



# Matrix IC Shipping Tray Catalog

## TQFP 1.0 mm

Device Size	Device Height	ePAK Description	Rev	Tray Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
5x5	1.0	eN-0505-1.0-1230-x		12x30	Pocket		eTR0279-x	a
7x7	1.0	eND-0707-1.0-1025-x	A	10x25	Pocket	Peak	eTR0046-x	a
10x10	1.0	eND-1010-1.0-0820-x	A	8x20	Pocket	Peak	eTR0045-x	a
10x10	1.0	eND-1010-1.0-0820-x	B	8x20	Pocket	Peak	eTR0481-x	a
12x12	1.0	eN-1212-1.0-0717-x		7x17	Pocket		eTR0041-x	a
14x14	1.0	eND-1414-1.0-0615-x	A	6x15	Pocket	Peak	eTR0044-x	a
16x16	1.0	eN-1616-1.0-0615-x		6x15	Pocket		eTR0577-x	a
20x20	1.0	eNH-2020-1.0-0512-x		5x12	Pocket	Peak	eTR0357-x	a
20x20	1.0	eN-2020-1.0-0512-x		5x12	Pocket	Kostat	eTR0618-x	a

## LQFP 1.4 mm

Device Size	Device Height	ePAK Description	Rev	Tray Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
5x5	1.4	eN-0505-1.4-1230-x		12x30	Pocket		eTR0132-x	a
7x7	1.4	eND-0707-1.4-1025-x	A	10x25	Pocket	Peak	eTR0007-x	a
10x10	1.4	eND-1010-1.4-0820-x	A	8x20	Pocket	Peak	eTR0005-x	a
10x10	1.4	eND-1010-1.4-0820-x	2	8x20	Pocket		eTR0617-x	a
12x12	1.4	eND-1212-1.4-0717-x	C	7x17	Pocket	Peak	eTR0051-x	a
14x14	1.4	eND-1414-1.4-0615-x	A	6x15	Pocket	Peak	eTR0006-x	a
14x20	1.4	eN-1420-1.4-0612-x		6x12	Pocket		eTR0040-x	a
20x20	1.4	eND-2020-1.4-0512-x	A	5x12	Pocket	Peak	eTR0018-x	a
24x24	1.4	eND-2424-1.4-0410-x	A	4x10	Pocket	Peak	eTR0019-x	a
24x24	1.4	eND-2424-1.4-0410-x	1	4x10	Pocket	Peak	eTR0179-x	a
28x28	1.4	eND-2828-1.4-0409-x		4x9	Pocket	Peak	eTR0035-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a)

**CARBON FIBER**





# QFP-PQFP

## CARBON FIBER

### QFP

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
10x10	2.0	eNH-1010-2.0-0616-x K		6x16	Pocket	Peak, Kostat	eTR0012-x	a
14x14	2.0	eN-1414-2.0-0614-x	1	6x14	Pocket	Peak	eTR0013-x	a
14x14	2.7	eND-1414-2.7-0614-x		6x14	Pocket	Peak	eTR0014-x	a
14x20	2.7	eN-1420-2.65-0611-x		6x11	Pocket		eTR0184-x	a
14x20	2.7	eND-1420-2.7-0611-x	B	6x11	Pocket	Peak	eTR0001-x	a
14x20	2.7	eN-1420-2.7-0611-x	1	6x11	Pocket		eTR0400-x	a
14x20	2.7	eNX-1420-2.7-0611-x		6x11	Pocket	Peak	eTR0855-x	a
28x28	3.4	eN-2828-3.4-0308-xC		3x8	Pocket	ITW Camtex	eTR0301-x	a
28x28	3.5	eND-2828-3.5-0308-x	B	3x8	Pocket	Peak	eTR0003-x	a
28x28	3.5	eN-2828-3.5-0308-x	0	3x8	Pocket	Universal	eTR0015-x	a
28x28	3.5	eND-2828-3.5-0308-xP		3x8	Pocket	Precise	eTR0002-x	a
28x28	3.5	eN-2828-3.5-0308-x	1	3x8	Pocket		eTR0183-x	a
32x32	3.4	eN-3232-3.4-0308-x		3x8	Pocket	ITW Camtex	eTR0074-x	a

### PQFP

Body Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
132L	N/A	eNX-PQFP132-0409-xM		4x9	Wall	Peak, AMS, Fluor	eTR0016-x	a
132L	N/A	eN-PQFP132-0409-x		4x9	Wall	3M, Daewon	eTR0270-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a)





# PGA-TSOP

## PGA

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
19x19	2.54	eKX-PGA1919-0205-x		2x5	Wall	Peak	eTR0004-x	a
19x19	2.54	eK-PGA1919-0205-x	1	2x5	Wall	Peak	eTR0150-x	a
33x33	2.1	eK-PGA3333-2.1-0204-x		2x4	Shelf		eTR0388-x	a
45x45	1.8	eK-PGA4545-1.8-0206-x	2	2x6	Shelf		eTR0172-x	a
51x51	2.5	eK-PGA5151-2.5-0205-x		2x5	Shelf		eTR0625-x	a

## TSOP/SOIC

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
3x4.9	1.0	eN-SSOP8-1230-x		12x30	Pocket		eTR0478-x	a
3.3x13.7	1.4	eN-MCM-H18M-1211-1-0915-X		9x15	Pocket		eTR0806-x	a
0.475 x 0.800	1.0	eN-TSOPII 54-0912-x S		9x12	Pocket	Shinon 54, 66, 86 LD	eTR0037-x	a
4.4x6.5	1.0	eN-TSSOP20/4.4-1435-x		14x35	Pocket	20, 24, 32 LD	eTR0185-x	a
7.5x17	1.8	eN-SPF48-0915-x		9x15	Pocket		eTR0448-x	a
7.5x8	1.8	eN-TSPF-24-0915-x		9x15	Pocket		eTR0979-x	a
8x13.4	1.0	eN-TSOP(1)28/0813.4-1318-x		13x18	Pocket	28 LD	eTR0174-x	a
8x20	1.0	eN-TSOP(1)32/0820-1312-x		13x12	Pocket	32 LD	eTR0175-x	a
10x14	1.0	eN-TSOP1014-1.0-1016-x		10x16	Pocket	40 LD	eTR0296-x	a
10x20	1.0	eN-TSOP1020-1.0-1012-x		10x12	Pocket		ETR0353-x	a
10.2x22.2	1.0	eN-TSOP(II)-54-0912-x	1	9x12	Pocket		eTR0337-x	a
11.4x22	2.1	eN-SX68000-0612-X		6x12	Pocket		eTR0811-x	a
12x20	1.0	eN-TSOP1220-1.0-0812-x		8x12	Pocket	48 LD	eTR0167-x	a
14x20	1.0	eN-TSOP(I)56-0812-x		8x12	Pocket	56 LD	eTR0271-x	a
18.6x10	3.8	eN SOIC-24LD 0417 X		4x17	pocket		eTR1096-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a)

**CARBON FIBER**



# CARBON FIBER

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
2x3	1.1	eN QFN0203 1.1 1435 X		14x35	eZ-load		eTR1196-x	a
2x5.6	1.5	eN QFN025.6 1.5 1426 X		14x26	eZ-load		eTR1115-x	a
2.3x2.3	0.7	eN-QFN2.32.3-0.7-1225-x		12x25	eZ-Load	2 mm stack	eTR0757-x	a
2.8x3.6	1.1	eN QFN2.83.6 1.1 1435 X		14x35	eZ-load		eTR1197-x	2Q2015
2.8x5.6	1.5	eN QFN2.85.6 1.5 1426 X		14x26	shelf		eTR1103-x	a
3x3	1.0	eN-QFN0303-1.0-1435-x		14x35	eZ-Load	2 mm stack	eTR0937-x	a
3x4	1.2	eN QFN0304 1.2 1435 X		14x35	eZ-load		eTR1175-x	a
3.1x3.3	0.7	eN-QFN3.13.3-0.7-1435-x		14x35	eZ-Load		eTR0915-x	a
3.2x2.9	0.9	eN-QFN3.22.9-0.9-1435-x		14x35	eZ-Load	2 mm stack	eTR1004-x	a
3.5x7.35	1.5	eN QFN3.57.35 1.5 1426 X		14x26	shelf		eTR1158-x	a
3.75x3.5	1.5	eN-QFN3.753.5-1.5-1435-X		14x35	eZ-Load	2 mm stack	eTR0878-x	a
3.75x4	1.5	eN-QFN3.7504-1.5-1435-x		14x35	eZ-Load	2 mm stack	eTR0790-x	a
3.75x4.5	1.5	eN-QFN3.754.5-1.5-1435-x		14x35	eZ-Load	2 mm stack	eTR0824-x	a
3.75x5	1.5	eN-QFN3.7505-1.5-1435-x		14x35	eZ-Load	2 mm stack	eTR0829-x	a
3.75x6	1.5	eN-QFN3.7506-1.5-1435-x		14x35	eZ-Load	2 mm stack	eTR0844-x	a
4x4	0.9	eN QLP0404-0.9-1845-x-R.1	1	18x45	eZ-Load		eTR0922-x	a
4x4	1.4	eN QLP0404-1.4-1845-x		18x45	eZ-Load		eTR0924-x	a
4x7.5	1.3	eN-QFN047.5-1.3-1426-x		14x26	eZ-Load		eTR0907-x	a
4x10.5	1.3	eN QFN0410.5 1.3 1421 X		14x21	shelf		eTR1193-x	a
4x10.75	1.3	eN QFN0410.75 1.3 1421 X		14x21	shelf		eTR1194-x	a
4x13	0.9	eN-QFN0413-0.9-1417-x		14x17	Shelf		eTR1002-x	a
4.15X8	1.5	eN QFN4.1508 1.5 1426 X		14x26	shelf		eTR1159-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a)



## QFN/QLP (continued)

**CARBON FIBER**

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
5x3.5	1.1	eN-QFN5.03.5-1.1-1435-x		14x35	eZ-load	2 mm stack	eTR1003-x	a
5x5	1.2	eN-QFN0505-1.2-1435-x-R.1	1	14x35	eZ-Load	2 mm stack	eTR0931-x	a
5x5	1.3	eN-QFN0505-1.3-1435-x		14x35	eZ-Load	2 mm stack	eTR0771-x	a
6x4	1.2	eN-QFN0604-1.2-1225-x		12x25	eZ-Load	2 mm stack	eTR0929-x	a
6.4x5.4	1.5	eN QFN6.45.4 1.5 1035 X		10x35	shelf		eTR1130-x	a
6x6	1.1	eN-QFN0606-1.1-1435-x		14x35	Shelf	2 mm stack	eTR0953-x	a
6x6	1.5	eN-QFN0606-1.5-1435-x		14x35	eZ-Load	2 mm stack	eTR0223-x	a
6x6.5	1.7	eN-QFN066.5-1.7-1026-x		10x26	eZ-Load	1.27 mm stack	eTR0766-x	a
6x8.5	1.9	eN-QFN068.5-1.9-1426-x		14x26	Shelf	2 mm stack	eTR0840-x	a
6.5x4.5	2.2	eN-QFN6.54.5-22-1035-x		10x35	eZ-Load	2 mm stack	eTR0995-x	a
7x7	1.0	eNX-QFN0707-1.0-1026-x	B	10x26	eZ-Load	2 mm stack	eTR0860-x	a
7x7	1.1	eN-QFN0707-1.1-1026-x		10x26	Shelf	2 mm stack	eTR0954-x	a
7x7	1.6	eN-QFN0707-1.6-1026-x		10x26	eZ-load	2 mm stack	eTR0553-x	a
7.4x10.1	1.4	eN-QFN7.410.1-1.4-1021-x		10x21	Shelf	2 mm stack	eTR0965-x	a
8x8	1.0	eNX-QFN0808-1.0-1026-x		10x26	Shelf	2 mm stack	eTR0925-x	a
9x9	1.3	eN-QFN0909-1.3-0923-x	03	9x23	eZ-Load		eTR0919-REV 03-x	a
9.1x11.9	1.8	eN QFN9.111.9 1.8 0820 X		8x20	shelf		eTR1127-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a )





## QFN/QLP (continued)

**CARBON FIBER**

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
10x6.5	3.2	eN-QFN106.5-3.2-0826-x		8x26	Shelf		eTR1000-x	a
10x10	1.0	eNX-QFN1010-1.0-0821-x	A	8x21	Shelf	2 mm stack	eTR0857-x	a
10x10	1.5	eNX-QFN1010-1.5-0821-x		8x21	eZ-Load	2 mm stk, Peak	eTR0679-x	a
10x10	2.7	eN QFN1010 2.7 0821 X		8x21	shelf		eTR1195-x	2Q2015
11x5.5	1.3	eN-QFN115.5-1.3-0835-x		8x35	eZ-Load		eTR0902-x	a
12x6	1.3	eN-QFN1206-1.3-0826-x		8x26	eZ-Load		eTR0918-x	a
18.3x18.3	2.5	eN-QFN18.318.3-2.5-0512-x		5x12	Shelf		eTR1005-x	a
21x31	1.4	eN-QFN2131-1.4-0509-x		5x9	Shelf		eTR0900-x	a
32x42.7	2.4	eN QFN3242.7 2.4 0306 X		3x6	shelf		eTR1111-x	a
36x46	2.4	eN QFN3646.7 2.4 0306 X		3x6	shelf		eTR1192-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a )





# MLF, CSP, BGA

## Small MLF, CSP and BGA

**CARBON FIBER**

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
3x5	1.6	eN-BG0305-1.6-1640-x		16x40	eZ-Load	2 mm stack	eTR0665-x	a
3x8	1.6	eN BG0308 1.6 1426 XV		14x26	V-shelf		eTR1152-x	a
3.25x3.5	1.5	eN-MLP-3.253.5-1.5-1435-x		14x35	eZ-Load	2 mm stack	eTR0746-x	a
3.25x3.75	1.5	eN-MLP-3.253.75-1.5-1435-x		14x35	eZ-Load	2 mm stack	eTR0767-x	a
4x4.5	0.8	eN-BG044.5-0.8-1435-xV		14x35	V-Shelf	2 mm stack	eTR0934-x	a
5x5	1.0	eN-BG0505-1.0-1435-x		14x35	eZ-Load	1.77 mm stack	eTR0859-x	a
5x5	1.2	eN0505-1.2-1435-xV		14x35	V-Shelf	2 mm stack	eTR0994-x	a
5x5	1.5	eN-BG0505-1.5-1640-x		16x40	eZ-Load	2 mm stack	eTR0205-x	a
5x5	1.5	eN-BG0505-1.5-1636-xV		16x36	V-Shelf	1.27 mm stack	eTR0631-x	a
5x5	1.6	eN-BG0505-1.6-1435-x		14x35	eZ-Load	2 mm stack	eTR0352-x	a
5x5	1.6	eN-BG0505-1.6-1435-x	1	14x35	eZ-Load	2 mm stack	eTR0378-x	a
5x5	4.0	eK-BG0505-4.0-1232-x		12x32	Shelf	2.03 mm stack	eTR0777-x	a
5x6	1.6	eN-BG0506-1.6-1435-x		14x35	eZ-Load	2 mm stack	eTR0360-x	a
5x7	2.0	eN-BG0507-2.0-1426-x		14x26	eZ-Load	1.27 mm Stack	eTR0590-x	a
5x8	1.7	eN-BG0508-1.7-1426-x		14x26	eZ-Load	1.27 mm stack	eTR0401-x	a
5.5x6	1.6	eN-LGA5.506-1.6-1435-x		14x35	eZ-Load	2 mm stack	eTR0733-x	a
5.5x8	1.9	eN-BG5.508-1.9-1426-x		14x26	eZ-Load	2 mm stack	eTR0326-x	a
6x6	1.5	eN-BG0606-1.5-1435-x		14x35	eZ-Load	2 mm stack	eTR0226-x	a
6x6	1.5	eNH-BG0606-1.5-1333	A	13x33	eZ-Load	1.77 mm stack, Peak	eTR0251-x	a
6x6	1.5	eNH-BG0606-1.5-1333-x	1	13x33	eZ-Load	1.77 mm stack	eTR0851-x	a
6x6	1.5	eNH-BG0606-1.5-1333-x	R.2	13x33	eZ-Load	UBOT	eTR0883-x	a
6x8	1.7	eN-BG0608-1.7-1426-x		14x26	eZ-Load	2 mm stack	eTR0282-x	a
6.4x6.4	1.6	eN-BG6.46.4-1.6-1023-x		10x23	eZ-Load	1.27 mm stack	eTR0387-x	a
6.4x10.5	1.0	eN-BG6.3910.5-1.0-1016-x		10x16	eZ-Load	1.27 mm stack	eTR0247-x	a
6.4x10.5	1.2	eN-BG6.3910.5-1.2-1021-x		10x21	Shelf	2 mm stack	eTR0383-x	a
6.5x6.5	2.8	eK-SMIA656.56.5-2.8-1332-x		13x32	eZ-load	2 mm stack	eTR0751-x	a
6.5x6.5	1.5	eN BG6.56.5 1.5 1026 XV		10x26	V-shelf		eTR1142-x	a
6.8x6.2	1.1	eN-BG6.86.2-1.1-1026-x		10x26	eZ-load	2 mm stack	eTR0992-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a)





**CARBON FIBER**

## Small MLF, CSP and BGA (continued)

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
7x7	1.5	eN-BG0707-1.5-1332-x		13x32	eZ-Load	2 mm stack	eTR0120-x	a
7x7	1.5	eN-BG0707-1.5-1026-xV		10x26	V-shelf	2 mm stack	eTR0650-x	a
7x7	1.9	eN BG0707 1.9 1026 X		10X26	eZ-load		eTR1133	a
7x10	1.8	eN-LGA0710-1.8-1425-x		14x25	eZ-Load	1.27 mm stack	eTR0335-x	a
7x14	1.2	eN BG0714 1.2 1017 XV		10x17	V-shelf		eTR1141	a
7.8x10.4	1.1	eN BG7.810.4 1.1 1021 XV		10x21	V-shelf		eTR1110-x	a
8x6	1.8	eN-LGA0806-1.8-1236-x		12x36	eZ-Load	1.27 mm stack	eTR0564-x	a
8x8	1.5	eNH-BG0808-1.5-1229-x	B	12x29	eZ-Load	2 mm stack	eTR0861-1	a
8x8	1.7	eN-BG0808-1.7-1229-x	1	12x29	eZ-Load	2 mm stack	eTR0463-x	a
8x8	2.0	eN-BG0808-2.0-1026-x		10x26	eZ-Load	1.27 mm stack	eTR0474-x	a
8x8	2.3	eN-OM0808-2.3-1026-x		10x26	Shelf	1.27mm Stack	eTR0584-x	a
8x8	6.6	eK-CLCC0808-6.6-0922-x		9x22	Pocket	2 mm stack	eTR0649-x	a
8x11.5	1.6	eN-BG0811.5-1.6-1222-x		12x22	eZ-Load	1.27 mm stack	eTR0571-x	a
8x11.6	1.9	eN-BG811.6-1.9-1021-x		10x21	eZ-Load	2 mm stack	eTR0536-x	a
8x12.5	1.6	eN-BG0812.5-1.6-1220-x		12x20	eZ-Load	1.27 mm stack	eTR0565-x	a
8.5x4.5	1.1	eN-BG8.54.5-1.1-1035-x		10x35	eZ-Load	2 mm stack	eTR0930-x	a
8.5x8.5	6.6	eK-CLCC0.58.5-6.6-0818-x		8x18	Pocket	2mm stack	eTR0651-x	a
8.5x12.5	1.7	eN-BG8.512.5-1.7-0817-x		8x17	Shelf	1.27 mm stack	eTR0795-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a)



## CARBON FIBER

### Medium CSP and BGA

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
9.04x14.57	0.8	eN BG9.0414.57 0.8 1017 X R.1		10x17	shelf		eTR1109-x	a
9.4x6.45	2.3	eN-LGA9.46.45-2.3-1030-x		10x30	eZ-Load	1.27 mm stack	eTR0662-x	a
9.4x6.45	2.3	eN-LGA9.46.45-2.3-1030-x	1	10x30	eZ-Load	1.27 mm stack	eTR0765-x	a
9x7.7	1.3	eN-BG097.7-1.3-1026-x		10x26	Shelf	2 mm stack	eTR0404-x	a
9x9	1.5	eN-BG0909-1.5-1026-x		10x26	eZ-Load	2 mm stack	eTR0121-x	a
9x12	1.8	eN-LGA0912-1.8-1121-x		11x21	eZ-Load	1.27 mm stack	eTR0254-x	a
9.04x14.5	0.8	eN-BG9.0414.57-0.8-1017-x		10x17	Shelf	2 mm stack	eTR0972-x	a
9.1x11.6	1.8	eN-LGA9.1x11.6-1.8-0927-x		9x27	eZ-Load	1.27 mm stack	eTR0198-x	a
9.7x7.9	2.3	eN-LGA9.77.9-2.3-1030-x		10x30	eZ-Load	1.27 mm stack	eTR0640-x	a
10x8	1.8	eN-LGA1008-1.8-1030-x		10x30	eZ-Load	1.27 mm stack	eTR0231-x	a
10x10	1.7	eN-BG1010-1.7-1024-x	1	10x24	eZ-Load	2 mm stack	eTR0197-x	a
10x10	1.7	eN-BG1010-1.7-0823-xV		8x23	V-shelf	2 mm stack	eTR0633-x	a
10X10	1.7	eN BG1010 1.7 0821 XV		8X21	V-shelf		eTR1139-x	a
10x10	1.9	eK-BG1010-1.9-0821-x		8x21	Shelf	2 mm stack	eTR0626-x	a
10x10	8.0	eK-BG1010-8.0-0820-x		8x20	Pocket	2 mm stack	eTR0677-x	a
10x12	1.8	eN-LGA1012-1.8-0816-x		8x16	eZ-Load	1.27 mm stack	eTR0293-x	a
10x14	1.6	eN-BG1014-1.6-1018-x		10x18	Shelf	1.27 mm stack	eTR0311-x	a
10.1x10.9	1.2	eN-BG10.110.9-1.2-0821-x		8x21	eZ-Load	2 mm stack	eTR0530-x	a
10.2x11.4	3.3	eN-BG10.1611.43-3.3-1022-x	1	10x22	eZ-Load	1.27 mm stack	eTR0307-x	a
10.5x6.3	1.5	eN-BG10.56.3-1.5-0723-x		7x23	eZ-Load	1.27 mm stack	eTR0417	a
10.7x10.7	2.8	eN-32LCC-2.8-0822-x		8x22	eZ-Load	1.27 mm stack	eTR0334-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a)



## CARBON FIBER

### Medium CSP and BGA(continued)

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
11x11	1.8	eNH-BG1111-1.8-0822-xV		8x22	V-Shelf	1.27 mm stack	eTR0676	a
11x13.7	2.4	eN-BG1113.7-2.4-0817-x		8x17	Shelf	1.27 mm stack	eTR0239-x	a
12x12	1.2	eNX-BG1212-1.2-0921-x		9x21	Shelf	1.27 mm stack	eTR0858-x	a
12x12	1.4	eN-BG1212-1.4-0821-xV		8x21	V-Shelf	2 mm stack	eTR0849-x	a
12x12	1.5	eN-BG1212-1.5-0820-xV		8x20	V-Shelf	1.27 mm stack	eTR0385-x	a
12x12	1.5	eN-BG1212-1.5-0820-xV	1	8x20	V-Shelf	1.27 mm stack	eTR0750-x	a
12x12	1.6	eN-BG1212-1.6-0820-xV		8x20	V-Shelf	2 mm stack	eTR0365-x	a
12x12	1.9	eN-BG1212-1.9-0921-x	1	9x21	eZ-Load	2 mm stack	eTR0217-x	a
12x12	2.2	eN BG1212 2.2 0821 XV		8x21	V-shelf		eTR1135-x	a
13x13	1.4	eN-BG1313-1.4-0820-x		8x20	Shelf	2 mm stack	eTR0064-x	a
13.5x25.2	1.6	eN-BG13.525.2-1.6-0811-xV		8x11	V-Shelf	1.27 mm stack	eTR0839-x	a
14x14	1.4	eN-BG1414-1.4-0819-xV		8x19	V-Shelf	1.27 mm stack	eTR0455-x	a
14.2x14.2	3.0	eK-BG14.214.2-3.0-0717-x		7x17	Shelf		eTR0182-x	a
14.2x14.2	2.5	eN-48LCC-2.5-0616-x		6x16	eZ-Load	1.27 mm stack	eTR0151-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark



## Medium CSP and BGA(continued)

**CARBON FIBER**

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
15x15	1.4	eN-BG1515-1.4-0717-x	1	7X17	Shelf	2 mm stack	eTR0875-x	a
15x15	1.6	eN-BG1515-1.6-0718-xV		7x18	V-Shelf	1.27 mm stack	eTR0438-x	a
15x15	2.8	eN-BG1515-2.8-0718-xV		7x18	V-Shelf	1.27 mm stack	eTR0793-x	a
15x20	2.8	eN-LGA1520-2.8-0713-x		7x13	Shelf	1.27 mm stack	eTR0406-x	a
15.8x12.6	2.0	eN-BG15.812.6-2.0-0620-x		6x20	Shelf	1.27 mm stack	eTR0560-x	a
16x16	1.4	eN-BG1616-1.4-0615-xV	1	6x15	V-Shelf	1.27 mm stack	eTR0411-x	a
16x16	2.9	eN-BG1616-2.9-0615-x		6x15	Shelf	1.27 mm stack	eTR0555-x	a
16x16	2.9	eN-BG1616-2.9-0615-x	1	6x15	Shelf	1.27 mm stack	eTR0739-x	a
16.2x20.5	1.0	eN-BG16.220.5-1.0-0612-x		6x12	Shelf	2 mm stack	eTR0638-x	a
17x16	1.4	eN BG1716 1.4 0614 X		6x14	shelf		eTR1187-x	a
17x17	1.5	eNH-BG1717-1.5-0615-x		6x15	Shelf	Peak	eTR0047-x	a
17x17	1.5	eNH-BG1717-1.5-0615-x	1	6x15	Shelf	1.27 mm stack	eTR0856-x	a
17x17	1.7	eN-BG1717-1.7-0615-xV	1	6x15	V-Shelf	1.27 mm stack	eTR0753-x	a
17x17	2.6	eN BG1717 2.6 0615 X		6x15	shelf		eTR1138-x	a
18x18	1.6	eN-BG1818-1.6-0614-xV		6x14	V-Shelf		eTR0275-x	a
18x18	2.6	eN-BG1818-2.6-0615-xV		6x15	V-Shelf		eTR0295-x	a
18.8x26.8	1.8	eN-18.8x26.8-1.8-0610-x		6x10	Shelf		eTR0754-x	a
19x19	1.8	eNH-BG1919-1.8-0614-x		6x14	Shelf	Peak	eTR0329-x	a
19x19	2.0	eN-BG1919-2.0-0614-x		6x14	Shelf		eTR0048-x	a
19x19	2.7	eNH-BG1919-2.7-0614-x		6x14	Shelf	Peak	eTR0772-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark



## CARBON FIBER

### Medium CSP and BGA(continued)

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
20x7.5	1.0	eN-BG207.5-1.0-0520-x		5x20	Shelf		eTR0999-x	a
20x20	3.0	eN-BG2020-3.0-0512-xV		5x12	V-shelf	1.27 mm stack	eTR0444-x	a
21x21	2.3	eNH-BG2121-2.3-0512-x	A	5x12	Shelf	Peak	eTR0853-x	a
23x23	1.5	eNX-BG2323-1.5-0512-x	A	5x12	Shelf	Peak	eTR0022-x	a
23x23	1.5	eN-BG2323-1.5-0512-xV		5x12	V-Shelf	Peak	eTR0556-x	a
23x23	1.5	eN-BG2323 1.5 0512 XV	1	5x12	V-Shelf	1.27 mm stack	eTR0704-x	a
25x25	1.8	eN-BG2525-1.8-0411-x		4x11	Shelf		eTR0138-x	a
25x25	2.2	eN-BG2525-2.2-0411-x		4x11	Shelf		eTR0798-x	a
25x25	3.2	eN-BG2525-3.2-0411-xV		4x11	V-shelf		eTR0903-x	a
25x32.5	2.1	eN-BG2532.5-2.1-0408-x		4x8	Shelf		eTR0137-x	a
26x26	1.0	eN-BG2626-1.0-0410-xV		4x10	V-Shelf		eTR0967-x	a
27x27	2.0	eNH-BG2727-2.0-0410-x		4x10	Shelf	Peak	eTR0008-x	a
27x27	2.0	eNH-BG2727-2.0-0410-x	3	4x10	Shelf	Peak	eTR0161-x	a
27x27	2.0	eNH-BG2727-2.0-0410-xS		4x10	Shelf	Peak	eTR0248-x	a
27x27	2.0	eNH BG2727 2.0 0410 X	R.4	4x10	Shelf		eTR0892-x	a
27x27	1.1	eN-BG2727-1.1-0410-x		4x10	Shelf		eTR0043-x	a
29x29	2.0	eNH-BG2929-2.0-0409-x		4x9	Shelf	Peak	eTR0086-x	a
29x29	2.7	eN BG2929 2.7 0409 X		4x9	Shelf		eTR1144	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark



## Large Body BGA

# CARBON FIBER

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
30x30	2.4	eNX-BG3030-2.4-0308-x		3x8	Shelf	Peak	eTR0108-x	a
31x31	2.2	eNH-BG3131-2.2-0309-x		3x9	Shelf	Peak	eTR0024-x	a
31x31	2.2	eNH-BG3131-2.2-0309-xS		3x9	Shelf	Peak	eTR0107-x	a
31x31	2.1	eN-BG3131-2.1-0309-x-V		3x9	V-Shelf		eTR0195-x	a
31x35	1.6	eN-BG3135-1.6-0308-x		3x8	Shelf		eTR0547-x	a
31.8x40.6	1.9	eK-BG31.840.6-1.9-0306-x		3x6	Shelf		eTR0566-x	a
32x24	4.9	eN-MMC3224-4.9-0311-x		3x11	Pocket		eTR0496-x	a
32x24	2.3	eN-SD/MMC CARD-0310-x		3x10	Shelf		eTR0451-x	a
32x40	3.0	eN-LGA3240-3.0-0308-x		3x7	Shelf		eTR0826-x	a
32.5x42.5	2.8	eN-BG32.542.5-2.8-0306-x		3x6	Shelf		eTR0159-x	a
33x33	1.5	eN-BG3333-1.5-0308-x		3x8	Shelf		eTR0546-x	a
34x34	1.8	eN-BG3434-1.8-0308-x		3x8	Shelf		eTR0204-x	a
35x35	1.35	eN-BG3535-1.35-0308-x		3x8	Shelf		eTR0080-x	a
35x35	1.5	eNH-BG3535-1.5-0308-x	B	3x8	Shelf	Peak	eTR0852-x	a
35x35	1.8	eN-BG3535-1.8-0308-xV		3x8	V-Shelf		eTR0403-x	a
35x35	2.2	eNH-BG3535-2.2-0308-x	1	3x8	Shelf	Peak	eTR0869-x	a
35x35	2.9	eN-BG3535-2.9-0308-x		3x8	Shelf	Peak	eTR0780-x	a
36x28	2.7	eN-LCC100-2.7-0310-x		3x10	Shelf		eTR0298-x	a
37.5x37.5	2.0	eNX-BG37.537.5-2.0-0307-xV		3x7	V-Shelf	Peak	eTR0870-x	a
37.5x37.5	2.5	eNX-BG37.537.5-2.5-0307-x		3x7	Shelf	Peak	eTR0850-x	a
37.5x37.5	2.3	eNX-BG37.537.5-2.3-0307-x		3x7	Shelf	Peak	eTR0026-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a)



## Large Body BGA (continued)

**CARBON FIBER**

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
40x40	1.4	eN-BG4040-1.4-0307-x		3x7	Shelf		eTR0206-x	a
40x40	2.2	eN-BG4040-2.2-0307-x-V		3x7	V-Shelf		eTR0701-x	a
40x40	2.5	eNX-BG4040-2.5-0307-x	B	3x7	Shelf	Peak	eTR0027-x	a
40x40	2.1	eN-BG4040-2.1-0307-x-V		3x7	V-Shelf		eTR0229-x	a
40x40	5.0	eKX-BG4040-5.0-0307-x	1	3x7	Shelf	Peak	eTR0304-x	a
42.2x42.2	2.9	eK-BG42.242.2-2.9-0206-x		2x6	Shelf		eTR0567-x	a
42.5x42.5	2.2	eNX-BG42.542.5-2.2-0206-x		2x6	Shelf	Peak	eTR0028-x	a
42.5x42.5	3.1	eN-BG42.542.5-3.1-0206-x		2x6	Shelf		eTR0203-x	a
43.8x43.8	5.0	eK-BG43.843.8-3.7-0206-x	B	2x6	Shelf		eTR0171-x	a
45x45	1.9	eN-BG4545-1.9-0206-x		2x6	Shelf		eTR0283-x	a
45x45	2.0	eK-BG4545-2.0-0206-x		2x6	Shelf		eTR0488-x	a
45x45	2.2	eNX-BG4545-2.2-0206-x		2x6	Shelf	Peak	eTR0010-x	a
47.5x47.5	2.2	eNX-BG47.547.5-2.2-0206-x		2x6	Shelf	Peak	eTR0087-x	a
51x51	2.2	eK-LGA5151-2.2-0205-x	1	2x5	Shelf		eTR0367-x	a
52.5x52.5	3.2	eN-BG52.552.5-3.2-0205-xV	1	2x5	V-Shelf		eTR1074-x	a
55.55x66	1.8	eN-BG55.5566-1.8-0204-x		2x4	Shelf		eTR0906-x	a
58x58	3.2	eK-BG5858-3.2-0205-x		2x5	Shelf		eTR0224-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a)



## CARBON FIBER

### Modules

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
3.2x5	1.1	eN-MOD3.205-1.1-1435-x		14x35	eZ-Load		eTR1006-x	a
3.2x5	1.6	eN-MOD3.205-1.6-1435-x		14x35	eZ-Load		eTR0928-x	a
3.6x3.8	1.4	eN-MOD3.63.8-1.4-1435-x		14x35	eZ-Load		eTR0921-x	a
4x8.75	1.9	eN-MOD048.75-1.9-1426-x		14x26	Shelf		eTR0940-x	a
6x4.5	1.5	eN-MOD064.5-1.5-1440-x		14x40	eZ-Load	2 mm stack	eTR0936-x	a
8x9.2	1.5	eN MOD089.2 1.5 1021 X		10x21	shelf		eTR1134-x	a
32x40	5.0	eK-MOD3240-5.0-0307-x		3x7	Shelf		eTR0993-x	a
35x60	1.3	eK-MOD3560-1.3-0304-x		3x4	shelf		eTR1125-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a)





# CARBON POWDER

## TQFP 0.8 and 1.0 mm

Device Size	Device Height	ePAK Description	Rev	Tray Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
5x5	1.0	eN-0505-1.0-1025-x		10x25	Pocket		eTR0322-x	a
7x7	1.0	eN-0707-1.0-1025-x		10x25	Pocket		eTR0216-x	a
10x10	0.8	eN-1010-0.8-0820-x		8x20	Pocket		eTR0321-x	a
10x10	1.0	eN-1010-1.0-0820-x		8x20	Pocket		eTR0214-x	a
12x12	1.0	eN-1212-1.0-0616-x		6x16	Pocket		eTR0320-x	a
12x12	1.0	eN-1212-1.0-0717-x	1	7x17	Pocket		eTR0215-x	a
14x14	1.0	eN-1414-1.0-0615-x		6x15	Pocket		eTR0207-x	a
24x24	1.0	eN-2424-1.0-0410-x		4x10	Pocket		eTR0341-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a)



# CARBON POWDER

Device Size	Device Height	ePAK Description	Rev	Tray Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
7x7	1.4	eN-0707-1.4-1025-x		10x25	Pocket		eTR0054-x	a
7x7	1.4	eN-0707-1.4-1025-x	1	10x25	Pocket		eTR0748-x	a
10x10	1.4	eN-1010-1.4-0820-x		8x20	Pocket		eTR0053-x	a
10x10	1.4	eN-1010-1.4-0820-x	1	8x20	Pocket		eTR0592-x	a
10x10	1.4	eN-1010-1.4-0820-x	3	8x20	Pocket		eTR0721-x	a
12x12	1.4	eN-1212-1.4-0717-x		7x17	Pocket		eTR0061-x	TBD
14x14	1.4	eN-1414-1.4-0615-x		6x15	Pocket		eTR0052-x	a
14x14	1.4	eN-LQFP1414-B8T-0615-x		6x15	Pocket		eTR0484-x	a
14x14	1.4	eN-1414-1.4-0615-x	2	6x15	Pocket		eTR0642-x	a
14x14	1.6	eN-1414-1.6-0615-x		6x15	Pocket		eTR0470-x	a
14x20	1.4	eN-1420-1.4-0612-x		6x12	Pocket		eTR0040-x	a
16x16	1.4	eN-LQFP-120P-16x16-1HT-0615-x		6x15	Pocket		eTR0493-x	a
20x20	1.4	eN-2020-1.4-0512-x		5x12	Pocket		eTR0055-x	a
24x24	1.4	eN-2424-1.4-0410-x		4x10	Pocket		eTR0062-x	a
24x24	1.4	eN-2424-1.4-0410-x	2	4x10	Pocket		eTR0658-x	a
28x28	1.4	eN-2828-1.4-0409-x		4x9	Pocket		eTR0083-x	a

## QFP

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
10x10	2.0	eN-1010-2.0-0820-x		6x16	Pocket		TBD	TBD
14x14	2.0	eN-1414-2.0-0614-x		6x14	Pocket		TBD	TBD
14x14	2.7	eN-PTA52C-0615-x		6x15	Pocket		eTR0489-x	a
14x20	2.15	eN-1420-2.15-0611-x		6x11	Pocket		eTR0572-x	a
14x20	2.75	eN-1420-2.75-0611-x	0	6x11	Pocket	Denka	eTR0042-x	a
28x28	3.5	eN-2828-3.5-0308-x		3x8	Pocket	Universal	eTR0063-x	a
28x28	3.4	eN-QFP120/160/208-2H-0308-x		3x8	Pocket	Sony	eTR0433-x	a
36x36	3.75	eN-3636-3.75-0307-x		3x7	Pocket		eTR0533-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a)

## TSOP

# CARBON POWDER

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
SSOP300MILIO	1.8	eN-SSOP300MILIO-1021-x		10x21	Pocket	SSOP300MIL	eTR0582-x	a
300MIL20PSSOP	1.8	eN-300MIL20PSSOP-1024-x		10x24	Pocket	300MIL20PSSOP	eTR0583-x	a
0.475 x 0.800	1.0	eN-TSOP(II)54-0912-xS		9x12	Pocket	Shinon 54, 66 and 86 LD	eTR0037-x	a
0.400 x 0.875	1.0	eN-TSOP(II)400x875-0912-x		9x12	Pocket		eTR0338-x	a
0.400 x 0.875	1.0	eN-TSOP(2)400MIL22-0912		9x12	Pocket	54, 66, 86 LD	eTR0173-x	a
4.4x6.5 (SSOP20)	1.15	eN-QSJ-50813-1230-x		12x30	Pocket		eTR0647-x	a
7.1x18.4	2.3	eN-HSOP36-2.3-0816-x		8x16	Pocket		eTR0469-x	a
7.5x10.3	2.35	eN-SOP16-1024-x		10x24	Pocket		eTR0494-x	a
8.1x14	0.9	eN-TSSOP56-1018-x		10x18	Pocket		eTR0423-x	a
10.7x26	2.05	eN-SOP40-0810-x		8x10	Pocket		eTR0505-x	a
11x21	2.65	eN-SOP32-0813-x		8x13	Pocket		eTR0504-x	a
11.8x18.4	1.0	eN-TSOP(II)70-0915-x		9x15	Pocket	24, 40, 70 LD	eTR0303-x	a
12x18.4	1.0	eN-TSOP(I)48P-0812-xD		8x12	Pocket	Denka 48LD	eTR0139-x	a
15.9x28.6	2.7	eN-SSOP70-0709-x		7x9	Pocket		eTR0422-x	a
17.2x24.3	1.5	eN-NP3-0408-x		4x8	Pocket		eTR0336-x	a
20.5x26.5	3.2	eN-POSP58-0408-3		4x8	Pocket	58 LD	eTR0196-x	a

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a)





# CARBON POWDER

Device Size	Device Height	ePAK Description	Rev	Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
2.5x2.5	1.2	eN-QFN2.52.5-1.2-0820-x		8x20	eZ-Load	2.0mm Stack	eTR0601-x	a
3.4x3.8	1.1	eN-VSON16-1.1-1435-x		14x35	eZ-Load	2.0 mm Stack	eTR0363-x	a
3.8x3.8	1.0	eN-VQON24-1.0-1230-x		12x30	Shelf	2.0 mm Stack	eTR0479-x	a
4.7x4.7	1.2	eN-BG4.74.7-1.2-1331-x		13x31	eZ-Load	2.0 mm Stack	eTR0593-x	a
5x5	1.4	eN-QFN0505-1.4-1331-x		13x31	Shelf	2.0 mm Stack	eTR0477-x	a
5x5	2.5	eN-5x5-SOCKETMODULES-x		13x32	V-Shelf	1.27mm Stack	eTR0769-x	a
6x6	3.8	eN-6x6-SOCKETMODULES-x		13x32	V-Shelf	1.27mm Stack	eTR0744-x	a
6.3x6.2	1.5	eN-QFN6.36.2-1.5-1230-x		12x30	eZ-load	2.0 mm Stack	eTR0558-x	a
7x7	1.5	eN-BG0707-1.5-1332-xV		13x32	V-shelf	2.0 mm Stack	eTR0323-x	a
11x13	1.4	eN-BG1113-1.4-0919-x		9x19	Shelf	2.0 mm Stack	eTR0328-x	a
12x12	1.5	eN-BG1212-1.5-0821-x		8x21	Shelf	2.0 mm Stack	eTR0369-x	a
13x12	0.9	eN-BG1312-0.9-0821-xV		8x21	V-Shelf	2.0 mm Stack	eTR0854-x	a
13.6x14.4	1.2	eN-BG13.614.4-1.2-0717-x		7x17	Shelf		eTR0281-x	a
16x16	1.4	eN-BG1616-1.4-0615-xV		6x15	V-shelf		eTR0315-x	a
17x17	1.7	eN-BG1717-1.7-0615-x		6x15	Shelf		eTR0308-x	a
23x23	1.1	eN-BG2323-1.1-0512-x		5x12	Shelf		TBD	TBD
27x27	1.5	eN-BG2727-1.5-0410-x		4x10	Shelf		eTR0058-x	a
30x30	1.8	eN-BG3030-1.8-0308-x		3x8	Shelf		eTR0512-x	a
31x31	2.2	eN-BG3131-2.2-0309-x		3x9	Shelf		eTR0237-x	a
35x35	1.5	eN-BG3535-1.5-0308-x		3x8	Shelf		eTR0059-x	a
37.5x37.5	1.5	eN-BG37.537.5-1.5-0307-x		3x7	Shelf		eTR0066-x	TBD

Tool Status: Anticipated mold tooling completion date. Completed tooling shown with check mark (a)





## PART NUMBER SYSTEM ePAK Trays

Part Number Code Definition	Example
<p><b>e X X - X X X X - X . X - X X X X - X X - e B</b></p> <ul style="list-style-type: none"> <li>└─ e.BIN Feature</li> <li>└─ Compatibility Code</li> <li>└─ Material Code</li> <li>└─ Row/Column Matrix</li> <li>└─ Package Body Thickness</li> <li>└─ Package Body Size</li> <li>└─ Design Code (optional)</li> <li>└─ Tray Thickness Code</li> <li>└─ e.PAK Tray Designator</li> </ul>	<p><b>e N D - 2 8 2 8 - 3 . 5 - 0 3 0 8 - 8 P - e B</b></p> <ul style="list-style-type: none"> <li>└─ e.BIN feature included</li> <li>└─ Precise interchangeable</li> <li>└─ 180C max eP8 bakeable</li> <li>└─ 3x8 cell matrix</li> <li>└─ 3.5 mm body thickness</li> <li>└─ 28x28 mm MQFP body</li> <li>└─ Pocketed cell</li> <li>└─ Thin profile tray</li> <li>└─ e.PAK tray designator</li> </ul>

Code use varies slightly depending on specific tray. Contact ePAK for more information.



## IC Tray Material Options

### ANTISTATIC COATED

Code	Max Temp	Material Type	Description	SR Range
eP1	75C	ABS	Dissipative	10e5-10e11

### CARBON FIBER

Code	Max Temp	Material Type	Description	SR Range
eP6	150C	MPSU	Dissipative	10e5-10e11
eP7	140C	MPSU	Dissipative	10e5-10e11
eP8	180C	PES	Dissipative	10e5-10e11
eP13	140C	MPPO	Dissipative	10e5-10e11
eP19	150C	MPPO	Dissipative	10e5-10e11

### CARBON POWDER

Code	Max Temp	Material Type	Description	SR Range
eP3	150C	MPPE	Conductive	10e4-10e7
eP18	125C	MPPE	Conductive	10e4-10e7

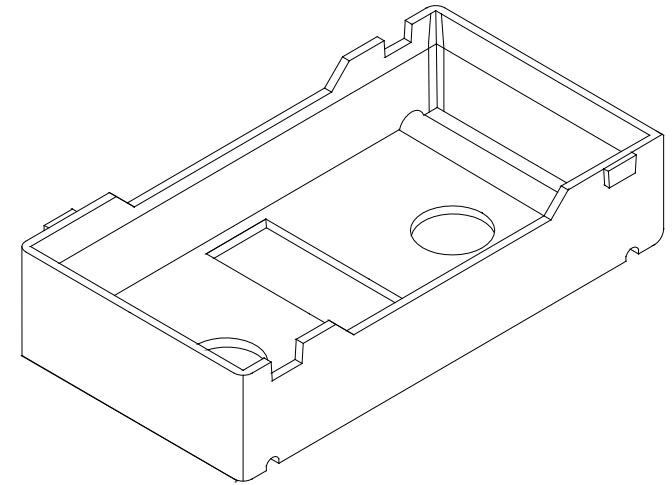
NOTE: Only ePAK's standard production materials are shown here. Contact ePAK for other qualified material options.



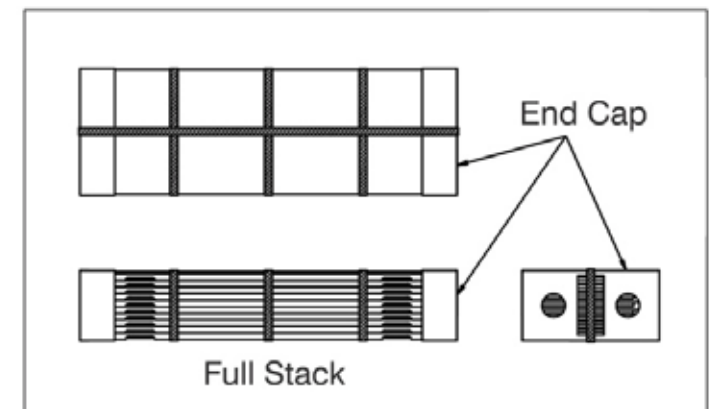
# END CAPS

- Provide excellent added protection of devices while handling and during transit
- Use with full tray stack
- Surface resistivity 10e10 (typical)
- Available in two material choices:

eP23 – Intrinsic A/S black LDPE  
 eP47 – A/S dipped black LDPE



JEDEC Thin Tray Capacity	End Cap Description	End Cap Order Code
6	eN-EC06-eP-23-BLK	eEC0002-eP23-BLK
7	eN-EC07-eP-23-BLK	eEC0003-eP23-BLK
8	eN-EC08-eP23-BLK	eEC0020-eP23-BLK
11	eN-EC11-eP-23-BLK	eEC0001-eP23-BLK
N/A (corner cap)	eN-EC-x	eEC0017-x



# SHOCK-ABSORBING END CAPS

- Provides shock-absorbing barrier for tray stacks
- Eliminates dependence on expensive cushioning and packing materials
- Ideal for rough handling environments
- Allows passing drop test results where other solutions fail



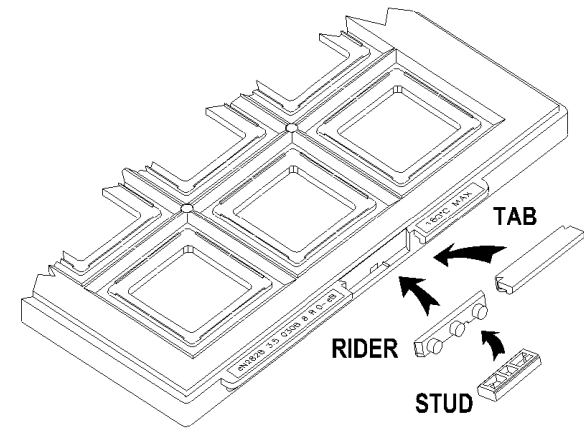
JEDEC Thin Tray Capacity	Description	Order Code	Tool Status
6	eN-SAB06-C8	mVT0011-Conductive PS	a
8	eV11-SAB08-PP	mVT1458-PP	a
11	eN-SAB11-C8	mVT0394-Conductive PS	a

**Material code options** (-x in P/N):

Material	Code	SR
Conductive PS	PS	$\leq 10e^9$
Non ESD black color PP material	PP	N/A



- **e.BIN TAB** for easy color coding; the **e.BIN TAB** retains the JEDEC tray outline and is available in 11 colors
- For sorting and binning applications, use the **e.BIN RIDER** and **STUD** in combination
- The **e.BIN RIDER** features a positive lock-in system and is black in color
- Detachable **e.BIN STUD** available as a stock item in 11 colors
- Custom marking and non-standard rider colors are available via special order (contact ePAK for leadtime and pricing)
- Bakeable to 180°C
- Exclusively from ePAK



Color	JEDEC TAB Order Code	RIDER Order Code	STUD Order Code	STUD *** Ink Color
Purple	eB-T-8-P	not available	eB-S-8-P	White
Dark Green	eB-T-8-DG	not available	eB-S-8-DG	White
Black	eB-T-8-BK	eB-R-8-BK	eB-S-8-BK	White
Light Blue	eB-T-8-B	not available	eB-S-8-B	White
Yellow	eB-T-8-Y	not available	eB-S-8-Y	Black
Green	eB-T-8-G	not available	eB-S-8-G	White
Brown	eB-T-8-BN	not available	eB-S-8-BN	White
Orange	eB-T-8-O	not available	eB-S-8-O	Black
Grey	eB-T-8-GY	not available	eB-S-8-GY	White
White	eB-T-8-W	not available	eB-S-8-W	Black
Red	eB-T-8-R	not available	eB-S-8-R	White

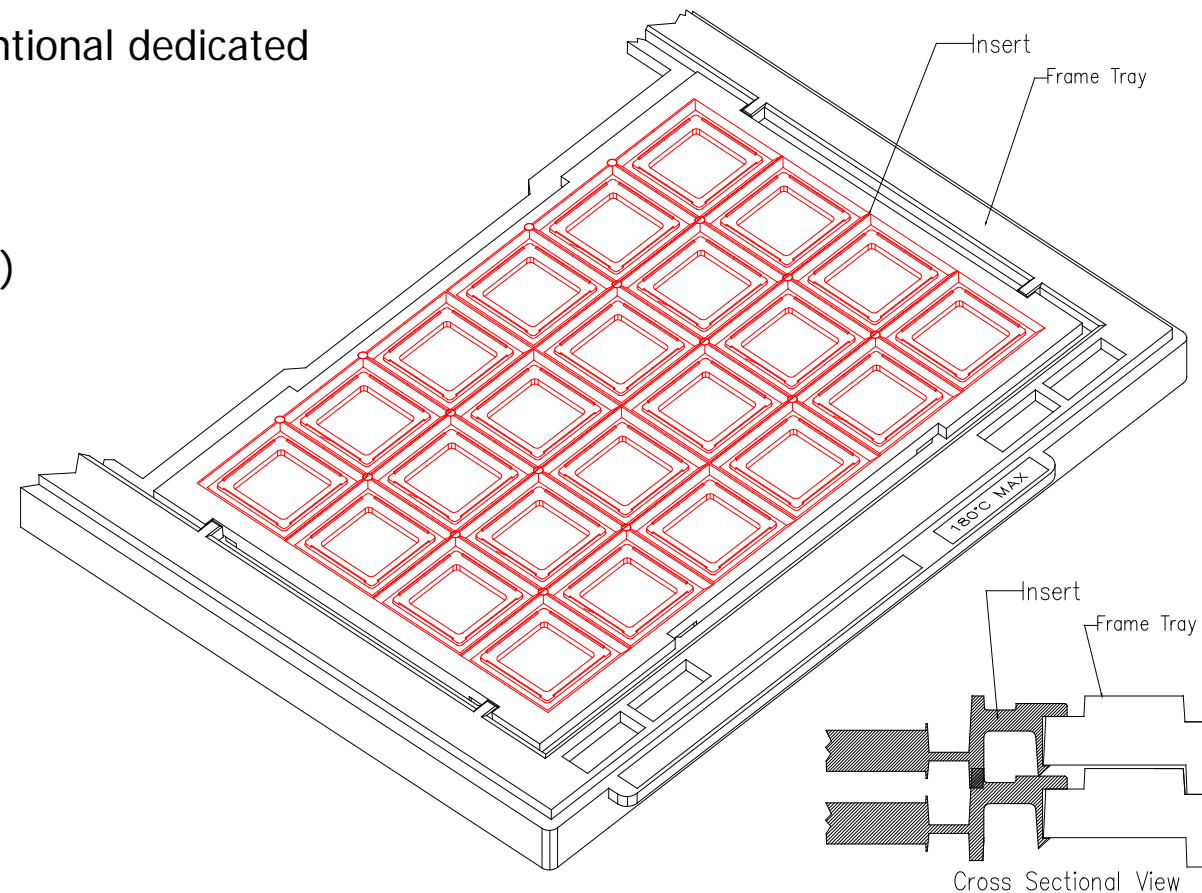
(\*Patented)

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\* If custom marking is required then these ink colors will be used as standard

# INSERT TRAYS

- Provides uniform pitch across the tray for easy machine interface
- Lower NRE cost than conventional dedicated molds
- Inserts snap into a common frame tray (3 insert per tray)
- Perfect for low volume and prototype applications
- Flexible design considerations
- Faster tooling cycle time





# INSERT TRAY TOOLING

- | One frame tray will contain 3 inserts.
- | Frame trays and inserts may be ordered separately by special order.

Device Type	Body Size	Device Height	Fully Assembled Tray ePAK Description	Rev	Tray Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
Thin Frame	All	All	eNF-0103-x		N/A	Frame	Thin Frame	eTR0082-x	a
Thick Frame	All	All	eKF-0103-x		N/A	Frame	Thick Frame	eTR0116-x	a
Cover	All	All	eN-CVR-0103-x		N/A	Cover	Cover tray	eTR0112-x	a
Cover	All	All	eN-COVER-x		N/A	Cover	Cover tray	eTR0689-x	a
CQFP 52	52L	2.9	eN-CQFP52-0306-F/I-x		3x6	Pedestal	Thin	eTR0091-x	a
CQFP 24	24L	1.7	eN-CQFP24-0612-F/I-x		6x12	Pedestal	Thin	eTR0128-x	a
MGQFP 16/32	16/32L	1.1	eN-MGQFP-16/32-0815-F/I-x		8x15	Pedestal	Thin	eTR0155-x	a
MGQFP 16/32	16/32L	1.1	eN-MGQFP16/32-0815-F/I-x		8x15	Pedestal	Thin	eTR0791-x	a
PLCC 28	28L	4.1	EK-PLCC28-0712-F/I-x		7x12	Pedestal	Thick	eTR0181-x	a
PLCC 84	30.2x30.2	4.38	eK PLCC84 0306 F/I X		3X6	pocket		eTR1154-x	a
SOIC 8 LD	8 L		eN-SOIC-8LD-1018-F/I-x		10x18	Pocket	Thin	eTR1011-x	a
SOIC 16 LD	7.5x10.3	2.8	eN-SOIC-16LD-0712-F/I-x		7x12	Pocket	Thin	eTR0718-x	a
SOIC-32LD	11.43x20.55	2.66	eN SOIC-32LD 0509 F/I X		5x9	shelf		eTR1124-x	a
LGA 3.2x5	3.2x5	2.5	eN-LGA3.205-1718-F/I-x		17x18	eZ-Load	Thin, 2mm stk	eTR0636-x	a
LGA 17x17	17x17	3.1	eK-LGA1717-0509-F/I-x		5x9	Shelf	Thick	eTR0761-x	a
LGA 21x21	21x21	2.8	eK-LGA2121-0409-F/I-x		4x9	V-Shelf	Thick	eTR0803-x	a
LGA 33x33	33x33	3.8	eK-LGA3333-0206-F/I-x		2x6	V-Shelf	Thick	eTR0821-x	a
CSP 4x4	4x4	1.3	eN-BG0404-1624-F/I-x		16x24	eZ-Load	Thin, 2mm stk	eTR0141-x	a
CSP 7x9	7x9	1.3	eN-BG0709-1115-F/I-x		11x15	eZ-Load	Thin, 2mm stk	eTR0219-x	a
CSP 9x11	9x11	1.3	eN-BG0911-0915-F/I-x		9x15	eZ-Load	Thin, 2mm stk	eTR0222-x	a
PGA 19x19			eKX-PGA1919/40-9903-D74-0205-F/I-x		2x5	Shelf	Thick	eTR0810-x	a
PGA 20x20	20x20	1.5	eK-PGA2020-0409-F/I-x		4x9	Shelf	Thick	eTR0462-x	a
PGA 24.9x21.8	24.9x21.8	2.0	eK-PGA24.921.8-0309-F/I-x		3x9	Shelf	Thick	eTR0595-x	a
PGA 29x29	29x29	2.8	eK-PGA2929-0306-F/I-x		3x6	Shelf	Thick	eTR0716-x	a
PGA 37x37	37x37	3.2	eK-PGA3737-0206-F/I-x		2x6	Shelf	Thick	eTR0667-x	a

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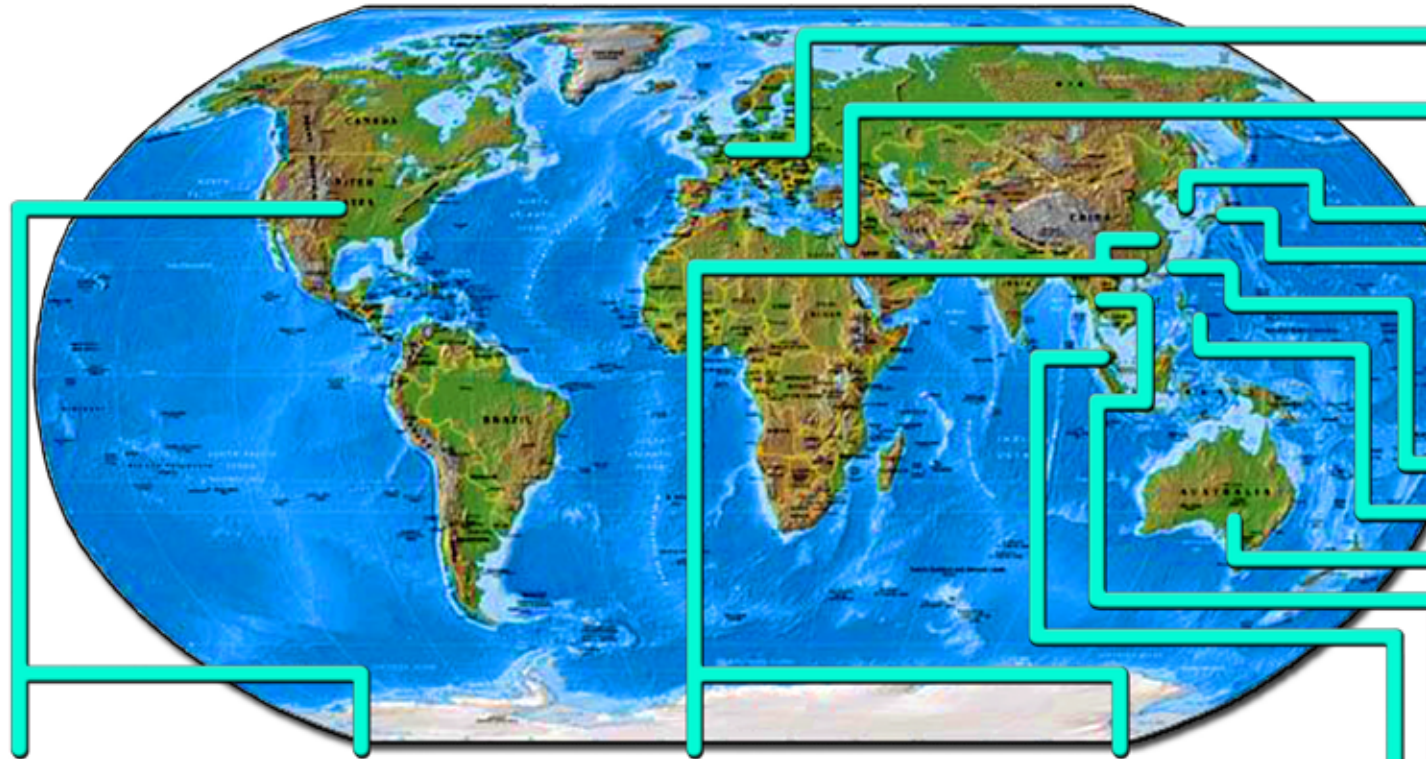


# INSERT TRAY TOOLING

Insert Tray Tooling Continued...

Device Type	Body Size	Device Height	Fully Assembled Tray ePAK Description	Rev	Tray Matrix	Cell Type	Interchangeable Format	Order Code	Tool Status
QFN 3.5x9	3.5X9	1.5	eN-QFN3.509-1.5-1615-F/I-x		16x15	eZ-Load	Thin, 2mm stk	eTR0684-x	a
QFN 3.5x10.5	3.5x10.5	1.0	eN-QFN3.510.5-1412-F/I-x		1x3	Shelf	Thin	eTR0978-x	a
QFN 5x11	5x11	1.4	eN-QFN0511-1312-F/I-x		13x12	Shelf	Thin	eTR0699-x	a
QFN 5.5x10	5.5x10	1.2	eN-QFN5.510-1215-F/I-x		12x15	Shelf	Thin	eTR0933-x	a
QFN 6.1x13.1	6.1x13.1	1.8	eN-QFN6.113.1-1212-F/I-x		12x12	eZ-Load	Thin	eTR0916-x	a
QFN 7.65x5	7.65x5	1.6	eN QFN7.6505 0918 F/I X		9x18	shelf		eTR1118-x	a
QFN 15x9	15X9	2.85	eN QFN1509 0512 F/I X		5X12			eTR1151-x	a
QFN 29.3x30.9	29.3x30.9	3.0	eN-QFN29.330.9-0306-F/I-x		3x6	Shelf	Thin	eTR0890-x	a
BGA 4.5x4.5	4.5x4.5	1.5	eN-BG4.54.51.51418-F/I-x		14x18	eZ-Load	Thin, 2mm stk	eTR0655-x	a
BGA 6x5.35	6x5.35		eN-BG065.35-1218-F/I-x		12x18	eZ-Load	Thin	eTR0459-x	a
BGA 9x14	9x14	3.4	eN-BG0914-912-F/I-x		9x12	eZ-Load	Thin	eTR0483-x	a
BGA 11x11	11x11	1.4	eN-BG1111-0712-F/I-x		7x12	V-Shelf	Thin	eTR0465-x	a
BGA 15.3x11.8	15.3x11.8	3.7	eK-BG15.311.8-0512-F/I-x		5x12	Shelf	Thick	eTR0468-x	a
BGA 16x10	16x10	1.2	eN-BG1610-0512-F/I-x		5x12	V-Shelf	Thin	eTR0982-x	a
BG18x12	18x12	1.25	eN BG1812 0512 F/I X		5x12	V-shelf		eTR1146-x	a
BGA 23x10	23x10	0.8	eN-BG2310-0312-F/I-x		3x12	V-Shelf	Thin	eTR1034-x	a
BGA 27x27	27x27	8	eK-BG2727-0306-F/I-x		3x6	Shelf	Thick	eTR0475-x	a
28.5x33.5	28.5x33.5	3.0	eN-RTK-994-2417-R1A-0306-F/I-x		3x6	Shelf	Thin	eTR0846-x	a
7SVGA Type A	-	-	eK-7SVGA-Type A-0206-F/I-x		2x6	-	Thick	eTR0257-x	a
MOD 13x26			eK-MOD1326-5.2-0506-F/I-x		2x3	Shelf	Thick	eTR0962-x	a
22 module	-	-	eN-22module-0612-F/I-x		6x12	-	Thin	eTR0331-x	a
MOD 29x29	29x29	2.6	eN-MOD2929-0306-F/I-x		3x6	Shelf	Thin	eTR0974-x	a
TSSOP 48/56	-	-	eN-TSSOP48/56-1012-F/I-x		10x12	Pocket	Thin	eTR0394-x	a
N/A			eN-XP1006-FA-0409-F/I-x		4x9	Shelf	Thin	eTR0947-x	a
N/A			eN-PAD0707-1.9-0712-F/I-x		7x12	Pocket	Thin	eTR0949-x	a





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