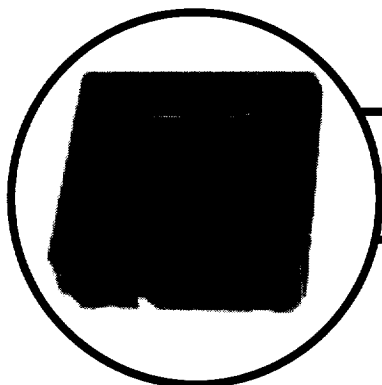


BGA



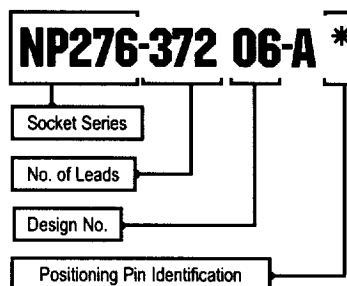
NP276 Series

Characteristics

Insulation Resistance:	1,000MΩ or more at 100 VDC
Withstanding Voltage:	100 VAC for 1 Minute
Contact Resistance:	30mΩ or less at 10mA/20mV (Initial)
Operating Temperature:	-55°C ~ +150°C

Material

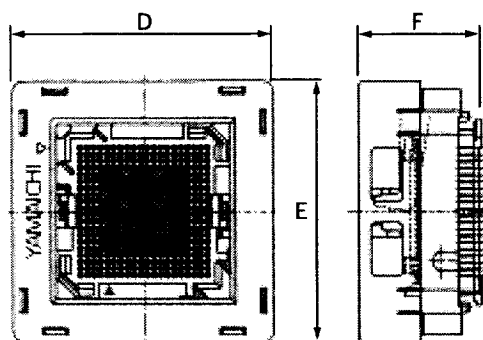
Insulator:	PEI (Glass Filled) UL94V-0
Contact:	Beryllium Copper
Plating:	Gold over Nickel



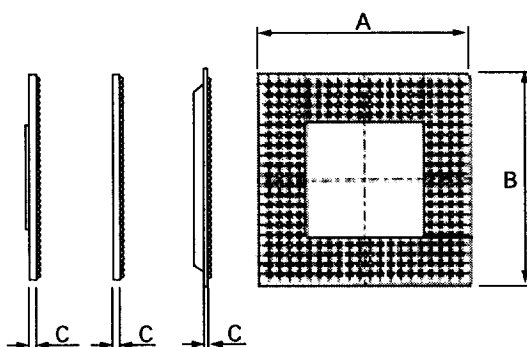
Depopulated Versions Available

Applicable Socket and IC Dimensions (Reference Only)

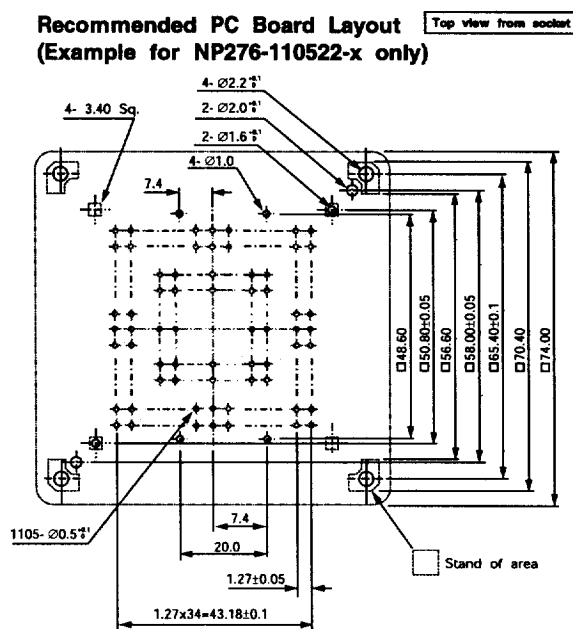
Outline Socket Dimensions



Matching IC Dimensions



Recommended PC Board Layout (Example for NP276-110522-x only)



Please contact Yamaichi directly concerning available PC-Board layouts for this series

BGA

NP276 Series

Part Number	Pin Count	Type	Pitch	Grid Size	IC Body Size (A x B x C)	Socket Dimensions (D x E x F)
NP276-11935	119	BGA	1.27	7 X 17	14 X 22 X 0.4 ~ 2.5	28.40 X 33.20 X 17.00
NP276-37206-AC03143	144	SBGA	1.27	20 X 20	27 X 27 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-15334-*	153	BGA	1.27	9 X 17	14 X 22 X 0.4 ~ 2.5	28.40 X 33.20 X 17.00
NP276-37206-A*-AC09608	160	SBGA	1.27	20 X 20	27 X 27 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-37206-AC05638	204	BGA	1.27	20 X 20	27 X 27 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-25626-AC06672	225	BGA	1.27	16 X 16	21 X 21 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-25626-*	256	BGA	1.27	16 X 16	21 X 21 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-37206-AC03327	256	BGA	1.27	20 X 20	27 X 27 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-37206-AC03145	256	SBGA	1.27	20 X 20	27 X 27 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-59608-AC05634	262	BGA	1.27	26 X 26	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-37206-AC03134	272	BGA	1.27	20 X 20	27 X 27 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-37206-AC03140	292	BGA	1.27	20 X 20	27 X 27 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-37206-AC04484	300	BGA	1.27	20 X 20	27 X 27 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-52929-AC12409	304	SBGA	1.27	23 X 23	31 X 31 X 0.4 ~ 2.0	58.40 X 58.40 X 21.50
NP276-62525-AC11317	313	BGA	1.27	25 X 25	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-37206-AC04474	316	BGA	1.27	20 X 20	27 X 27 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-40009-AC06524	320	BGA	1.27	20 X 20	27 X 27 X 0.3 ~ 0.7	49.40 X 49.40 X 19.10
NP276-37206-AC07094	324	BGA	1.27	20 X 20	27 X 27 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-37206-AC05627	328	BGA	1.27	20 X 20	27 X 27 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-37206-AC05610	328	BGA	1.27	20 X 20	27 X 27 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-59609-AC08337	336	BGA	1.27	26 X 26	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-59608-AC03329	340	BGA	1.27	26 X 26	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-59608-AC03328	352	BGA	1.27	26 X 26	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-59608-AC03146	352	SBGA	1.27	26 X 26	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-59608-AC03149	356	SBGA	1.27	26 X 26	27 X 27 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-37206-A*	372	BGA	1.27	20 X 20	27 X 27 X 0.3 ~ 3.1	49.40 X 49.40 X 19.10
NP276-59608-AC03137	388	BGA	1.27	26 X 26	27 X 27 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-40009-*	400	BGA	1.27	20 X 20	27 X 27 X 0.3 ~ 0.7	49.40 X 49.40 X 19.10
NP276-76820-AC06127	416	BGA	1.27	30 X 30	40 X 40 X 0.3 ~ 3.1	68.00 X 68.00 X 22.50
NP276-59608-AC05955	420	BGA	1.27	26 X 26	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-59608-AC09801	420	SBGA	1.27	26 X 26	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-87318-AC05621	432	BGA	1.27	31 X 31	40 X 40 X 0.3 ~ 3.1	68.00 X 68.00 X 22.50
NP276-87318-AC05630	432	SBGA	1.27	26 X 26	40 X 40 X 0.3 ~ 3.1	68.00 X 68.00 X 22.50
NP276-59608-AC03156	436	BGA	1.27	26 X 26	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-59608-AC04460	456	BGA	1.27	26 X 26	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-59608-AC03142	480	BGA	1.27	26 X 26	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-59608-AC05717	480	SBGA	1.27	26 X 26	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-59608-AC03035	484	BGA	1.27	26 X 26	35 X 35 X 0.3 ~ 0.7	58.40 X 58.40 X 21.50
NP276-59608-AC07102	492	BGA	1.27	26 X 26	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-75319-AC09783	493	BGA	1.27	29 X 29	37.5 X 37.5 X 0.3~3.1	68.00 X 68.00 X 25.00
NP276-59608-AC08302	516	BGA	1.27	26 X 26	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-52928-B*	529	BGA	1.27	23 X 23	31 X 31 X *	58.40 X 58.40 X 21.50
NP276-76820-AC08955	576	SBGA	1.27	30 X 30	40 X 40 X 0.3 ~ 3.1	68.00 X 68.00 X 22.50
NP276-75319-AC07115	584	BGA	1.27	29 X 29	37.5 X 37.5 X 0.3 ~ 3.1	68.00 X 68.00 X 25.00
NP276-65227-AC07614	587	BGA	1.27	28 X 28	37.5 X 37.5 X 0.3 ~ 3.1	68.00 X 68.00 X 25.00
NP276-59608-A*	596	BGA	1.27	26 X 26	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-62525-A*	625	BGA	1.27	25 X 25	35 X 35 X 0.3 ~ 3.1	58.40 X 58.40 X 21.50
NP276-110522-AC09796	600	SBGA	1.27	35 X 35	45 X 45 X 0.3 ~ 3.1	74.00 X 74.00 X 25.00
NP276-110522-AC12425	600	BGA	1.27	35 X 35	45 X 45 X 0.3 ~ 3.1	74.00 X 74.00 X 25.00
NP276-110522-AC11940	640	SBGA	1.27	35 X 35	45 X 45 X 0.3 ~ 3.1	74.00 X 74.00 X 25.00
NP276-65227-*	652	BGA	1.27	28 X 28	37.5 X 37.5 X 0.3 ~ 3.1	68.00 X 68.00 X 25.00
NP276-97623-AC06017	672	SBGA	1.27	34 X 34	45 X 45 X 0.3 ~ 3.1	74.00 X 74.00 X 25.00
NP276-75319-*	753	BGA	1.27	29 X 29	37.5 X 37.5 X 0.3~3.1	68.00 X 68.00 X 22.50
NP276-76820-*	768	BGA	1.27	30 X 30	40 X 40 X 0.3 ~ 3.1	68.00 X 68.00 X 22.50
NP276-87318-*	873	BGA	1.27	31 X 31	40 X 40 X 0.3 ~ 3.1	68.00 X 68.00 X 22.50
NP276-96924-*	969	BGA	1.27	33 X 33	42.5 X 42.5 X 0.3~3.1	74.00 X 74.00 X 25.00
NP276-97623-*	976	BGA	1.27	34 X 34	45 X 45 X 0.3~3.1	74.00 X 74.00 X 25.00
NP276-110522-*	1105	BGA	1.27	35 X 35	45 X 45 X 0.3~3.1	74.00 X 74.00 X 25.00

* No latch included.

Note: Please contact Yamaichi Electronics for other pin counts.