

## Specifications

|                                  |                              |
|----------------------------------|------------------------------|
| Insulation Resistance:           | 1,000MΩ min. at 100V DC      |
| Dielectric Withstanding Voltage: | 100V AC for 1 minute         |
| Contact Resistance:              | 100mΩ max. at 10mA/20mV max. |
| Operating Temperature Range:     | -55°C to +170°C              |
| Contact Force:                   | 15g /pin (approx.)           |
| Mating Cycles:                   | 10,000 insertions            |

## Materials and Finish

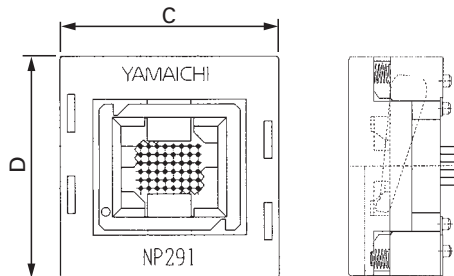
Housing: Polyethersulphone (PES), glass-filled and Polyetherimide (PEI), glass-filled  
 Contacts: Beryllium Copper (BeCu)  
 Plating: Gold over Nickel



## Features

- ⇨ Open top type sockets for FBGA packages
- ⇨ Contacting structure to nip the sides of solder balls to lower damages of coplanarity of solder balls

## Outline Socket Dimensions



## Part Number (Details)

**NP291 - 048 05 - 3 -(G4-BF) - \***

Series No.

No. of Contact Pins

Design Number

G = Contact Plating (Gold)

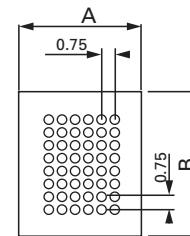
4 = Contact Style (180° TH)

Contact Area - Au (0.3μm min. over Ni)  
 Terminal Area - Au (0.05μm min. over Ni)

Positioning Pin Identification:

No Mark = Without Positioning Pins 'A' and 'B'  
 With Mark = For various Positioning Pin Options (Please contact Yamaichi)

## Outline IC Dimensions



| Part Number              | Pin Count | Pitch | Grid Size | IC Dimensions | Socket Dimensions |
|--------------------------|-----------|-------|-----------|---------------|-------------------|
|                          |           |       |           | A x B         | C x D             |
| NP291-03617-*            | 36        | 0.75  | 6x6       | 6.5x10.50     | 28.5x27.3         |
| NP291-04805-3* AC-16001  | 36        | 0.75  | 6x8       | 6x8           | 64x64             |
| NP291-04002-2 AC-11318   | 40        | 0.75  | 5x8       | 7.628x9.228   | 27.5x22.5         |
| NP291-04002-2-G4-BF-*    | 40        | 0.75  | 5x8       | 5.74x7.48     | 27.5x22.5         |
| NP291-04009-2-G4-BF-*    | 40        | 0.75  | 5x8       | 5.857x7.508   | 27.5x22.5         |
| NP291-04013-*            | 40        | 0.75  | 6x11      | 5.55x9.10     | 18x24             |
| NP291-04019              | 40        | 0.75  | 6x11      | 6.15x10.65    | 16x19             |
| NP291-04414-*            | 44        | 0.75  | 6x11      | 7.75x14.35    | 18x24             |
| NP291-04808-*AC-13177    | 45        | 0.75  | 6x8       | 7.45x7.55     | 28.3x27.3         |
| NP291-04812 AC-15741     | 46        | 0.75  | 6x8       | 6.50x7.91     | 28.3x27.3         |
| NP291-04812-2-* AC-14680 | 46        | 0.75  | 6x8       | 6.50x7.91     | 28.3x27.3         |
| NP291-04805-1*           | 48        | 0.75  | 6x8       | 9x15          | 32x32             |
| NP291-04805-3*           | 48        | 0.75  | 6x8       | 6x8           | 32x32             |
| NP291-04805-4*           | 48        | 0.75  | 6x8       | 7.20x11.65    | 32x32             |
| NP291-04805-5*           | 48        | 0.75  | 6x8       | 6.20x13.15    | 32x32             |
| NP291-04805-8*_*         | 48        | 0.75  | 6x8       | 6.94x14.40    | 32x32             |
| NP291-04808-2-G4-BF-*    | 48        | 0.75  | 6x8       | 7.58x9.81     | 28.3x27.3         |
| NP291-04812-2-G4-BF-*    | 48        | 0.75  | 6x8       | 6.50x7.91     | 28.3x27.3         |
| NP291-04842-*            | 48        | 0.75  | 6x8       | 7x7           | 20x20             |
| NP291-04843-*            | 48        | 0.75  | 6x8       | 6x8           | 20x20             |
| NP291-04848-*            | 48        | 0.75  | 6x8       | 8x10          | 20x20             |
| NP291-04851-_*_*         | 48        | 0.75  | 6x8       | 7x11          | 20x20             |
| NP291-04852-_*_*         | 48        | 0.75  | 6x8       | 9x12          | 20x20             |
| NP291-04878              | 48        | 0.75  | 6x8       | 7x8.50        | 20x20             |
| NP291-07210-2 AC-08904   | 54        | 0.75  | 8x9       | 7.67x16.37    | 28.4x33.9         |
| NP291-05658-_*_*         | 56        | 0.75  | 7x8       | 7.25x12       | 20x20             |
| NP291-07210-2 AC-08338   | 56        | 0.75  | 8x9       | 7.67x16.37    | 28.4x33.9         |
| NP291-05670              | 56        | 0.75  | 7x8       | 10x6.5        | 20x26             |
| NP291-07210-2-G4-BF-*    | 72        | 0.75  | 8x9       | 7.67x16.37    | 28.4x33.9         |
| NP291-07428-*            | 74        | 0.75  | 7x16      | 6.80x12.40    | 16.8x22.0         |
| NP291-07773-_*_*         | 77        | 0.75  | 7x11      | 7x10          | 20x26             |
| NP291-28807-*            | 288       | 0.75  | 22x22     | 18x18         | 40x40             |