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

# **Specifications**

Insulation Resistance:  $500 M\Omega$  at 150V DC

Withstanding Voltage:  $100V_{eff}$  to  $700V_{eff}$  for 1 minute Contact Resistance:  $30 m\Omega$  max. at 10 mA and 20 mV

Operating Temp. Range: -25°C to +85°C Reflow-soldering Temp.: 220°C for 60 seconds Mating Cycles: 20 insertions maximum

Solvent Durability:

- for 1-time screw connection Allowable Torque (max.): = 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)

SnPb  $2.0 \sim 4.0 \mu m$  over  $2.5 \sim 4.5 \mu m$  Ni = S5

Au  $0.3\mu m$  min. over  $2.5 \sim 4.5\mu m$  Ni = B5

# Part Number (Details)

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

Series No.

No. of Contact Pins

Positioning Pins:

0 = Without Pins

1 = With Pins

Contact Plating:

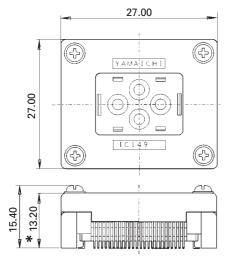
S = SnPb (for IC-socket Use)

B = Gold (for Adapter Use)

0 = without Screws 1 = with Screws

# Compatible Emulation-Adapter ICP-100-5

# Outline Socket Dimensions (Reference Only)



# $30 \times 15.30$

- 1. Ensure a clean contact area. Fluxes, dust and other impurifications may cause corrosion and contact problems
- 2. This Socket is not for automatic production. It is particulary 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.

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.

4. If using the Socket with an Adapter, please use the gold-plated Socket

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 16.00 ±0.2 00 ±0.14 □14.00 ±0.1 50x24=12.00 ±0.05 50x24=12.00 ±0. 50 ±0.05 . 50 ±0. 5 .50 ±0.05 2-17, 10 MIN 2-13,80 MAX $0.50^{+0.2}_{-0.1}$ 0. 20 ±0. 05 00 Detail A 2-ø1.50 ±0.03 C HHH

Detail C

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

# **Specifications**

Insulation Resistance:  $500 M\Omega$  at 150V DC

Withstanding Voltage:  $100V_{eff}$  to  $700V_{eff}$  for 1 minute Contact Resistance:  $30m\Omega$  max. at 10mA and 20mV

Operating Temp. Range: -25°C to +85°C 220°C for 60 seconds Reflow-soldering Temp.: 20 insertions maximum Mating Cycles:

Solvent Durability:

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)

SnPb  $2.0 \sim 4.0 \mu m$  over  $2.5 \sim 4.5 \mu m$  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

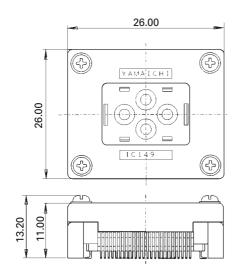
Contact Plating:

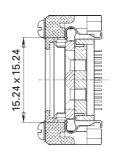
S = SnPb (for IC-socket Use)

B = Gold (for Adapter Use)

# Compatible Emulation-Adapter ICP-100-5

# Outline Socket Dimensions (Reference Only)





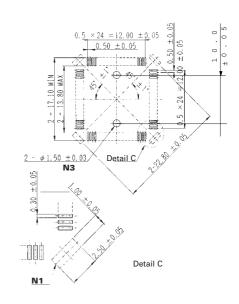
- 1. Ensure a clean contact area. Fluxes, dust and other impurifications may cause corrosion and contact problems
- 2. This Socket is not for automatic production. It is particulary suitable for the development of software stored in ROM and for testing LSI-IC's.
- 3. Careful attention must be taken when 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

# IC - Dimensions

# 14.0 0.5 14mm x 14mm 16.0 29 15.0 • 15.0

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**

 $\begin{array}{ll} \mbox{Insulation Resistance:} & 500\mbox{M}\Omega \mbox{ at 150V DC} \\ \mbox{Withstanding Voltage:} & 700\mbox{V AC for 1 minute} \end{array}$ 

Contact Resistance:  $30m\Omega$  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)

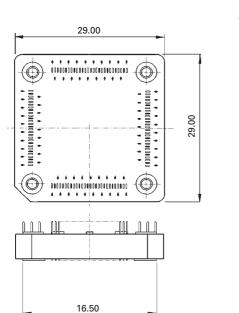
# Materials and Finish

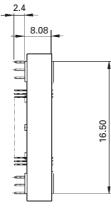
Housing: PTES, glass filled UL94V-0

Contact: Phosphor Bronze

Plating: Au 0.3µm min. over 2.5 ~ 4.5µm Ni

# Outline Adapter Dimensions (Reference Only)



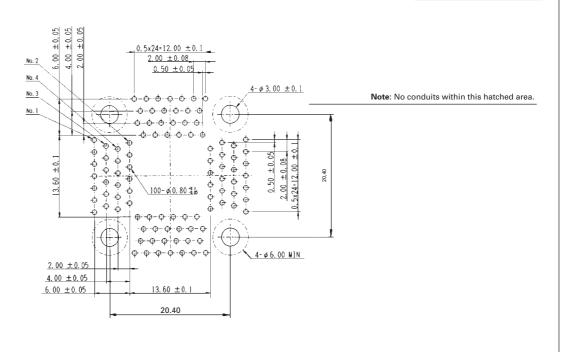


### Remarks

- Ensure a clean contact area. Fluxes, dust and other impurifications may cause corrosion and contact problems.
- 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





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

# **Specifications**

Insulation Resistance:  $500 M\Omega$  at 150V DC

Withstanding Voltage:  $100V_{eff}$  to  $700V_{eff}$  for 1 minute Contact Resistance:  $30m\Omega$  max. at 10mA and 20mV

Operating Temp. Range: -25°C to +85°C 220°C for 60 seconds Reflow-soldering Temp.: Mating Cycles: 20 insertions maximum

Solvent Durability:

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)

SnPb  $2.0 \sim 4.0 \mu m$  over  $2.5 \sim 4.5 \mu m$  Ni = S5

Au 0.3μm min. over 2.5 ~ 4.5μm Ni = B5

# Part Number (for IC-use)

100 - \*28 - S5 IC149 Series No.

No. of Contact Pins

Positioning Pins:

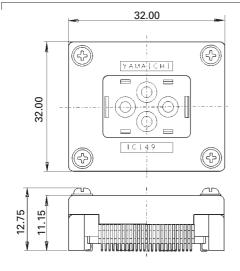
0 = Without Pins 1 = With Pins

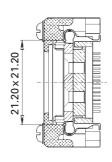
Contact Plating:

S5 = SnPb

# Compatible Emulation-Adapter not available

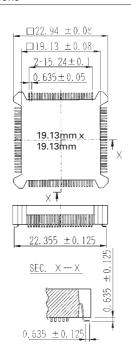
# Outline Socket Dimensions (Reference Only)





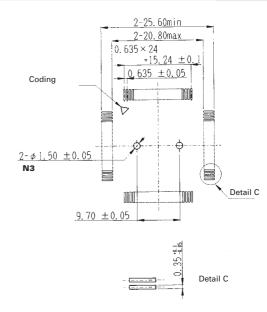
- 1. Ensure a clean contact area. Fluxes, dust and other impurifications may cause corrosion and contact problems.
- 2. This Socket is not for automatic production. It is particulary suitable for the development of software stored in ROM and for testing LSI-IC's.
- 3. Careful attention must be taken 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

# IC - Dimensions



# Socket PCB-Layout

Top View from Socket



### Notes

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



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

# **Specifications**

Insulation Resistance:  $500M\Omega$  at 150V DC

 $\begin{tabular}{lll} With standing Voltage: & 100V_{\rm eff} \ to \ 700V_{\rm eff} \ for \ 1 \ minute \\ Contact \ Resistance: & 30m\Omega \ max. \ at \ 10mA \ and \ 20mV \end{tabular}$ 

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  $\sim$  4.0 $\mu$ m over 2.5  $\sim$  4.5 $\mu$ m Ni = S5 Au 0.3 $\mu$ m min. over 2.5  $\sim$  4.5 $\mu$ m Ni = B5

# Part Number (Details)

IC149 - 100 - \*14 - \*5

Series No.

No. of Contact Pins

Positioning Pins:

0 = Without Pins

1 = With Pins

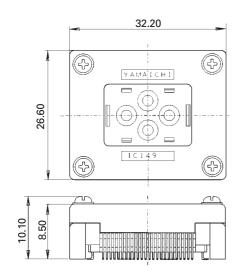
Contact Plating:

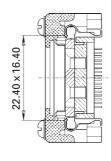
S = SnPb (for IC-socket Use)

B = Gold (for Adapter Use)

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

# Outline Socket Dimensions (Reference Only)

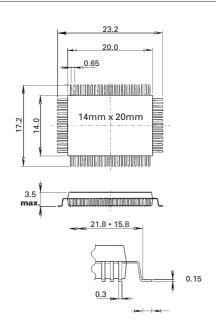




### Domarko

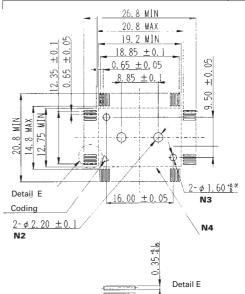
- 1. Ensure a clean contact area. Fluxes, dust and other impurifications may cause corrosion and contact problems.
- 2. This Socket is not for automatic production. It is particulary suitable for the development of software stored in ROM and for testing LSI-IC's.
- 3. Careful attention must be taken 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

# 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 / ICP Series

# Emulation-Adapter (100 pins)

# **Specifications**

 $\begin{array}{ll} \mbox{Insulation Resistance:} & 500\mbox{M}\Omega \mbox{ at 150V DC} \\ \mbox{Withstanding Voltage:} & 700\mbox{V AC for 1 minute} \end{array}$ 

Contact Resistance:  $30m\Omega$  max. at 10mA and 20mV

-25°C to +85°C

Operating Temp. Range: Reflow-soldering Temp.: Mating Cycles:

220°C for 60 seconds 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-100-4-4 (with 4 x M2.0 - 12.0)

Compatible Socket (Part No.)

IC149-100-014-B5 (w/o pos. pins) IC149-100-114-B5 (with pos. pins)

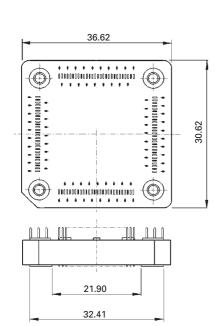
### Materials and Finish

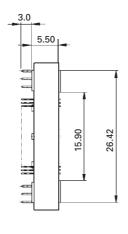
Housing: PTES, glass filled UL94V-0

Contact: Phosphor Bronze

Plating: Au 0.3µm min. over 2.5 ~ 4.5µm Ni

# Outline Adapter Dimensions (Reference Only)



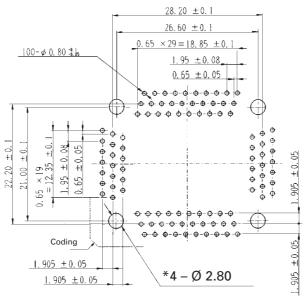


### Remarks

- Ensure a clean contact area. Fluxes, dust and other impurifications may cause corrosion and contact problems.
- 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-\*14-B5)

Top View from Soldering Side



\* PCB thickness from 1.2 - 3.4mm



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

# **Specifications**

Insulation Resistance:  $500M\Omega$  at 150V DC

Withstanding Voltage:  $100V_{\rm eff}$  to  $700V_{\rm eff}$  for 1 minute Contact Resistance:  $30m\Omega$  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 ~ 4.0 $\mu$ m over 2.5 ~ 4.5 $\mu$ m Ni = S5 Au 0.3 $\mu$ m min. over 2.5 ~ 4.5 $\mu$ m 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

Contact Plating:

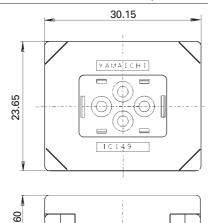
1 = With Pins

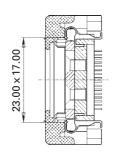
S = SnPb

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)

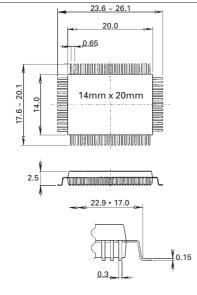




### Remarks

- 1. Ensure a clean contact area. Fluxes, dust and other impurifications may cause corrosion and contact problems.
- 2. This Socket is not for automatic production. It is particulary 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



# 21. 4MAX 18. 85 ± 0. 1 0. 65 ± 0. 05 8. 85 ± 0. 1 0. 65 ± 0. 05 19. 85 M N 19. 85 M N 20. 85 ½ 10. 00 ± 0. 05 19. 85 M N 10. 00 ± 0. 05 10. 85 M N 10. 00 ± 0. 05 10. 85 M N 10. 85 M N 10. 00 ± 0. 05 10. 85 M N 10. 00 ± 0. 05 10. 85 M N 10. 00 ± 0. 05 10. 85 M N 10. 00 ± 0. 05 10. 85 M N 10. 00 ± 0. 05 10. 85 M N 10. 00 ± 0. 05 10. 85 M N 10. 00 ± 0. 05

27.4MIN

Detail E

### Notes

Socket PCB-Layout

- 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.

30 85 %

N4: The Socket may be glued to the PC Board within this area.



Top View from Socket

# IC149 / ICP Series

# Emulation-Adapter (100 pins)

# **Specifications**

 $\begin{array}{ll} \mbox{Insulation Resistance:} & 500\mbox{M}\Omega \mbox{ at 150V DC} \\ \mbox{Withstanding Voltage:} & 700\mbox{V AC for 1 minute} \end{array}$ 

Contact Resistance:  $30m\Omega$  max. at 10mA and 20mV

-25°C to +85°C

Operating Temp. Range: Reflow-soldering Temp.: Mating Cycles:

220°C for 60 seconds 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-KS11113-0 (w/o pos. pins) IC149-100-KS11113-1 (with pos. pins)

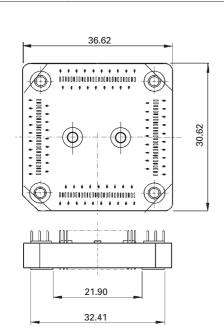
### Materials and Finish

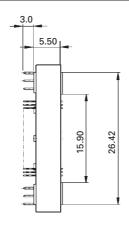
Housing: PTES, glass filled UL94V-0

Contact: Phosphor Bronze

Plating: Au 0.3µm min. over 2.5 ~ 4.5µm Ni

# Outline Adapter Dimensions (Reference Only)



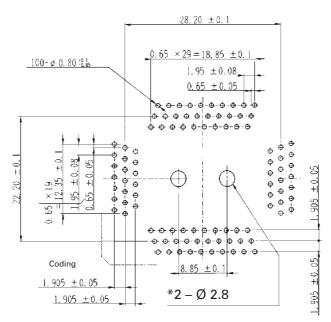


### Remarks

- Ensure a clean contact area. Fluxes, dust and other impurifications may cause corrosion and contact problems.
- 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

