

Series NP351

BGA / CSP 0.80mm Pitch (TH - Open Top)

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 +150°C
Contact Force:	15g per pin approx.
Mating Cycles:	10,000 insertions

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 damages of coplanarity of solder balls

Part Number (Details)

NP351 - 120 14 (H) - * - (*)

Series No.

No. of Contact Pins

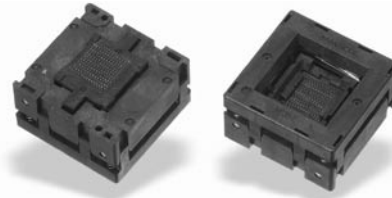
Design Number

H = Also for Handler Use

Positioning Pin Options (see PCB):

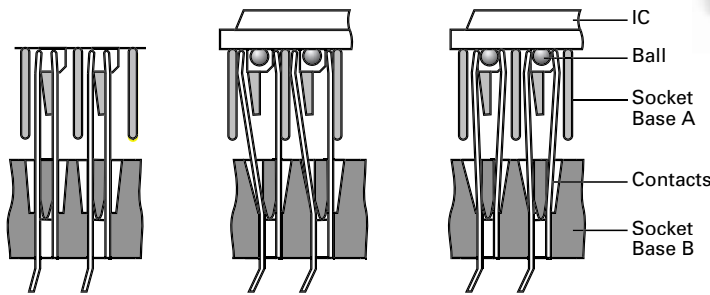
	Pos. pin 'A'	Pos. pin 'B'
1 =	With	With
2 =	With	Without
3 =	Without	With
4 =	Without	Without

Contact Terminal Length and Form

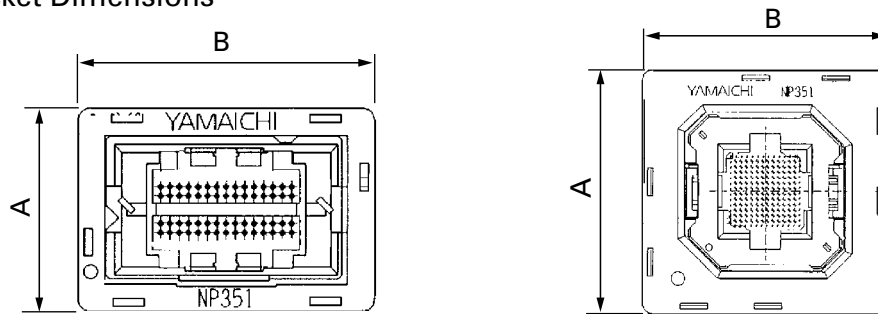


Since the solder balls are touched by two contacts on each side, the solder ball damage can be minimized; additional features are low actuation force and compact socket size

Yamaichi's 2-point Tweezer Style Contact



Outline Socket Dimensions

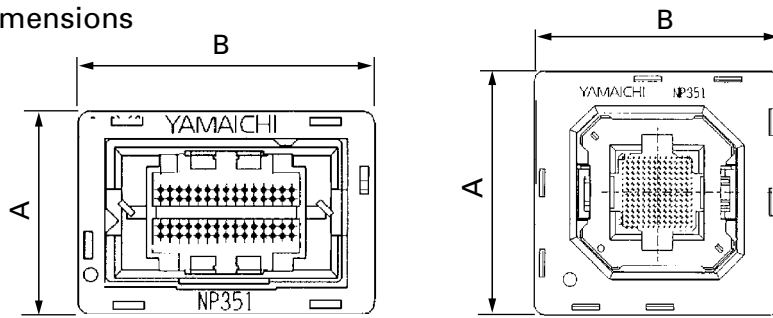


Part Number	Pin Count	Matching IC Dimensions		Base Socket Size A x B (mm)	Grid Layouts
		Grid Size (mm)	IC Body Size (mm)		
NP351-048-105-*	48	8 x 12	10.95 x 11.95	36 x 36	MORE INFO
NP351-048-155-*	48	6 x 8	7.95 x 8.95	36 x 36	MORE INFO
NP351-048-166-*	48	6 x 8	7 x 7	17.6 x 25.4	MORE INFO
NP351-048-216	48	6 x 8	7 x 11	18 x 22	MORE INFO
NP351-048-284	48	6 x 8	6.4 x 7.8	18 x 22	MORE INFO
NP351-048-292	48	6 x 8	8 x 10	18 x 22	MORE INFO
NP351-049-122-*	49	7 x 7	7 x 7	32 x 32	MORE INFO
NP351-056-158-*	56	8 x 8	7 x 11	33 x 33	MORE INFO
NP351-056-172-*	56	8 x 8	11 x 12	33 x 33	MORE INFO
NP351-056-176-*	56	8 x 8	7.2 x 7.0	33 x 33	MORE INFO
NP351-056-178-*	56	10 x 12	8.0 x 11.6	17.6 x 25.4	MORE INFO
NP351-056-228	56	8 x 8	7.95 x 11.55	18 x 22	MORE INFO
NP351-05682	56	8 x 8	9 x 12	17.6 x 25.4	MORE INFO
NP351-060-214	60	10 x 10	8.7 x 9.1	18 x 22	MORE INFO

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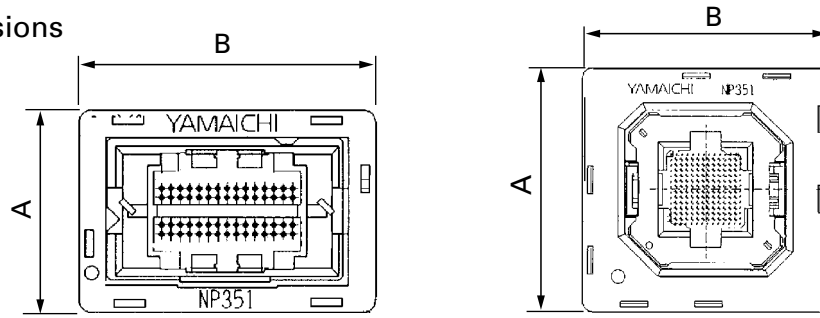


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		Grid Size (mm)	IC Body Size (mm)		
NP351-060-226	60	6 x 15	11 x 13	17.0 x 26.5	MORE INFO
NP351-06024-*.*	60	6 x 15	7.83 x 14.76	40 x 40	MORE INFO
NP351-09663 AC-17413	61	10 x 10	9 x 9	36 x 36	MORE INFO
NP351-064-148	64	8 x 8	8 x 8	40 x 40	MORE INFO
NP351-064-227	64	8 x 8	7 x 11	22 x 18	MORE INFO
NP351-064-268	64	8 x 8	10 x 11	22 x 18	MORE INFO
NP351-064-275	64	10 x 12	8 x 11	17.6 x 25.4	MORE INFO
NP351-064-287-*.*	64	8 x 8	7 x 7	32 x 32	MORE INFO
NP351-06444-*.*	64	8 x 8	8 x 8	36 x 36	MORE INFO
NP351-069-129	69	10 x 10	8 x 11	17.6 x 25.4	MORE INFO
NP351-072-152	72	8 x 12	8 x 11	17.6 x 25.4	MORE INFO
NP351-072-174-*.*	72	8 x 12	8 x 12	17.6 x 25.4	MORE INFO
NP351-072-227	72	8 x 12	7 x 11	22 x 18	MORE INFO
NP351-072-274	72	8 x 10	7 x 9	22 x 18	MORE INFO
NP351-07296	72	8 x 12	8 x 11	17.6 x 25.4	MORE INFO
NP351-080-128	80	9 x 9	8 x 8	22 x 18	MORE INFO
NP351-080-205	80	6 x 15	9 x 16	17.6 x 25.4	MORE INFO
NP351-08033-*.*	80	12 x 12	11 x 11	36 x 36	MORE INFO
NP351-08041	80	9 x 9	9 x 9	32 x 32	MORE INFO
NP351-09663-*.AC-27881	80	10 x 10	9 x 9	36 x 36	MORE INFO
NP351-081-169	81	9 x 9	8 x 8	22 x 18	MORE INFO
NP351-084-187-*.*	84	9 x 10	10.95 x 11.95	36 x 36	MORE INFO
NP351-09663-*.*	96	10 x 10	9 x 9	36 x 36	MORE INFO
NP351-09663- A100331	100	10 x 10	9 x 9	36 x 36	MORE INFO
NP351-100-211-*.*	100	11 x 11	11 x 11	36 x 36	MORE INFO
NP351-10889-*.*	108	12 x 12	11 x 11	36 x 36	MORE INFO
NP351-109-118-*.*	109	12 x 12	11 x 11	36 x 36	MORE INFO
NP351-11215-*.*	112	11 x 11	10 x 10	36 x 36	MORE INFO
NP351-11230	112	11 x 11	10 x 10	36 x 36	MORE INFO
NP351-113-277-*.*	113	11 x 11	10 x 10	36 x 36	MORE INFO
NP351-121-156-*.*	121	13 x 13	12 x 12	36 x 36	MORE INFO
NP351-121-206-*.*	121	11 x 11	10 x 10	36 x 36	MORE INFO
NP351-128-200	128	12 x 12	11 x 11	20 x 24	MORE INFO
NP351-12845-*.*	128	12 x 12	11 x 11	36 x 36	MORE INFO
NP351-139-*.AC-20602	132	14 x 14	12 x 12	40 x 40	MORE INFO
NP351-144-111-*.*	144	12 x 12	11 x 11	36 x 36	MORE INFO
NP351-144-217-*.*	144	12 x 12	12 x 12	36 x 36	MORE INFO
NP351-14422-*.*	144	13 x 13	12 x 12	36 x 36	MORE INFO
NP351-14426-*.*	144	14 x 14	13 x 13	40 x 40	MORE INFO
NP351-14429	144	13 x 13	12 x 12	33 x 33	MORE INFO
NP351-144-319-*.*	144	14 x 14	12 x 12	40 x 40	MORE INFO
NP351-14493-*.*	144	14 x 14	13 x 13	40 x 40	MORE INFO
NP351-145-154-*.*	145	15 x 15	13 x 13	38 x 38	MORE INFO
NP351-15760-*.*	157	16 x 16	14 x 14	40 x 40	MORE INFO
NP351-132-*.*.AC-27365	160	14 x 14	12 x 12	38 x 38	MORE INFO
NP351-132-*.*.AC-28179	160	14 x 14	12 x 12	40 x 40	MORE INFO
NP351-160-133-*.*	160	13 x 13	12 x 12	36 x 36	MORE INFO
NP351-16092-*.*	160	14 x 14	13 x 13	40 x 40	MORE INFO

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NP351-18464-1AC-14895	161	14 x 14	12 x 12	40 x 40	MORE INFO
NP351-19602 AC-23134	168	14 x 14	12 x 12	33 x 33	MORE INFO
NP351-14422-*.AC-17197	169	13 x 13	12 x 12	36 x 36	MORE INFO
NP351-17607	175	15 x 15	13 x 13	38 x 38	MORE INFO
NP351-163.AC-28048	176	15 x 15	13 x 13	40 x 40	MORE INFO
NP351-176-135-*	176	15 x 15	13 x 13	35 x 35	MORE INFO
NP351-17621-*.*	176	17 x 17	15 x 15	40 x 40	MORE INFO
NP351-17635-*	176	15 x 15	13 x 13	38 x 38	MORE INFO
NP351-17691-*.*	176	17 x 17	15 x 15	40 x 40	MORE INFO
NP351-20881.AC-14017	176	17 x 17	15 x 15	38 x 38	MORE INFO
NP351-19602-1.AC-12403	179	14 x 14	12 x 12	33 x 33	MORE INFO
NP351-180-139-*	180	14 x 14	12 x 12	40 x 40	MORE INFO
NP351-18134-*	181	14 x 14	13 x 13	40 x 40	MORE INFO
NP351-184-132-*.*	184	14 x 14	12 x 12	40 x 40	MORE INFO
NP351-18464-*.*	184	14 x 14	12 x 12	40 x 40	MORE INFO
NP351-15760-3-2.AC-16183	192	16 x 16	14 x 14	40 x 40	MORE INFO
NP351-19219-*	192	16 x 16	14 x 14	38 x 38	MORE INFO
NP351-192-247H-*	192	16 x 16	14 x 14	38 x 38	MORE INFO
NP351-18464-*.AC-23530	196	14 x 14	12 x 12	40 x 40	MORE INFO
NP351-18464.AC-28663	196	14 x 14	12 x 12	40 x 40	MORE INFO
NP351-19602	196	14 x 14	12 x 12	33 x 33	MORE INFO
NP351-196-145-*.*	196	16 x 16	14 x 14	40 x 40	MORE INFO
NP351-20149-1 AC-23372	200	15 x 15	13 x 13	38 x 38	MORE INFO
NP351-20149-*	201	15 x 15	13 x 13	38 x 38	MORE INFO
NP351-20890-*.*	208	17 x 17	15 x 15	40 x 40	MORE INFO
NP351-20897-*	208	17 x 17	15 x 15	40 x 40	MORE INFO
NP351-212-207-*.*	212	15 x 15	13 x 13	40 x 40	MORE INFO
NP351-21653	216	21 x 21	18 x 18	47 x 47	MORE INFO
NP351-220-218-*	220	16 x 16	13 x 13	40 x 40	MORE INFO
NP351-15760-*.*.AC-26972	221	16 x 16	14 x 14	40 x 40	MORE INFO
NP351-22405N-*	224	18 x 18	16 x 16	38 x 38	MORE INFO
NP351-224-134-*.*	224	18 x 18	16 x 16	40 x 40	MORE INFO
NP351-20149-*.AC-27395	225	15 x 15	13 x 13	38 x 38	MORE INFO
NP351-140-*.AC-22635	240	17 x 17	15 x 15	38 x 38	MORE INFO
NP351-240-195-*	240	17 x 17	15 x 15	40 x 40	MORE INFO
NP351-240-229	240	16 x 16	14 x 14	40 x 40	MORE INFO
NP351-24088-*.*	240	22 x 22	19 x 19	47 x 47	MORE INFO
NP351-24099-*.*	240	18 x 18	16 x 16	40 x 40	MORE INFO
NP351-264-140-*	264	17 x 17	15 x 15	40 x 40	MORE INFO
NP351-26457-*	264	25 x 25	21 x 21	47 x 47	MORE INFO
NP351-281-234-*	281	17 x 17	15 x 15	40 x 40	MORE INFO
NP351-289-191-*	289	17 x 17	15 x 15	40 x 40	MORE INFO
NP351-304-183-*	304	23 x 23	18 x 18	47 x 47	MORE INFO
NP351-30487-*.*	304	22 x 22	19 x 19	47 x 47	MORE INFO
NP351-21653 AC-14425	320	21 x 21	18 x 18	47 x 47	MORE INFO
NP351-34031-*	340	22 x 22	20 x 20	47 x 47	MORE INFO
NP351-532-83-*	532	26 x 26	23 x 23	47 x 47	MORE INFO