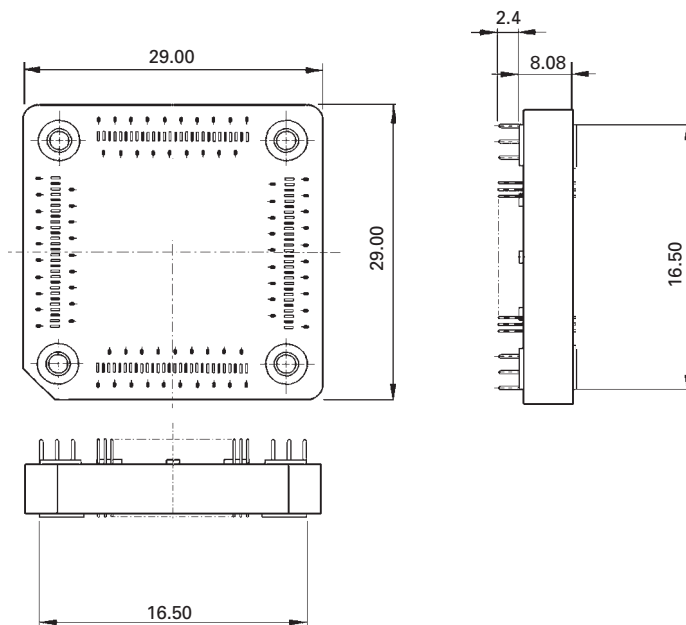
IC149-100-025-B5 (w/o pos. pins)

IC149-100-125-B5 (with pos. pins)

## Materials and Finish

Housing: PTES, glass filled UL94V-0  
 Contact: Phosphor Bronze  
 Plating: Au 0.3μm min. over 2.5 ~ 4.5μm Ni

## Outline Adapter Dimensions (Reference Only)

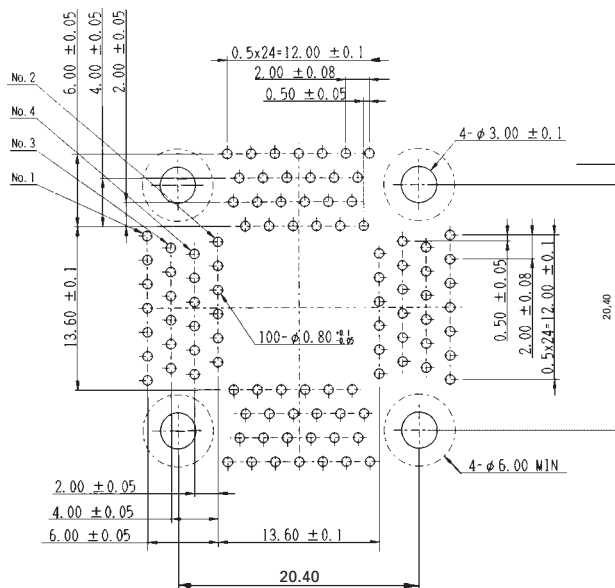


### Remarks

1. Ensure a clean contact area. Fluxes, dust and other impurities may cause corrosion and contact problems.
2. Careful attention must be taken when fixing the Adapter, since it is made from thermoplastic material. By exceeding the maximum torque a perfect performance can no longer be guaranteed.

## Adapter PCB-Layout (IC149-100-\*25-B5)

Top View from Soldering Side



Note: No conduits within this hatched area.

# IC149 Series (SMT)

# BQFP - 100 Pins (25x25) 0.635mm pitch

## Specifications

Insulation Resistance:	500MΩ at 150V DC	
Withstanding Voltage:	100V <sub>eff</sub> to 700V <sub>eff</sub> for 1 minute	
Contact Resistance:	30mΩ max. at 10mA and 20mV	
Operating Temp. Range:	-25°C to +85°C	
Reflow-soldering Temp.:	220°C for 60 seconds	
Mating Cycles:	20 insertions maximum	
Solvent Durability:	Freon	
Allowable Torque (max.):	- for 1-time screw connection	= max 0.147 Nm
	- for repetitive screw connection	= min 0.078 Nm max 0.098 Nm

## Materials and Finish

Housing: Polyphenylenesulfide (PPS) glass filled UL94V-0  
 Contact: Beryllium Copper (BeCu)  
 Plating: SnPb 2.0 ~ 4.0μm over 2.5 ~ 4.5μm Ni = S5  
 Au 0.3μm min. over 2.5 ~ 4.5μm Ni = B5

## Part Number (for IC-use)

**IC149 - 100 - \*28 - S5**

Series No.

No. of Contact Pins

Positioning Pins:

0 = Without Pins

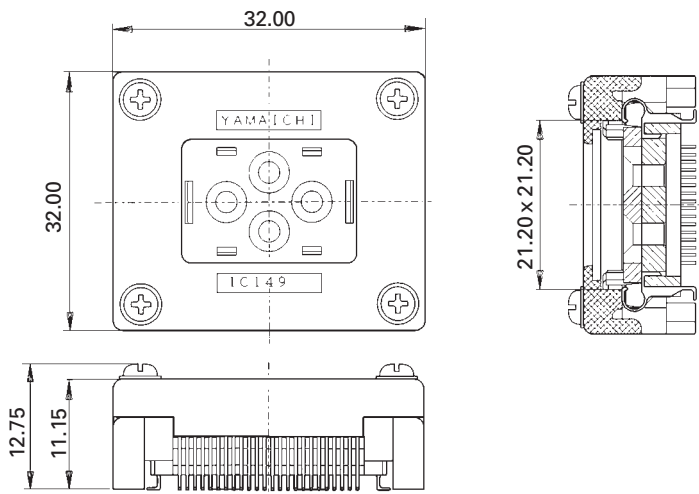
1 = With Pins

Contact Plating:

S5 = SnPb

**Compatible Emulation-Adapter not available**

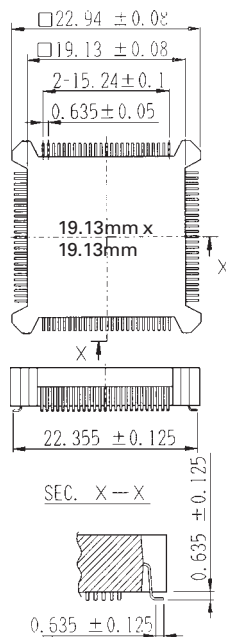
## Outline Socket Dimensions (Reference Only)



### Remarks

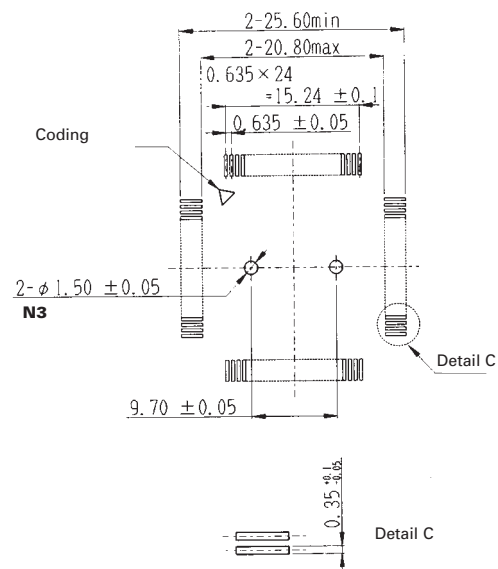
1. Ensure a clean contact area. Fluxes, dust and other impurities may cause corrosion and contact problems.
2. This Socket is not for automatic production. It is particularly suitable for the development of software stored in ROM and for testing LSI-IC's.
3. Careful attention must be taken when fixing the Socket, since it is entirely made from thermoplastic material. If the max. torque is exceeded, the Socket will be damaged beyond repair.
4. If using the Socket with an Adapter, please use the gold-plated Socket version.

## IC - Dimensions



## Socket PCB-Layout

Top View from Socket



### Notes

**N3:** These holes are only necessary for use with positioning pins.

# IC149 Series (SMT)

# QFP/TQFP - 100 Pins (20x30) 0.65mm pitch

## Specifications

Insulation Resistance:	500MΩ at 150V DC	
Withstanding Voltage:	100V <sub>eff</sub> to 700V <sub>eff</sub> for 1 minute	
Contact Resistance:	30mΩ max. at 10mA and 20mV	
Operating Temp. Range:	-25°C to +85°C	
Reflow-soldering Temp.:	220°C for 60 seconds	
Mating Cycles:	20 insertions maximum	
Solvent Durability:	Freon	
Allowable Torque (max.):	- for 1-time screw connection	= max 0.147 Nm
	- for repetitive screw connection	= min 0.078 Nm max 0.098 Nm

## Materials and Finish

Housing: Polyphenylenesulfide (PPS) glass filled UL94V-0  
 Contact: Beryllium Copper (BeCu)  
 Plating: SnPb 2.0 ~ 4.0μm over 2.5 ~ 4.5μm Ni = S5  
 Au 0.3μm min. over 2.5 ~ 4.5μm Ni = B5

## Part Number (Details)

**IC149 - 100 - \*14 - \*5**

Series No.

No. of Contact Pins

Positioning Pins:

0 = Without Pins

1 = With Pins

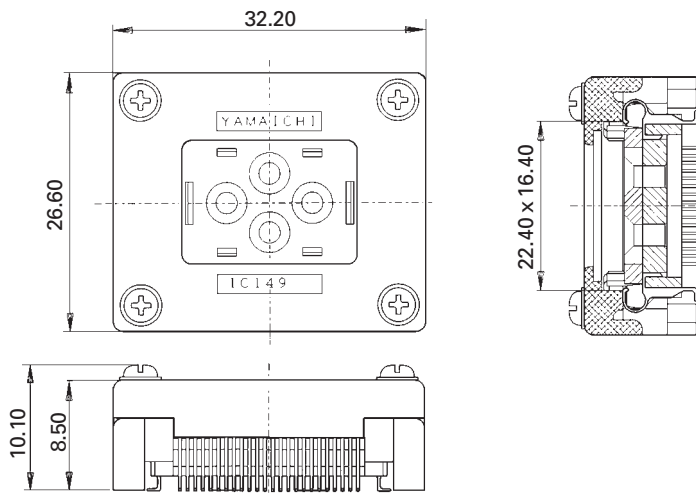
Contact Plating:

S = SnPb (for IC-socket Use)

B = Gold (for Adapter Use)

**Compatible Emulation-Adapter  
 ICP-100-4-4 (with 4 x M2.0 -12.0mm)**

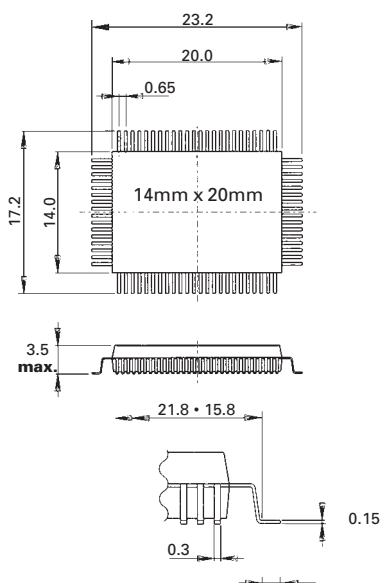
## Outline Socket Dimensions (Reference Only)



### Remarks

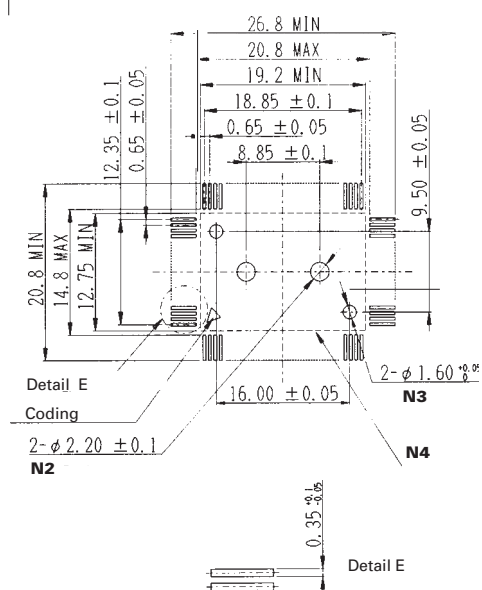
1. Ensure a clean contact area. Fluxes, dust and other impurities may cause corrosion and contact problems.
2. This Socket is not for automatic production. It is particularly suitable for the development of software stored in ROM and for testing LSI-IC's.
3. Careful attention must be taken when fixing the Socket, since it is entirely made from thermoplastic material. If the max. torque is exceeded, the Socket will be damaged beyond repair.
4. If using the Socket with an Adapter, please use the gold-plated Socket version.

## IC - Dimensions



## Socket PCB-Layout

Top View from Socket



### Notes

- N2:** These holes are only necessary when fixing the Socket with screws.  
**N3:** These holes are only necessary for use with positioning pins.  
**N4:** The Socket may be glued to the PC Board within this area.



# IC149 Series (SMT)

# QFP/TQFP - 100 Pins (20x30) 0.65mm pitch

## Specifications

Insulation Resistance: 500MΩ at 150V DC  
 Withstanding Voltage: 100V<sub>eff</sub> to 700V<sub>eff</sub> for 1 minute  
 Contact Resistance: 30mΩ max. at 10mA and 20mV  
 Operating Temp. Range: -25°C to +85°C  
 Reflow-soldering Temp.: 220°C for 60 seconds  
 Mating Cycles: 20 insertions maximum  
 Solvent Durability: Freon

## Materials and Finish

Housing: Polyphenylenesulfide (PPS) glass filled UL94V-0  
 Contact: Beryllium Copper (BeCu)  
 Plating: SnPb 2.0 ~ 4.0μm over 2.5 ~ 4.5μm Ni = S5  
 Au 0.3μm min. over 2.5 ~ 4.5μm Ni = B5

Extra Feature: Clipped Cover

## Part Number (for IC-use)

IC149 - 100 - \*05 - S5

Series No.

No. of Contact Pins

Positioning Pins:

0 = Without Pins

1 = With Pins

Contact Plating:

S = SnPb

## Part Numbers (for Adapter-use)

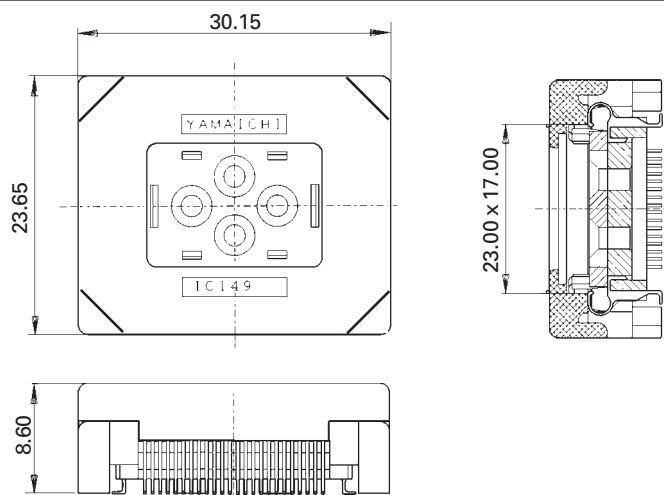
IC149-100-KS11113-0 (w/o pos. pins)

IC149-100-KS11113-1 (with pos. pins)

## Compatible Emulation-Adapter

ICP-100-4-1 (with 2 x M2.5 -12.0mm)

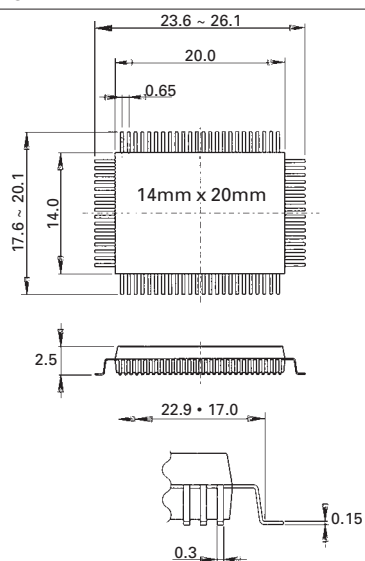
## Outline Socket Dimensions (Reference Only)



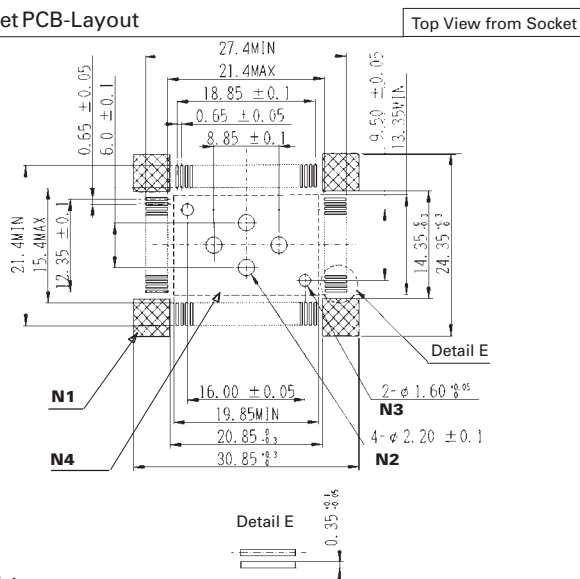
### Remarks

1. Ensure a clean contact area. Fluxes, dust and other impurities may cause corrosion and contact problems.
2. This Socket is not for automatic production. It is particularly suitable for the development of software stored in ROM and for testing LSI-IC's.
3. Careful attention must be taken when fixing the Socket, since it is entirely made from thermoplastic material. If the max. torque is exceeded, the Socket will be damaged beyond repair.
4. If using the Socket with an Adapter, please use the gold-plated Socket version.

## IC - Dimensions



## Socket PCB-Layout



### Notes

- N1:** Metal soldering Tab Clip. Socket may be stabilized by soldering (Reflow) in these 4 areas.
- N2:** These holes are only necessary when fixing the Socket with screws.
- N3:** These holes are only necessary for use with positioning pins.
- N4:** The Socket may be glued to the PC Board within this area.

# IC149 / ICP Series

# Emulation-Adapter (100 pins)

## Specifications

Insulation Resistance:	500MΩ at 150V DC	
Withstanding Voltage:	700V AC for 1 minute	
Contact Resistance:	30mΩ max. at 10mA and 20mV	
Operating Temp. Range:	-25°C to +85°C	
Reflow-soldering Temp.:	220°C for 60 seconds	
Mating Cycles:	20 insertions maximum	
Allowable Torque (max.):	- for 1-time screw connection	= max 0.147 Nm
	- for repetitive screw connection	= min 0.078 Nm max 0.098 Nm

## Adapter Part Number

ICP-100-4-1 (with 2 x M2.5 - 12.0)

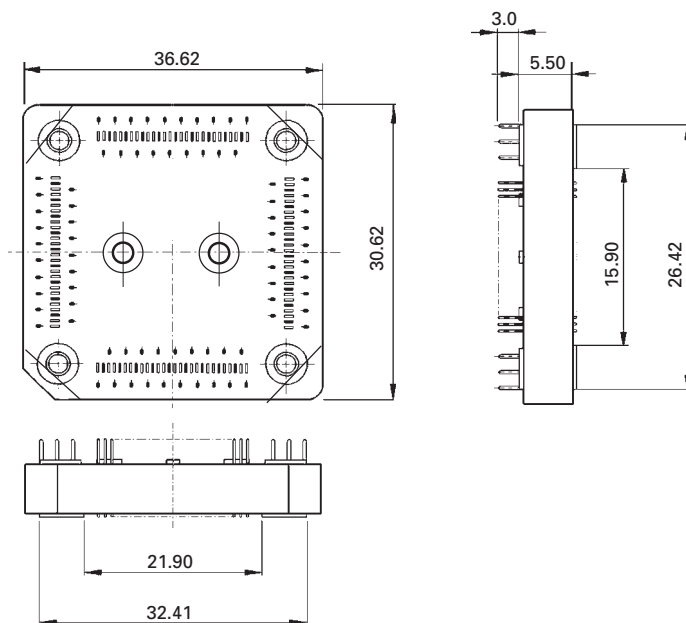
## Compatible Socket (Part No.)

IC149-100-KS1113-0 (w/o pos. pins)  
IC149-100-KS1113-1 (with pos. pins)

## Materials and Finish

Housing: PTES, glass filled UL94V-0  
Contact: Phosphor Bronze  
Plating: Au 0.3μm min. over 2.5 ~ 4.5μm Ni

## Outline Adapter Dimensions (Reference Only)

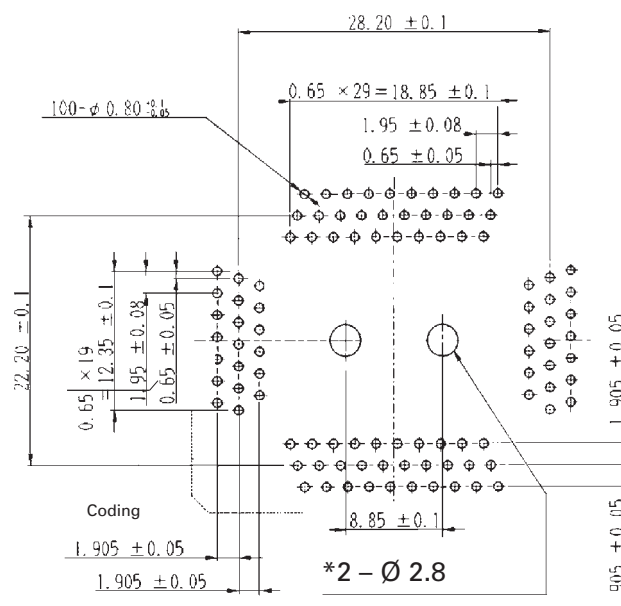


### Remarks

1. Ensure a clean contact area. Fluxes, dust and other impurities may cause corrosion and contact problems.
2. Careful attention must be taken when fixing the Adapter, since it is made from thermoplastic material. By exceeding the maximum torque a perfect performance can no longer be guaranteed.

Adapter PCB-Layout (IC149-100-KS1113-\*)

Top View from Soldering Side



\* PCB thickness from 1.2 - 3.4mm