

Specifications

Insulation Resistance:	1,000M min. at 100V DC
Dielectric Withstanding Voltage:	100V AC for 1 minute
Contact Resistance:	30m max. at 10mA/20mV max.
Operating Temperature Range:	-55°C to +150°C -40°C to +170°C
Contact Force:	30g per pin approx.
Mating Cycles:	10,000 insetsions

Materials and Finish

Housing: Polyetherimide (PEI), glass-filled
Polyethersulphone (PES), glass-filled

Contacts: Beryllium Copper (BeCu)

Plating: Gold over Nickel

Features

- ⇒ Open top type sockets for BGA packages
- ⇒ Self contacting structure without upper pressing force (ZIF)
- ⇒ Contacting structure to nip the sides of solder balls to lower damage to the coplanarity of the solder balls



Part Number (Details)

NP276 - 1105 22 - * - (*)

Series No.

No. of Contact Pins
(.AC-types are depopulated
base sockets)

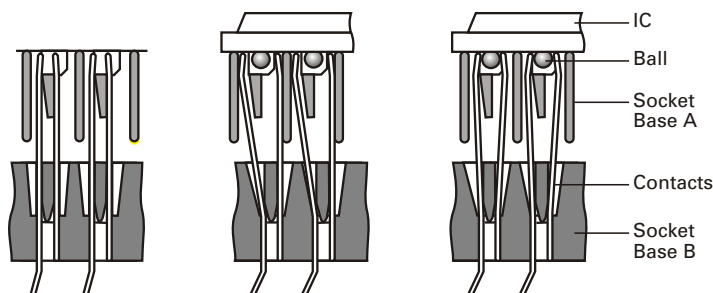
Design Number

Positioning Pin Options (see PCB):

	Pos. pin 'A'	Pos. pin 'B'
1 =	With	With
2 =	With	Without
3 =	Without	With
4 =	Without	Without

Contact Terminal Length and Form

Yamaichi's 2-point Tweezer Contact



Since the solder balls are touched by two contacts on each side, the solder ball damage can be minimized; additional features are low actuation force and compact socket size

We have depopulated versions from existing NP276 base sockets. As new versions are continually being tooled up we recommend to contact Yamaichi for your specific pin count and matching IC

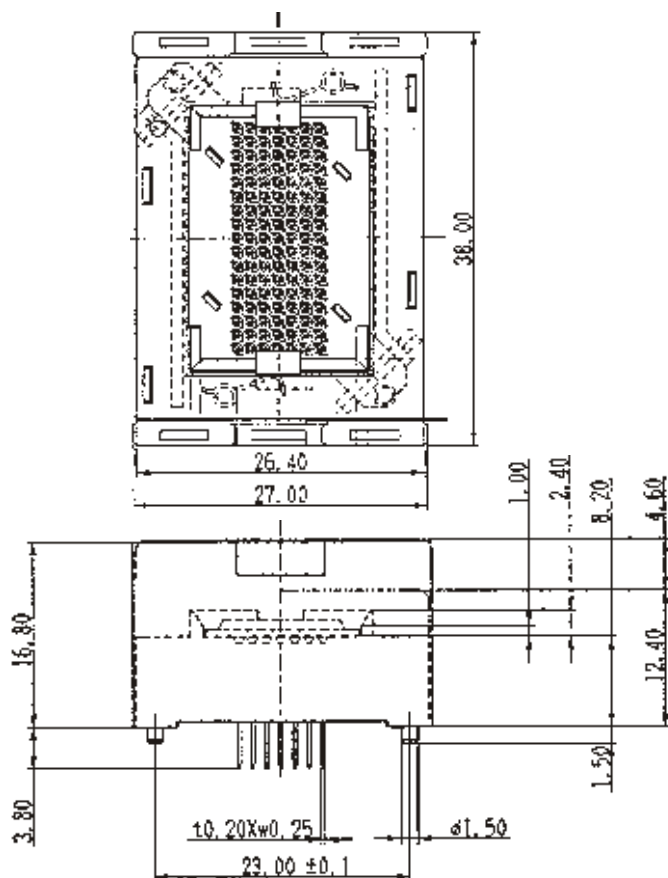
Applicable Base Socket and IC Dimensions

Part Number	Pin Count	Pitch	IC Dimensions		Base Sockets (see page)
			Grid Size	Body Size	
NP276-11904	119	1.27	7 x 17	14 x 22	2
NP276-11904-3	119	1.27	7 x 17	14 x 22	2
NP276-15316	153	1.27	9 x 17	14 x 22	3
NP276-16951	169	1.27	13 x 13	17 x 17	4
NP276-25626	256	1.27	16 x 16	21 x 21	5
NP276-37206	372	1.27	20 x 20	27 x 27	6
NP276-40009	400	1.27	20 x 20	27 x 27	7
NP276-59608	596	1.27	26 x 26	35 x 35	8
NP276-65227	652	1.27	28 x 28	37.5 x 37.5	9
NP276-87318	873	1.27	31 x 31	40 x 40	10
NP276-110522	1105	1.27	35 x 35	45 x 45	11

NP276 Series (Open Top) Ball Grid Array Base Socket (BGA, 1.27mm Pitch)

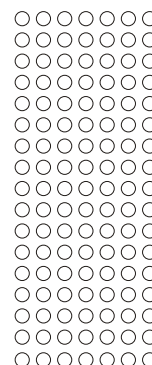
Base Socket NP276-11904

Outline Socket Dimensions (27.00 x 38.00mm)



Grid Size: 7 x 17

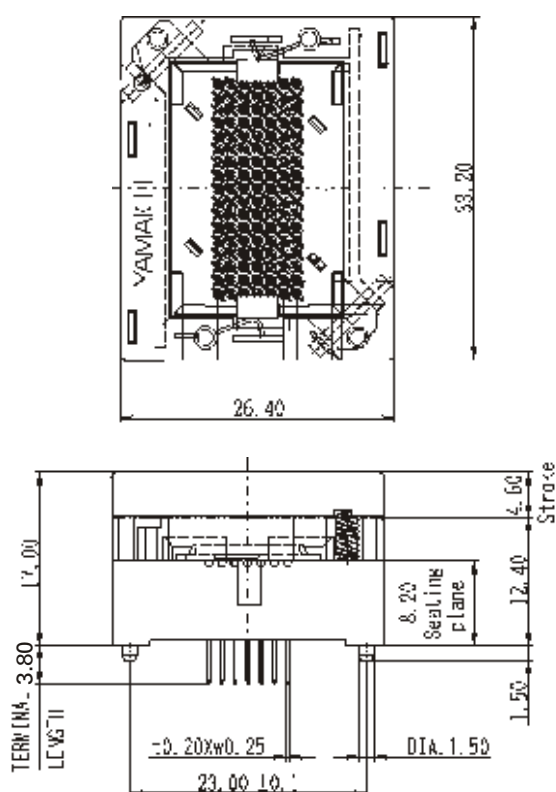
NP276-11904



Pin Count	119
Body Size	14 x 22

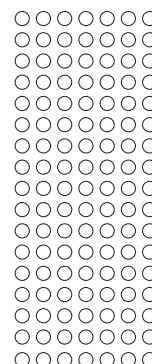
Base Socket NP276-11094-3

Outline Socket Dimensions (26.40 x 32.20mm)



Grid Size: 7 x 17

NP276-11094-3



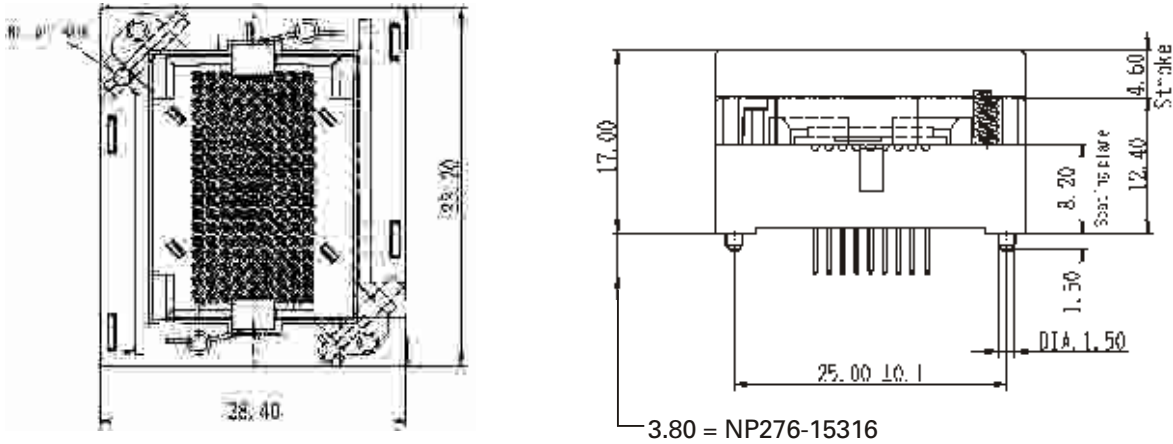
Pin Count	119
Body Size	14 x 22

NP276 Series (Open Top)

Ball Grid Array Base Socket (BGA, 1.27mm Pitch)

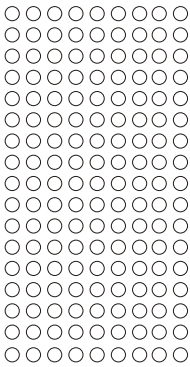
Base Socket NP276-15316

Outline Socket Dimensions (28.40 x 33.20mm)



Grid Size: 9 x 17

NP276-15316

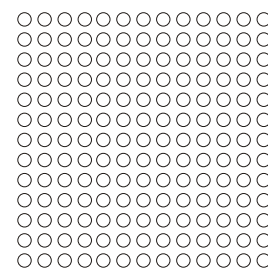
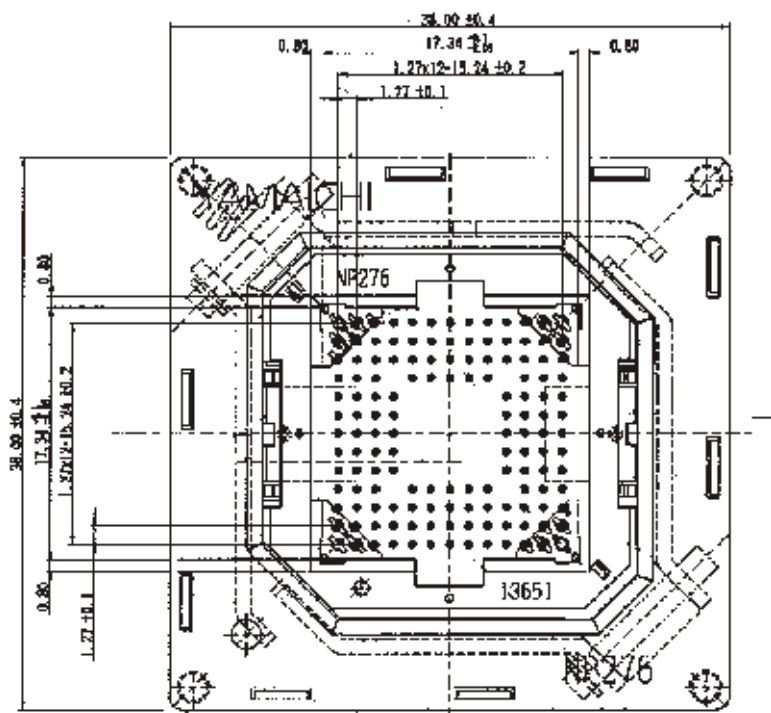


Pin Count	153
Body Size	14 x 22

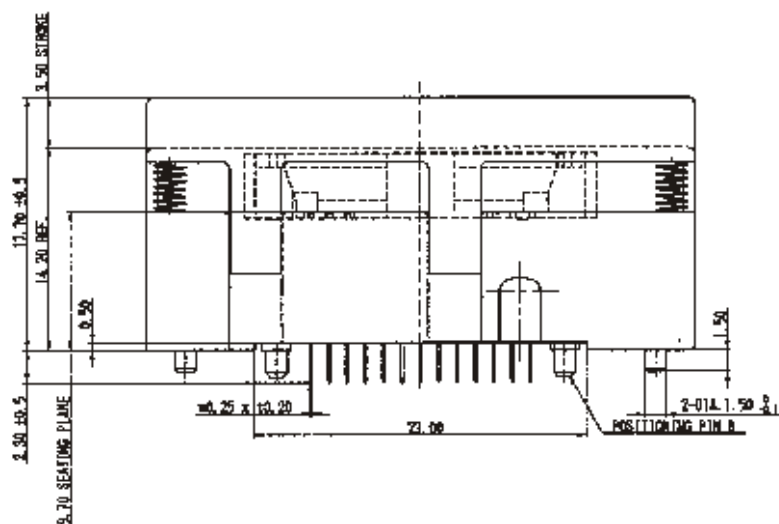
NP276 Series (Open Top) Ball Grid Array Base Socket (BGA, 1.27mm Pitch)

Base Socket NP276-16951

Outline Socket Dimensions (27.00 x 38.00mm)



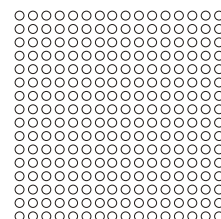
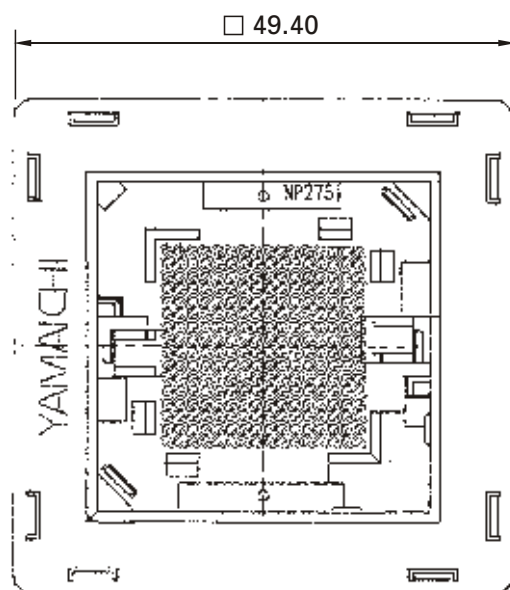
Pin Count	169
Body Size	17.0 x 17.0
Grid Size	13 x 13



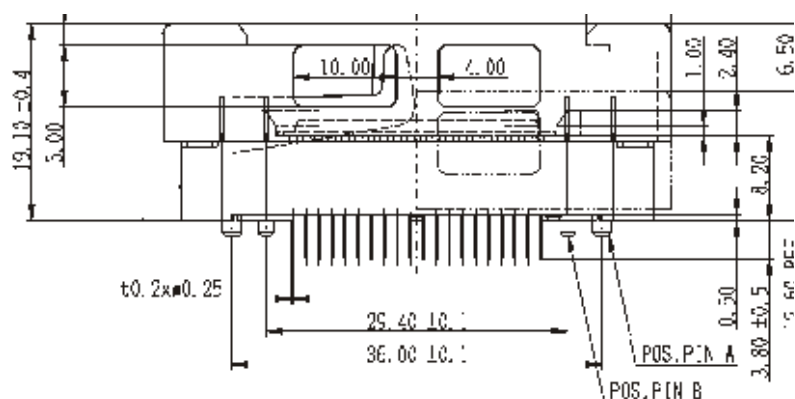
NP276 Series (Open Top) Ball Grid Array Base Socket (BGA, 1.27mm Pitch)

Base Socket NP276-25626

Outline Socket Dimensions (49.4 x 49.4mm)

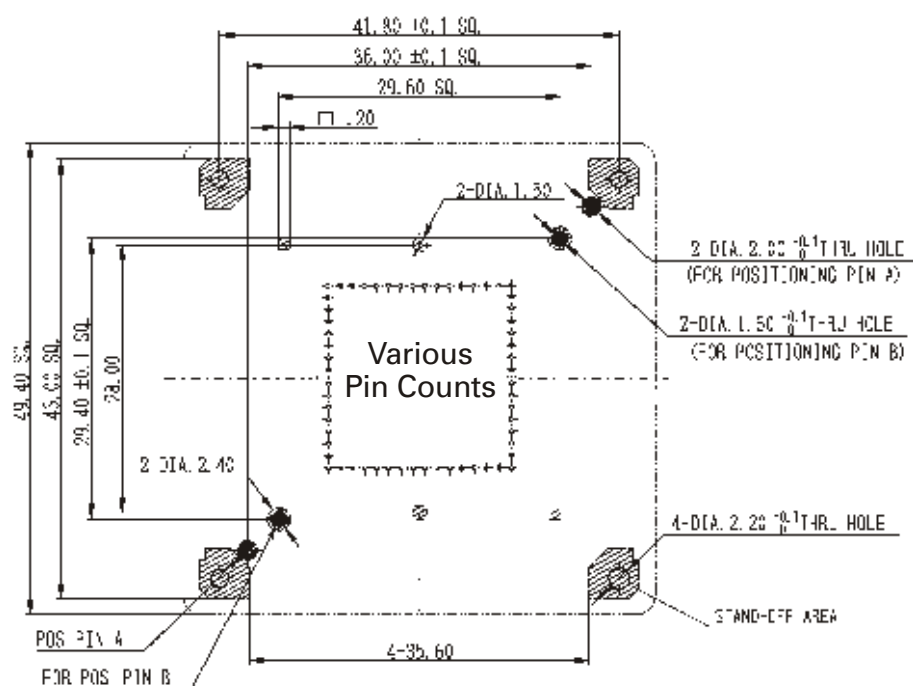


Pin Count	256
Body Size	21.0 x 21.0
Grid Size	16 x 16



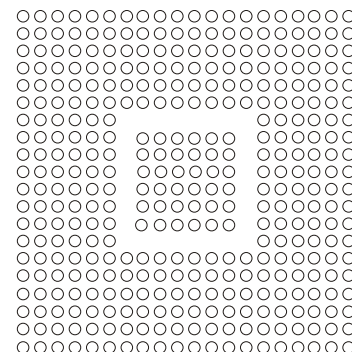
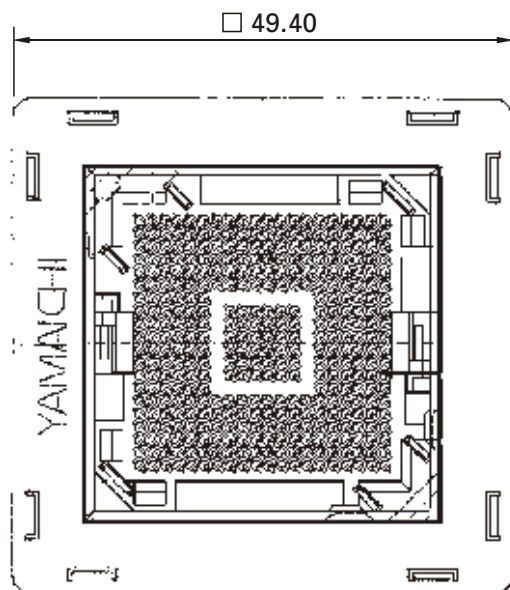
Recommended PC Board Layouts

Top View from Socket

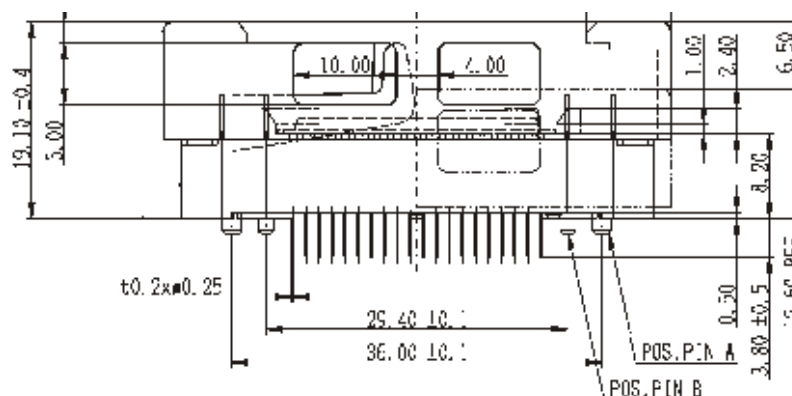


Base Socket NP276-37206

Outline Socket Dimensions (49.4 x 49.4mm)

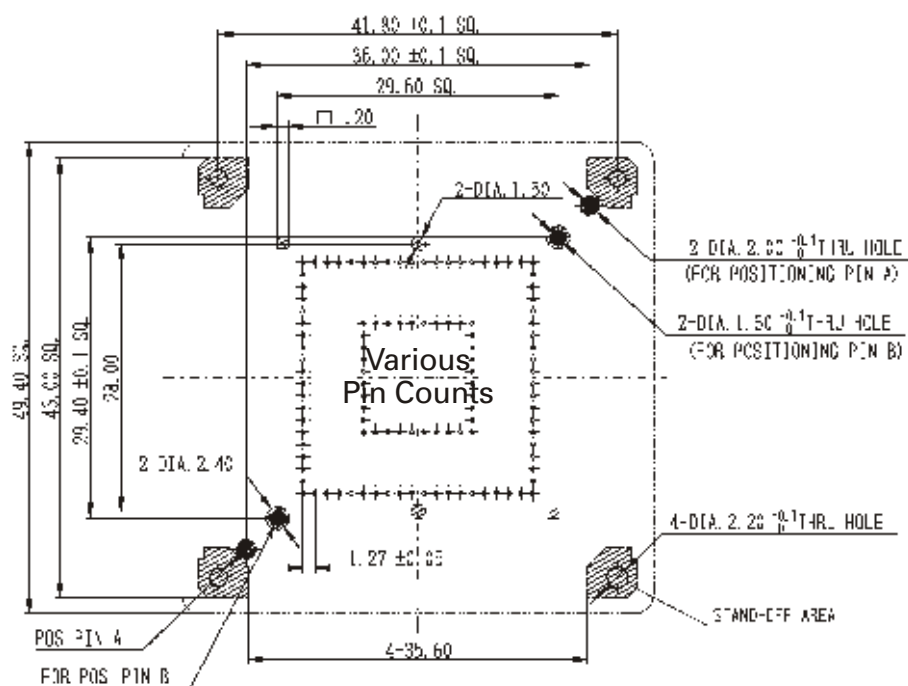


Pin Count	372
Body Size	27.0 x 27.0
Grid Size	20 x 20



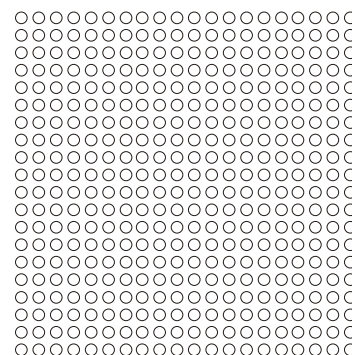
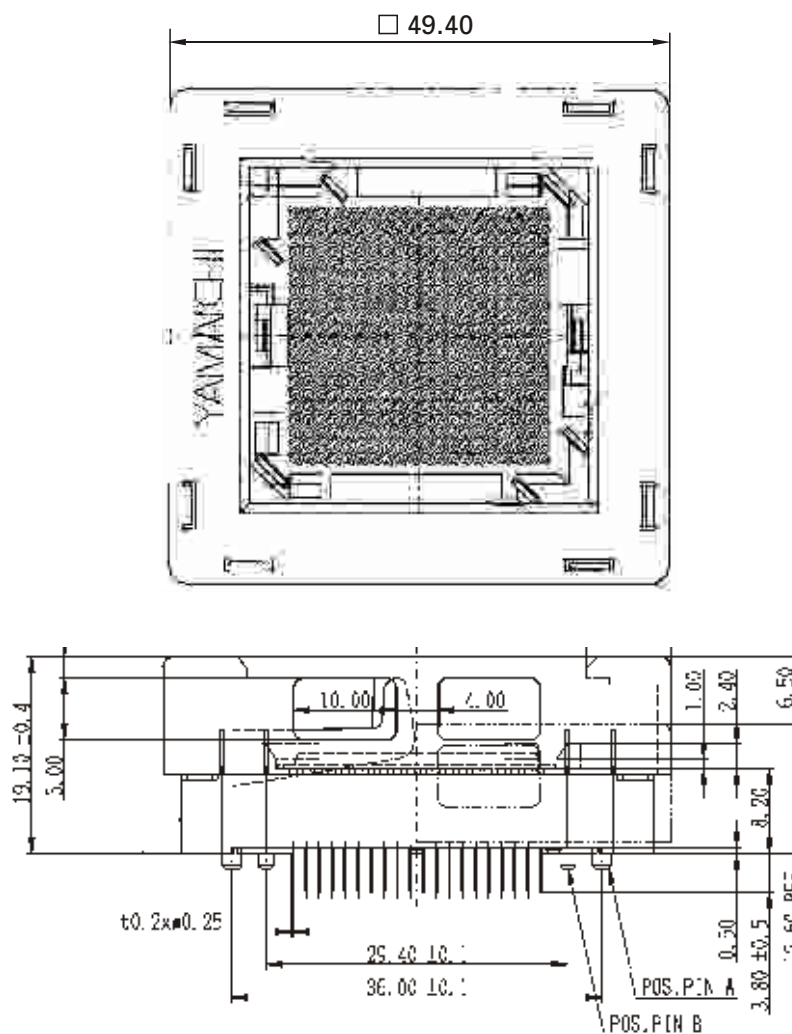
Recommended PC Board Layouts

Top View from Socket



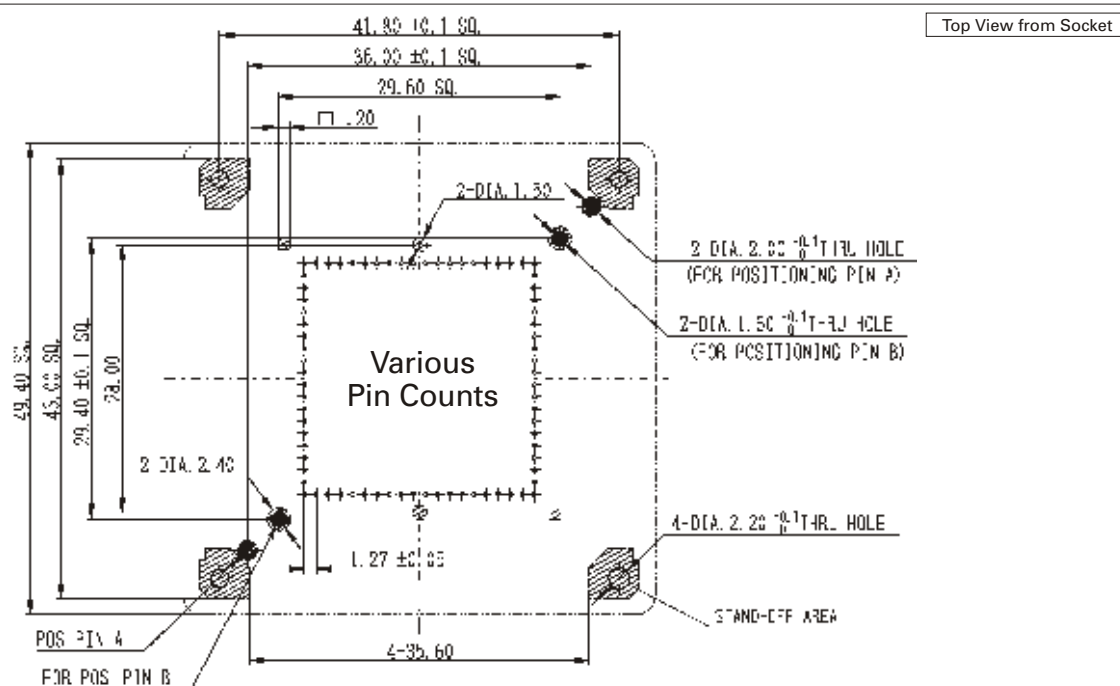
Base Socket NP276-40009

Outline Socket Dimensions (49.4 x 49.4mm)



Pin Count	400
Body Size	27.0 x 27.0
Grid Size	20 x 20

Recommended PC Board Layouts

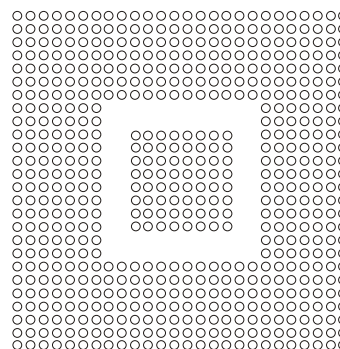
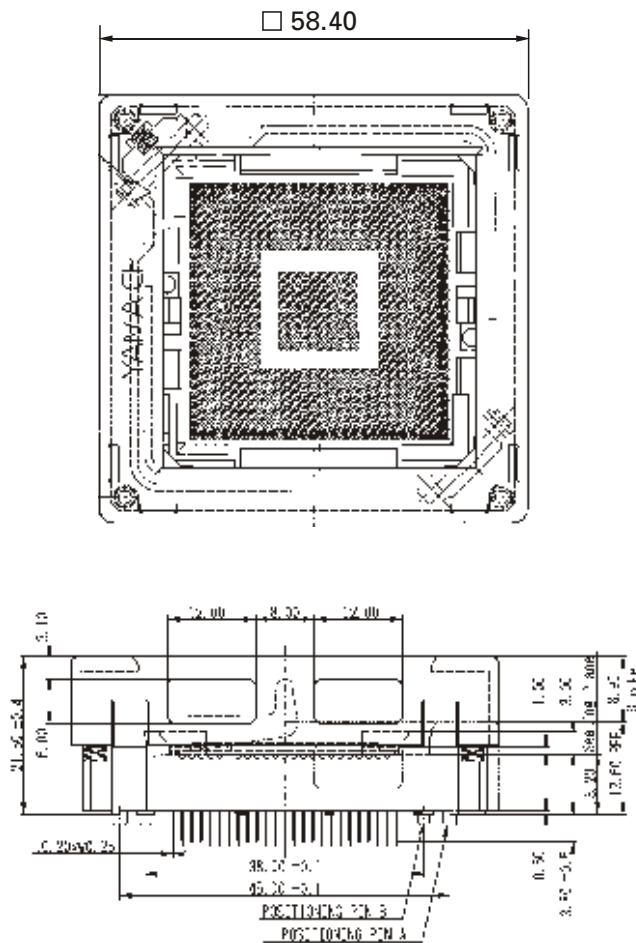


NP276 Series (Open Top) Ball Grid Array Base Socket (BGA, 1.27mm Pitch)

NP276 Series (Open Top) Ball Grid Array Base Socket (BGA, 1.27mm Pitch)

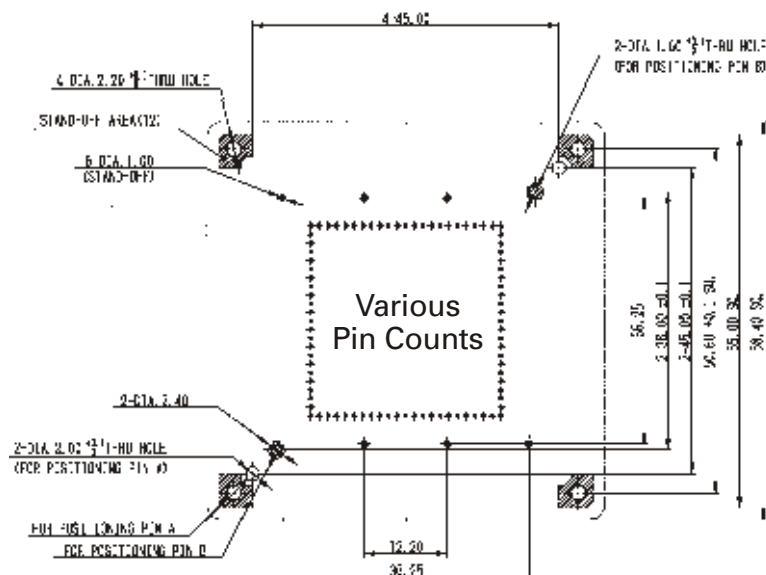
Base Socket NP276-59608

Outline Socket Dimensions (58.4 x 58.4mm)



Pin Count	596
Body Size	35.0 x 35.0
Grid Size	26 x 26

Recommended PC Board Layouts



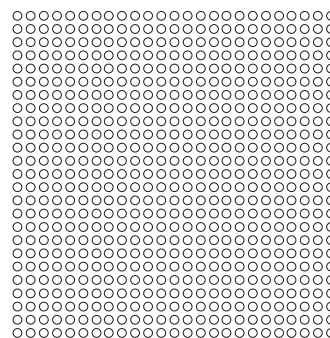
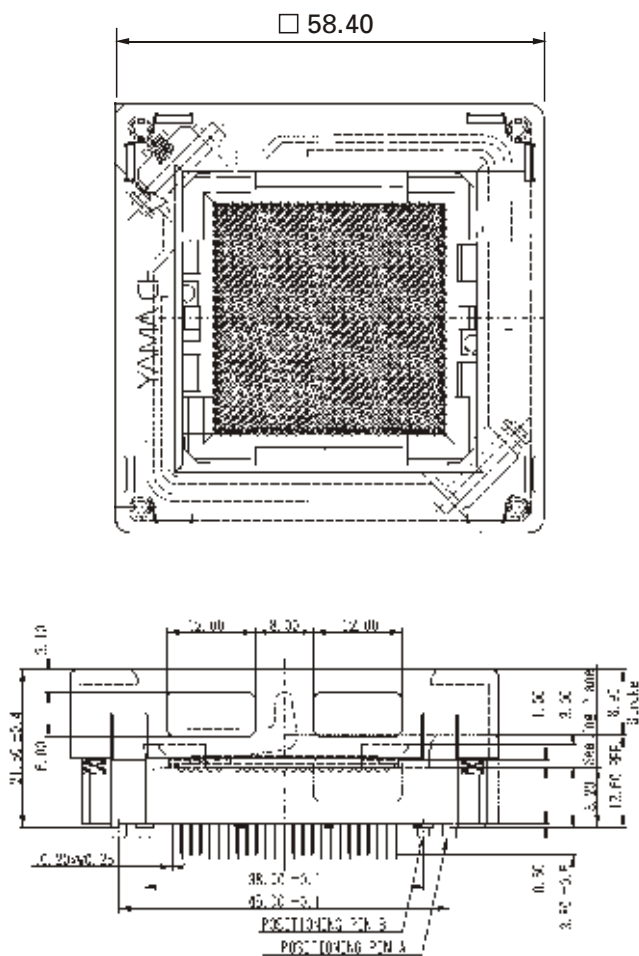
Top View from Socket

NP276 Series (Open Top) Ball Grid Array Base Socket (BGA, 1.27mm Pitch)

NP276 Series (Open Top) Ball Grid Array Base Socket (BGA, 1.27mm Pitch)

Base Socket NP276-62525

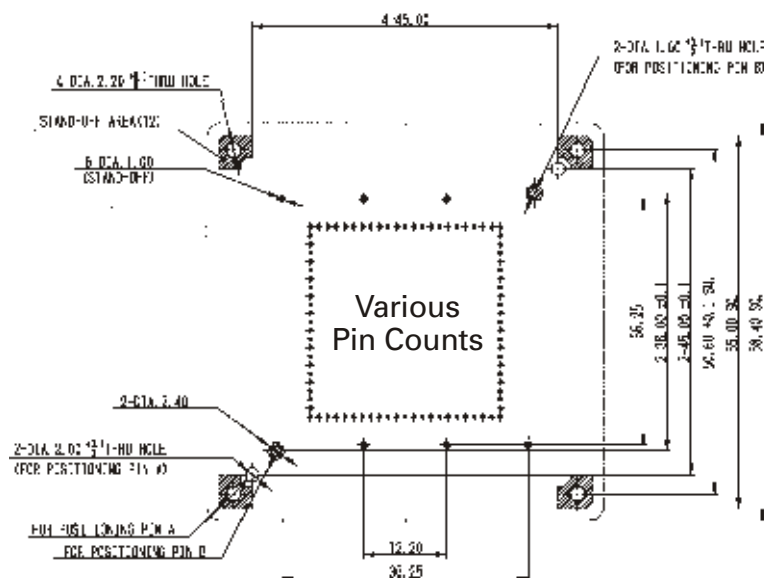
Outline Socket Dimensions (58.4 x 58.4mm)



Pin Count	625
Body Size	35.0 x 35.0
Grid Size	25 x 25

Recommended PC Board Layouts

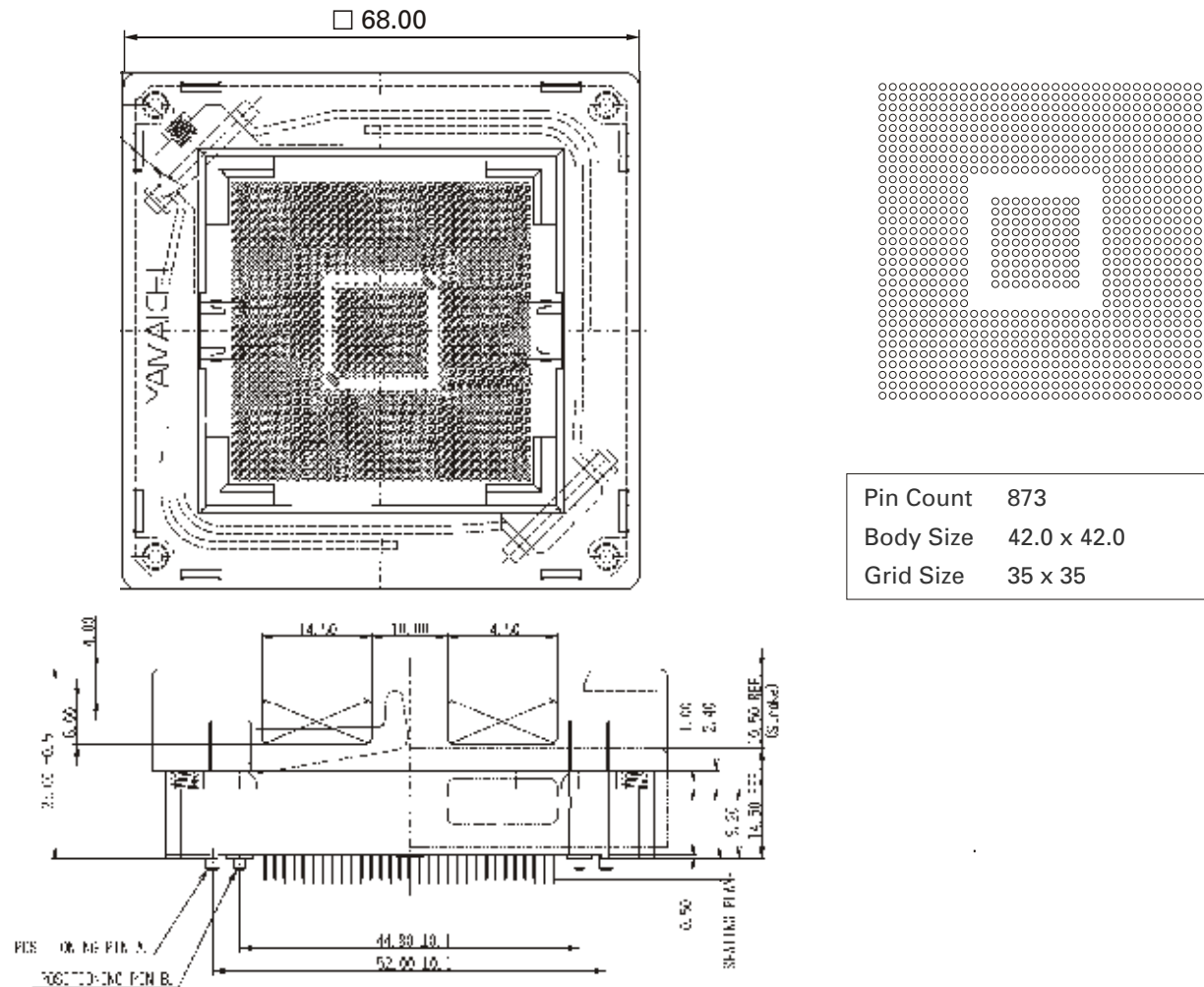
Top View from Socket



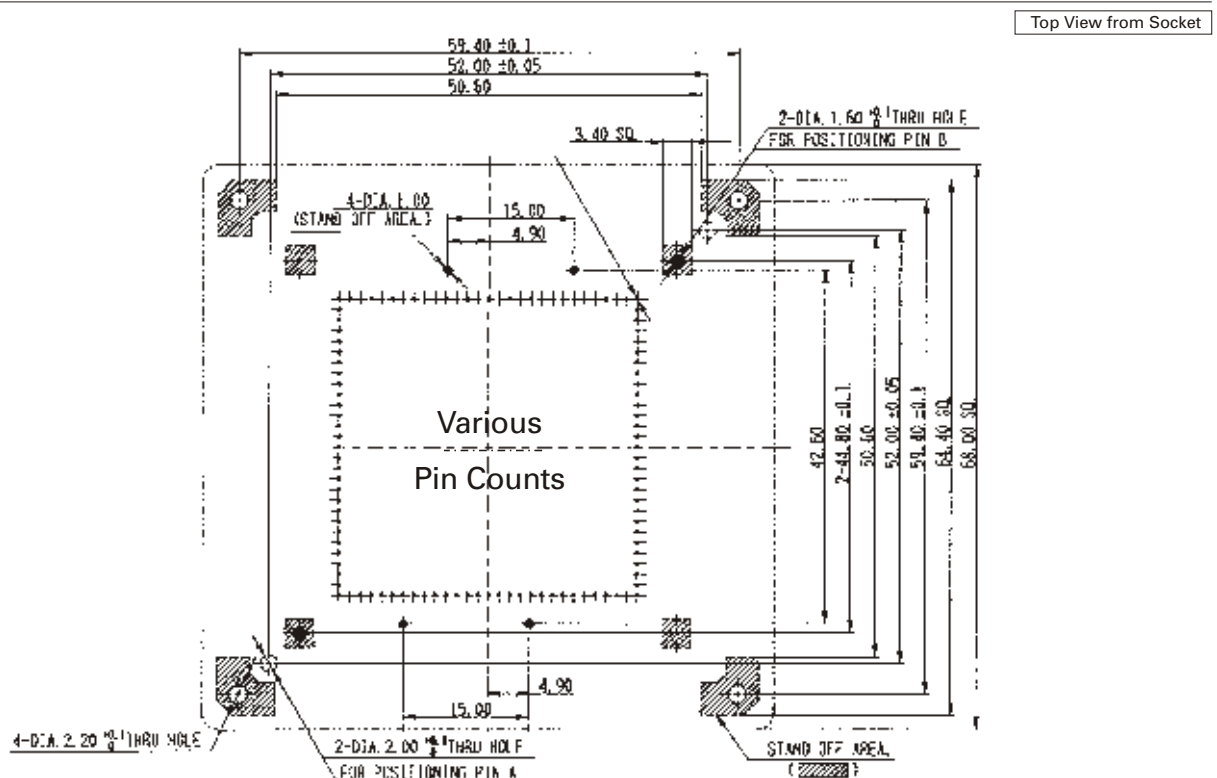
Ball Grid Array Base Socket (BGA, 1.27mm Pitch)

Base Socket NP276-87318

Outline Socket Dimensions (68.0 x 68.0mm)

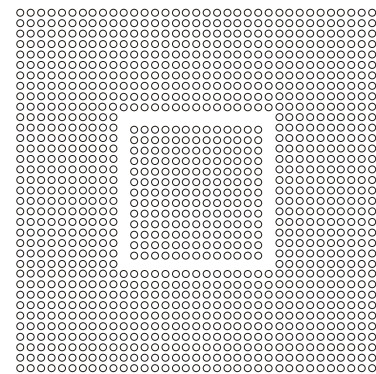


Recommended PC Board Layouts



Ball Grid Array Base Socket (BGA, 1.27mm Pitch)

Outline Socket Dimensions (74.0 x 74.0mm)



Pin Count	1105
Body Size	45.0 x 45.0
Grid Size	35 x 35

Top View from Socket

