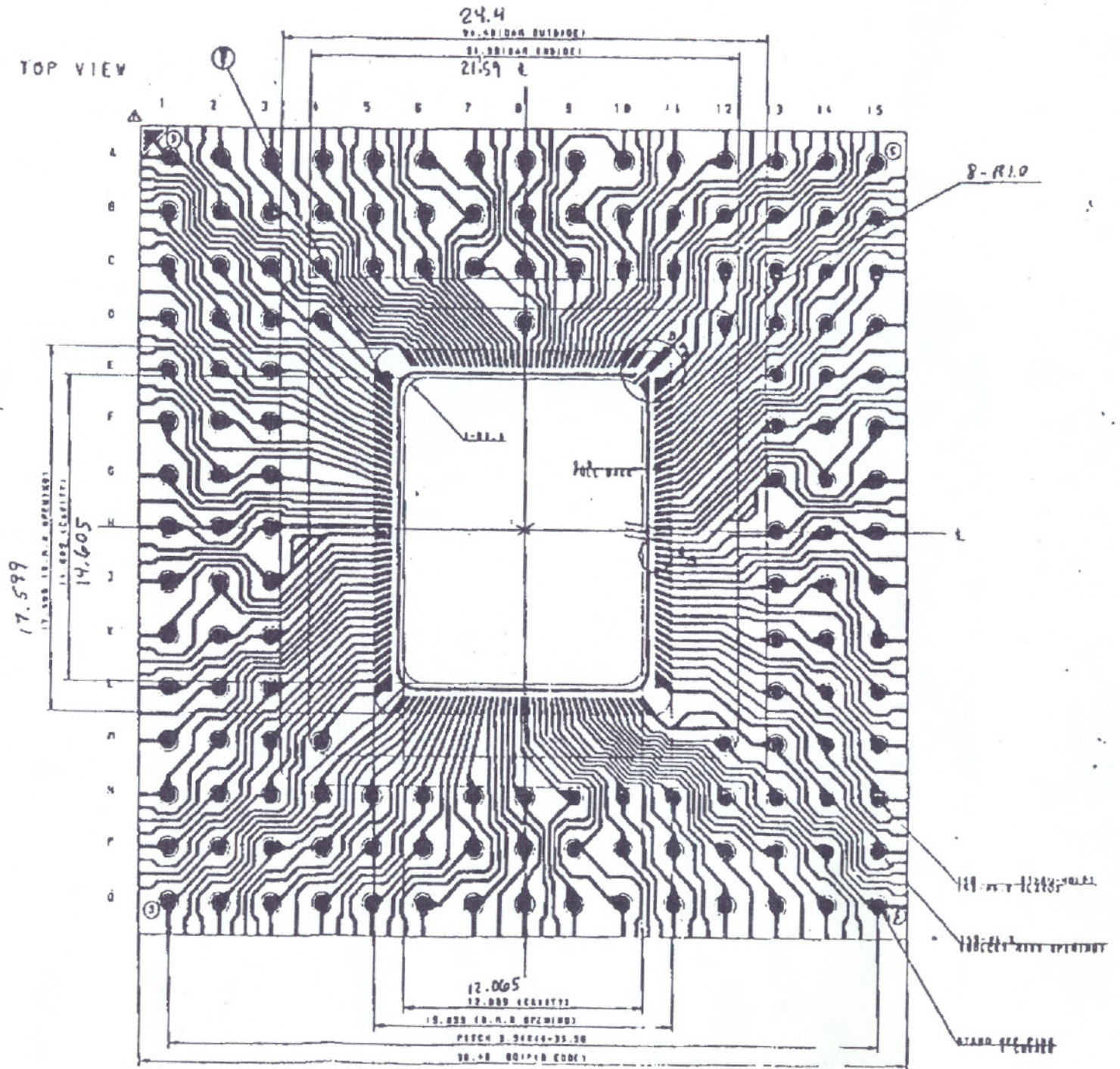
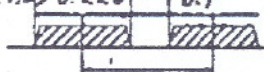


TOP VIEW



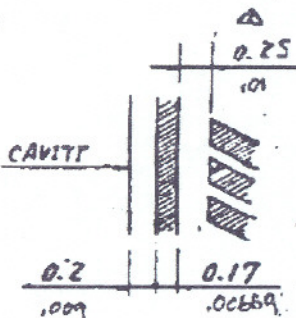
NOTE

1. BASE MATERIAL : GLASS BT RESIN
~~HIGH TEMP. BLACK GLASS EPOXY~~
 THICKNESS : 1.64 ± 0.19
 COPPER FOIL : 18 μm
2. TOTAL THICKNESS : 2.30 ± 0.36
 0.32
3. PLATING
 COPPER : 10 μm MIN.
 NICKEL : 5 μm MIN.
 GOLD : 0.5 μm MIN. (SOFT GOLD) ~~NON-THRU HOLE~~
 GOLD THICKNESS CHECK POINT : MARKED \odot
4. BONDING PADS (SIDE 2) 0.185 ± 0.015 PAD 1 \rightarrow 38 SIDE 1
 (SIDE 4) 0.190 ± 0.014 PAD 39 \rightarrow 76 SIDE 2
 (SIDE 1,3) 0.220 ± 0.010 PAD 77 \rightarrow 114 SIDE 3
 PAD 115 \rightarrow 149 SIDE 4

5. SIGNAL LEADS : WIDTH 0.1 TYP 0.03431
 MIN. SPACING 0.1 TYP
6. ~~SOLDER MASK IS SHOWN BY RETICULATE PATTERN.~~
7. CAVITY SIZE : 12.065×14.605 (METALIZED)
^{0.475} ^{0.575}
 SPACING BETWEEN BONDING PAD AND CAVITY : 0.2 TYP
 CORNER RADIUS : 1.0
8. TOLERANCE

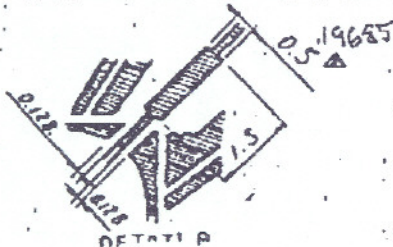
	POSITION TOL.	TOL. (ITSELF)
PATTERN (CIRCUIT)	± 0.15	± 0.05
SOLDER MASK	± 0.3	
P.W.B. EDGE	± 0.1	± 0.1
ROUTING	± 0.1	± 0.1

9. I/O PIN MATERIAL : KOVAR : ~~PHOSPHOR BRONZE~~
 PLATING : GOLD $0.5 \mu\text{m}$ MIN.
 NICKEL $2.0 \mu\text{m}$ MIN.
 TIN-LEAD (90/10) $1 \mu\text{m}$ MIN.
~~(60/40) μm MIN.~~

10. PIN FULL STRENGTH : 4Kg MIN. SOLDERED PIN.
11. PIN FINISH : SOLDER DIP AFTER PINNING.

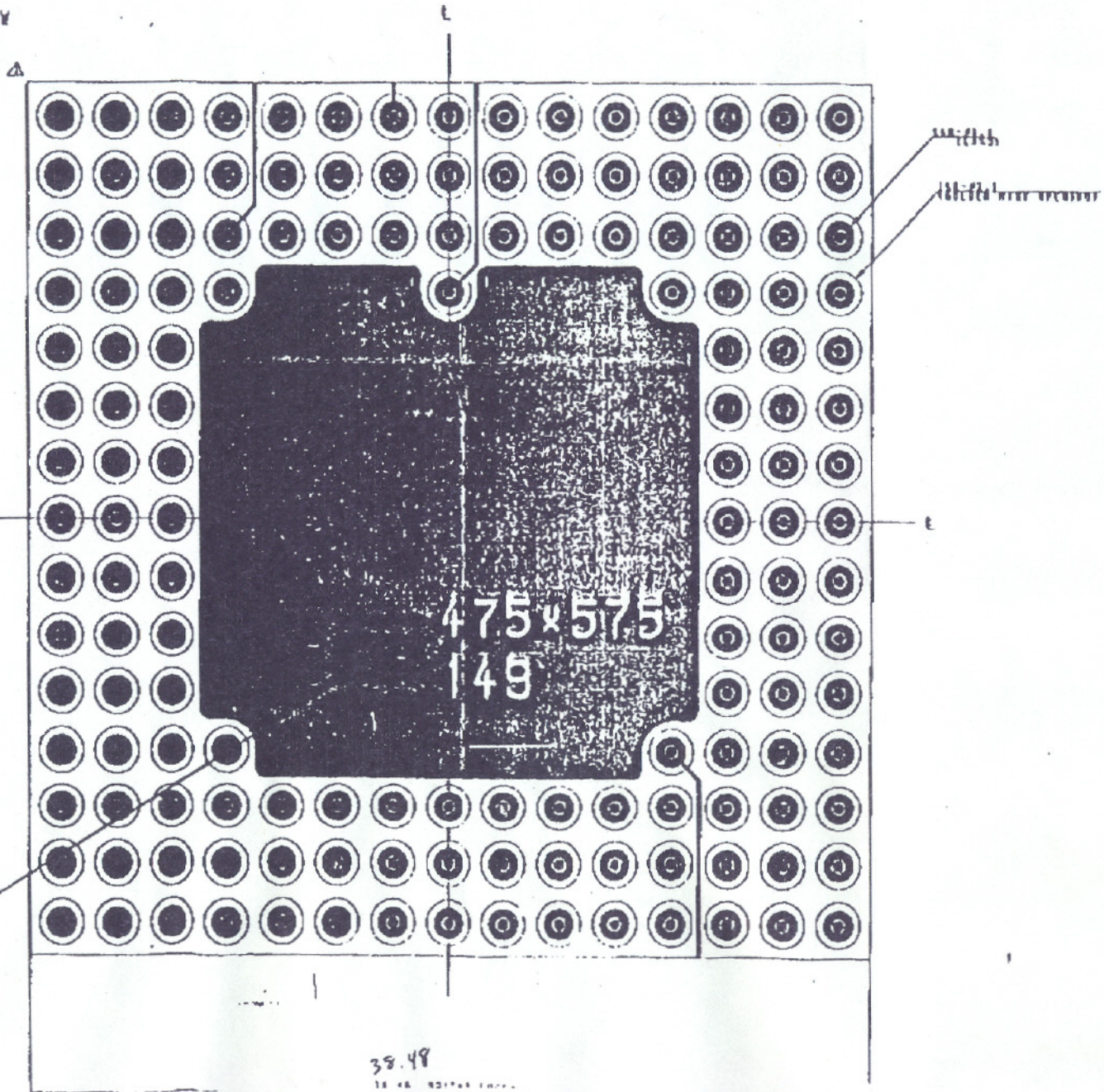


DETAIL A



DETAIL B

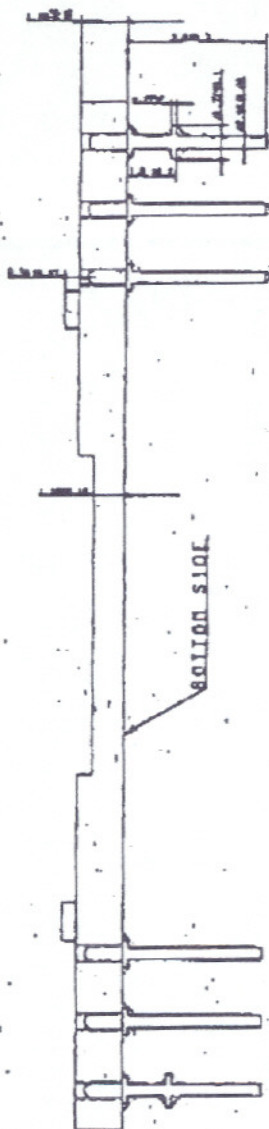
BOTTOM VIEW



38.48

18 48 00100 0000

CROSS SECTION



△	NO CHANGED	Mar. 10 1988	H. ITO	N. G. G.
△	NO CHANGED	Apr. 15 1988	T. TANAKA	T. M.
△	REMOVED CORNER CHAMFER.	Apr. 3 1988	T. TANAKA	T. M.
SYM	REVISION	DATE	REVD	CHKD
TITLE PGA-149U-C-VL51-3			SIDE BACK	
CODE ID-0604-D				
SCALE 5/1	DIM M.M.	(S:??, 1:??)		
DSN	T. TANAKA	Mar. 31. 1988		
CHKD	T. HAYASHI	Mar. 31. 1988		
APPD				

IBIDEN CO., LTD. JAPAN

1	O4	51	N7	101	E14
2	O3	52	O6	102	O15
3	C2	53	O7	103	C15
4	B1	54	P8	104	D14
5	D2	55	O8	105	E13
6	E3	56	N8	106	C14
7	C1	57	N9	107	B15
8	E2	58	O9	108	O13
9	O1	59	O10	109	C13
10	F3	60	P9	110	B14
11	F2	61	P10	111	A15
12	E1	62	N10	112	O12
13	G2	63	O11	113	C12
14	G3	64	P11	114	B13
15	F1	65	N11	115	A14
16	G1	66	O12	116	B12
17	H2	67	P12	117	C11
18	H1	68	O13	118	A13
19	H3	69	P13	119	B11
20	J3	70	O14	120	A12
21	J1	71	N12	121	A11
22	K1	72	P14	122	B10
23	J2	73	O15	123	C10
24	K2	74	N13	124	B9
25	K3	75	P12	125	A9
26	L1	76	M13	126	A10
27	L2	77	N14	127	C9
28	M1	78	P15	128	B8
29	N1	79	M14	129	A8
30	M2	80	L13	130	C8
31	L3	81	N15	131	C7
32	N2	82	L14	132	O6
33	P1	83	M15	133	A7
34	M3	84	K13	134	A6
35	N3	85	K14	135	B7
36	P2	86	L15	136	B6
37	O1	87	J14	137	C6
38	M4	88	J13	138	A5
39	N4	89	K15	139	B5
40	O2	90	J15	140	C5
41	P3	91	H14	141	A4
42	P4	92	H15	142	B4
43	N5	93	H13	143	A3
44	O3	94	G13	144	B3
45	F5	95	G15	145	A2
46	O4	96	F15	146	C4
47	N6	97	G14	147	B2
48	P5	98	F14	148	A1
49	O5	99	F13	149	C3
50	P7	100	E15		