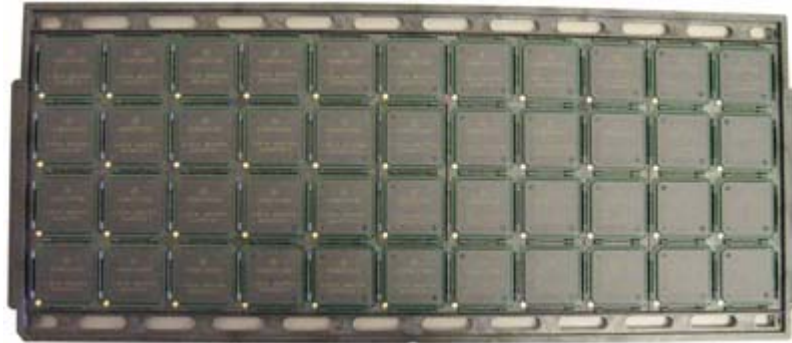




## BGA Tray JEDEC Matrix IC Trays

BGA IC Matrix Trays Conform to JEDEC Standards



Example BGA Tray

BGA Body Size	Quantity Pockets Per Tray	Matrix Row-Column	JEDEC Reference	Order TopLine Tray Part Number
Square BGA				
5 x 5mm	576	16 x 36	CO-029AAA	BGATRAY5mm-16x36
5 x 5mm	624	16 x 39	-	BGATRAY5mm-16x39
5 x 5mm	640	16 x 40	-	BGATRAY5mm-16x40
6 x 6mm	360	12 x 30	-	BGATRAY6mm-12x30
6 x 6mm	429	13 x 33	-	BGATRAY6mm-13x33
6 x 6mm	608	16 x 38	-	BGATRAY6mm-12x30
7 x 7mm	416	13 x 32	CO-029AA	BGATRAY7mm-13x32
7 x 7mm	476	14 x 34	-	BGATRAY7mm-14x34
8 x 8mm	348	12 x 29	CO-029AAB	BGATRAY8mm-12x29
8 x 8mm	360	12 x 30	-	BGATRAY8mm-12x30
9 x 9mm	250	10 x 25	-	BGATRAY9mm-10x25
9 x 9mm	260	10 x 26	CO-029AB	BGATRAY9mm-10x26
10 x 10mm	184	8 x 23	-	BGATRAY10mm-8x23
10 x 10mm	240	10 x 24	CO-029AY	BGATRAY10mm-10x24
10 x 10mm	250	10 x 25	-	BGATRAY10mm-10x25
11 x 11mm	176	8 x 22	CO-029AC	BGATRAY11mm-8x22
12 x 12mm	189	9 x 21	CO-029AZ	BGATRAY12mm-9x21
12 x 12mm	198	9 x 22	-	BGATRAY12mm-9x22
13 x 13mm	160	8 x 20	CO-029AD	BGATRAY13mm-8x20
14 x 14mm	152	8 x 19	CO-029AAC	BGATRAY14mm-8x19
14 x 14mm	119	7 x 17	-	BGATRAY14mm-7x17
15 x 15mm	126	7 x 18	CO-029AE	BGATRAY15mm-7x18
16 x 16mm	119	7 x 17	-	BGATRAY16mm-7x17
17 x 17mm	90	6 x 15	CO-029AF	BGATRAY17mm-6x15

18 x 18mm	84	6 x 14	CO-029AG(2)	BGATRAY18mm-6x14
19 x 19mm	84	6 x 14	CO-029AG	BGATRAY19mm-6x14
21 x 21mm	60	5 x 12	CO-029AH	BGATRAY21mm-5x12
23 x 23mm	60	5 x 12	CO-029AJ	BGATRAY23mm-5x12
25 x 25mm	44	4 x 11	CO-029AK	BGATRAY25mm-4x11
27 x 27mm	40	4 x 10	CO-029AL	BGATRAY27mm-4x10
29 x 29mm	36	4 x 9	CO-029AM	BGATRAY29mm-4x9
31 x 31mm	27	3 x 9	CO-029AN	BGATRAY31mm-3x9
32.5 x 32.5mm	24	3 x 8	CO-028AE	BGATRAY32.5mm-3x8
33 x 33mm	24	3 x 8	CO-029AP	BGATRAY33mm-3x8
35 x 35mm	24	3 x 8	CO-029AR	BGATRAY35mm-3x8
37.5 x 37.5mm	21	3 x 7	CO-029AS	BGATRAY37.5mm-3x7
40 x 40mm	21	3 x 7	CO-029AT	BGATRAY40mm-3x7
42.5 x 42.5mm	12	2 x 6	CO-029AU	BGATRAY42.5mm-2x6
45 x 45mm	12	2 x 6	CO-029AV	BGATRAY45mm-2x6
47.5 x 47.5mm	12	2 x 6	CO-029AW	BGATRAY47.5mm-2x6
50 x 50mm	10	2 x 5	CO-029AX	BGATRAY45mm-2x6
52.5 x 52.5mm	10	2 x 5	-	BGATRAY52.5mm-2x5

BGA Body Size	Quantity Pockets Per Tray	Matrix Row-Column	JEDEC Reference	Order TopLine Tray Part Number
Rectangular BGA				
6 x 7mm	160	10 x 16	-	BGATRAY6x7mm-10x16
6 x 8mm	260	10 x 26	-	BGATRAY6x8mm-10x26
7 x 9mm	325	13 x 25	-	BGATRAY7x9mm-13x25
8 x 9mm	297	12 x 27	-	BGATRAY8x9mm-12x27
8 x 9mm	336	12 x 28	-	BGATRAY8x9mm-12x28
8 x 10mm	220	10 x 22	-	BGATRAY8x10mm-10x22
8 x 13mm	240	12 x 20	-	BGATRAY8x13mm-12x20
9 x 13mm	250	10 x 25	-	BGATRAY9x13mm-10x25
10 x 12.5mm	136	8 x 17	-	BGATRAY10x12.5mm-8x17
11 x 13mm	160	8 x 20	-	BGATRAY11x13mm-8x20
12 x 13mm	152	8 x 19	-	BGATRAY12x13mm-8x19
12 x 14mm	112	8 x 14	-	BGATRAY12x14mm-8x14
13 x 15mm	136	8 x 17	-	BGATRAY13x15mm-8x17
14 x 22mm	84	7 x 12	CO-029BA	BGATRAY14x22mm-7x12
14 x 22mm	84	6 x 14	-	BGATRAY14x22mm-6x14
14 x 22mm	96	8 x 12	CO-029BE	BGATRAY14x22mm-8x12
21 x 25mm	55	5 x 11	CO-029BC	BGATRAY21x25mm-5x11

**Optional Features:**

Specify max temperature: 125°C, 140°C, 150°C, 180°C when ordering.

Specify height of BGA component when ordering.



**JEDEC Matrix Trays  
X, Y and Step Dimensions  
See Drawing Last Page**

Updated  
Feb 2010

**Dimensions are metric (mm)**

TopLine does not guarantee the accuracy of this list.

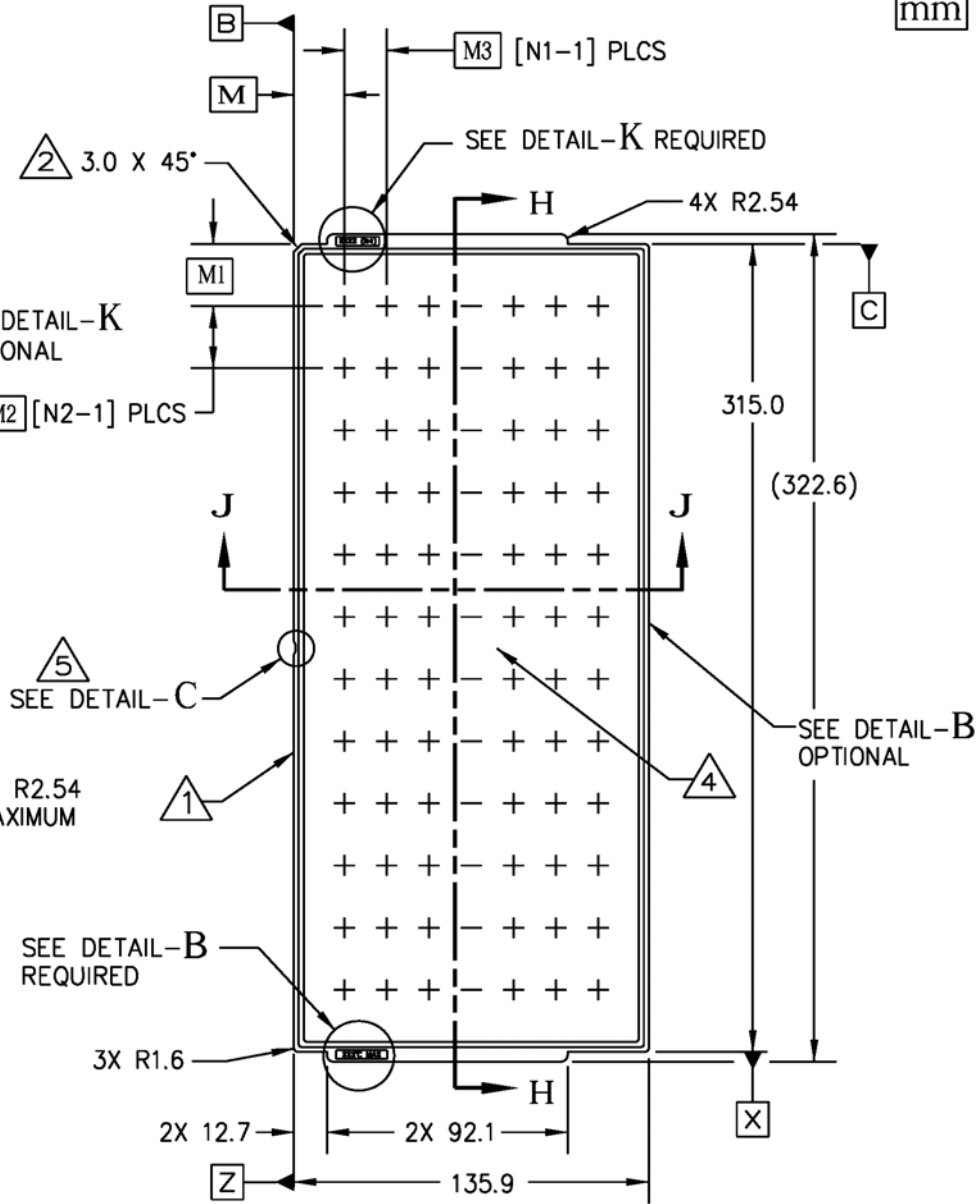
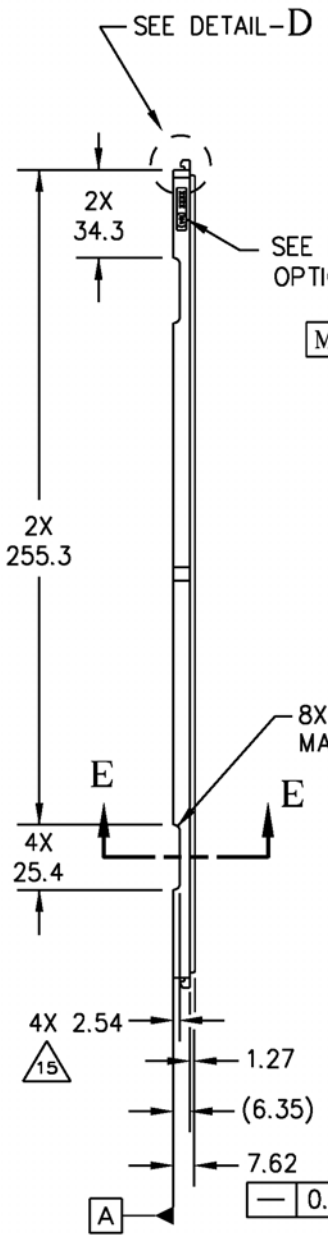
**BGA**

Type	JEDEC Standard	Var	BGA Body Size	Columns N1	Rows N2	Cells N3	Up Left Corner (+X) M	Up Left Corner (-Y) M1	-Y step M2	+X Step M3
BGA	CO-029	AAA	5mm x 5mm	16	36	576	8.70	8.75	8.50	7.90
BGA	CO-029	AA	7mm x 7mm	13	32	416	11.55	11.80	9.40	9.40
BGA	CO-029	AAB	8mm x 8mm	12	29	348	10.75	11.90	10.40	10.40
BGA	CO-029	AB	9mm x 9mm	10	26	260	16.65	15.00	11.40	11.40
BGA	CO-029	AY	10mm x 10mm	10	24	240	9.00	9.15	12.90	13.10
BGA	CO-029	AC	11mm x 11mm	8	22	176	17.20	16.80	13.40	14.50
BGA	CO-029	AZ	12mm x 12mm	9	21	189	9.55	10.00	14.75	14.60
BGA	CO-029	AD	13mm x 13mm	8	20	160	15.45	15.00	15.00	15.00
BGA	CO-029	AE	15mm x 15mm	7	18	126	16.35	11.30	17.20	17.20
BGA	CO-029	AF	17mm x 17mm	6	15	90	19.20	21.00	19.50	19.50
BGA	CO-029	AG	19mm x 19mm	6	14	84	14.60	18.79	21.34	21.34
BGA	CO-029	AH	21mm x 21mm	5	12	60	20.15	26.05	23.90	23.90
BGA	CO-029	AJ	23mm x 23mm	5	12	60	16.95	17.25	25.50	25.50
BGA	CO-029	AK	25mm x 25mm	4	11	44	26.70	20.00	27.50	27.50
BGA	CO-029	AL	27mm x 27mm	4	10	40	24.15	26.10	29.20	29.20
BGA	CO-029	AM	29mm x 29mm	4	9	36	20.85	31.10	31.60	31.40
BGA	CO-029	AN	31mm x 31mm	3	9	27	25.05	21.90	33.60	42.90
BGA	CO-029	AP	33mm x 33mm	3	8	24	32.45	33.25	35.50	35.50
BGA	CO-029	AR	35mm x 25mm	3	8	24	29.95	24.50	38.00	38.00
BGA	CO-029	AX	37.5mm x 37.5mm	3	7	21	27.95	37.50	40.00	40.00
BGA	CO-029	AT	40mm x 40mm	3	7	21	25.65	30.60	42.30	42.30
BGA	CO-029	AU	42.5mm x 42.5mm	2	6	12	26.70	43.75	45.50	82.50
BGA	CO-029	AV	45mm x 45mm	2	6	12	30.00	30.00	51.00	75.90
BGA	CO-029	AW	47.5mm x 47.5mm	2	6	12	30.00	31.25	50.50	75.90
BGA	CO-029	AX	50mm x 50mm	2	5	12	41.45	51.50	53.00	53.00
<b>RECTANGULAR PACKAGE</b>										
BGA	CO-029	BF	16mm x 8mm	9	20	180	8.20	12.60	20.70	11.95
BGA	CO-029	BG	13mm x 11mm	11	15	165	9.55	10.25	15.50	14.60
BGA	CO-029	BE	22mm x 14mm	8	12	96	11.60	24.95	24.10	16.10
BGA	CO-029	BA	22mm x 14mm	7	12	84	12.75	23.30	24.40	18.40
BGA	CO-029	BB	21mm x 18.5mm	6	13	78	14.60	16.50	23.50	21.34
BGA	CO-029	BC	25mm x 21mm	5	11	55	20.95	20.00	27.50	23.50
BGA	CO-029	BD	32.5mm x 25mm	4	8	32	26.70	33.25	35.50	27.50

# Typical JEDEC Outline

mm

L. SIDE VIEW



PLAN VIEW



FRONT VIEW

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