#### EMULATION TECHNOLOGY. INC.

## **BGA Rework Stencils**

### Description

If you've been using metal stencils for BGA rework, we have some great news for you. Flextac BGA Rework Stencils...a creative new product that is a major improvement over what you maybe using now.

These flexible solder paste stencils are laser cut from high quality, anti-static polymer film with a residue-free adhesive backing. Because they are self-sticking, no tape or fixturing is needed. The adhesive seals around each BGA pad to prevent solder paste from bleeding under the stencil when the paste is applied. Flextac Stencils are easy to use and leave no residue on the board surface.

Typical BGA rework stencils are made from metal and require fixturing or taping to position them and hold them in place. Metal stencils warp easily, and if the circuit board has undulations in the board surface, the metal stencil will not sit flat. Since there is no gasket-like seal, solder paste can easily bleed under metal stencils when paste is applied with a squeegee. Also solder paste can spill out over the sides of flat metal stencils contaminating the circuit board surface. Metal stencils require tedious stencil cleaning. To use metal stencils effectively, a high level of operator skill is required.

#### **How Flextac Stencils Work**

You first fold the pre-scored side tabs and then peel off the protective cover film from the bottom side of the stencil. Holds the side tabs while placing the Flextac Stencil in position on the circuit board surface. If the stencil is not correctly positioned, you can simply reposition it. The side tabs also serve as solder dams preventing solder paste overspill. No external taping or fixturing is used. You next apply a small dab of solder paste and uses a standard squeegee to spread the paste. Since the residue-free adhesive seals around each BGA pad, you can make as many passes with the squeege as needed to assure proper aperture filling. The Flextac Stencil is then peeled up leaving a perfect deposit of solder on each pad. Although Flextac Stencils are disposable, they can be used several times.

#### **Application**

Applying solder paste for BGA rework.

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#### **Features and Benefits**

- Residue-free adhesive backing seals around BGA pads to prevent solder paste bleed.
- Laser cut ensures precise aperture size.
- Disposable eliminates tedious stencil cleaning.
- Flexible conforms to board surface.
- Fold-up sides for easy placement and solder paste containment.
- Low cost.
- Wide selection.
- Packaged in a handy ESD safe carrying case

### **Specifications**

Material: Anti-static Polymer Film

Adhesive: Residue-Free

(Exceeds BELCORE S.I.R. GR-78-CORE)

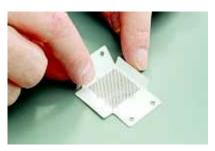


Flextac BGA Rework Stencil Kit (click to buy) is packaged in a rugged ESD safe case.

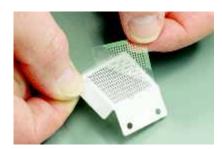


The Kit includes 20 different sizes of BGA rework stencils, a spatula handle and three sizes of spatula blades.





Step 1: Select the proper size and fold up the side tabs.



Step 2: Peel off the cover film exposing the adhesive backing



Step 3: Place in position using the handy side tabs.



Step 4: Apply paste using a standard metal squeegee.



Step 5: Remove the stencil and save for another reuse or dispose.

Note: All part numbers listed below are sold in packages of 10.



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0.65mm (.0256") Pitch									
Ball Count	Grid Size & Ball Pattern	Thickness (in)	Thickness (mm)	Hole Diam. (in)	Hole Diam. (mm)	Component Body	Description		
336	14 x 14, Full Array	.004"	(0.102 mm)	.020"	(0.508 mm)	14 mm x 14 mm	<u>ST-336-9BG020-</u> <u>1</u>		
	0.80mm (.0315") Pitch								
Ball Count	Grid Size & Ball Pattern	Thickness (in)	Thickness (mm)	Hole Diam. (in)	Hole Diam. (mm)	Component Body	Description		
280	16 x 16, Full Array	.004"	(0.102 mm)	.017"	(0.432 mm)	16 mm x 16 mm	ST-280-6BG019- 4		
	1.00mm (.039") Pitch								
Ball Count	Grid Size & Ball Pattern	Thickness (in)	Thickness (mm)	Hole Diam. (in)	Hole Diam. (mm)	Component Body	Description		
64	8 x 8, Full Array	.004"	(0.102 mm)	.020"	(0.508 mm)	10 mm x 13 mm	ST-064-3BG008- 4		
196	14 x 14, Full Array	.004"	(0.102 mm)	.020"	(0.508 mm)	15 mm x 15 mm	ST-196-3BG014- 4		
256	16 x 16, Full Array	.004"	(0.102 mm)	.020"	(0.508 mm)	17 mm x 17 mm	ST-256-3BG016- 4		
324	<u>18 x 18, Full Array</u>	.004"	(0.102 mm)	.020"	(0.508 mm)	19 mm x 19 mm	ST-324-3BG018- 4		
324	22 x 22, P4-Row, +6 x 6 center	.004"	(0.102 mm)	.020"	(0.508 mm)	23 mm x 23 mm	ST-324-3BG022- 4		
484	22 x 22, Full Array	.004"	(0.102 mm)	.020"	(0.508 mm)	23 mm x 23 mm	ST-484-3BG022- 4		



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672	26 x 26, Full Array	.004"	(0.102 mm)	.020"	(0.508 mm)	27 mm x 27 mm	<u>ST-672-3BG026-</u> <u>4</u>
676	26 x 26, Full Array	.004"	(0.102 mm)	.020"	(0.508 mm)	27 mm x 27 mm	<u>ST-676-3BG026-</u> <u>4</u>
1657	41 x 41, Full Array	.006"	(0.152 mm)	.025"	(0.635 mm)	42.5 mm x 42.5 mm	ST-1657- 3BG041-6

# 1.27mm (.050") Pitch

Ball Count	Grid Size & Ball Pattern	Thickness (in)	Thickness (mm)	Hole Diam. (in)	Hole Diam. (mm)	Component Body	Description
119	7 x 17, Full Array	.006"	(0.152 mm)	.025"	(0.635 mm)	14 mm x 22 mm	ST-119- 2BG07X12-6
208	<u>17 x 17, P4-Row</u>	.006"	(0.152 mm)	.025"	(0.635 mm)	23 mm x 23 mm	ST-208-2BG017- 4
256	16 x 16, Full Array	.008"	(0.203 mm)	.032"	(0.813 mm)	21 mm x 21 mm	ST-256-2BG016- 8
256	20 x 20, P4-Row	.006"	(0.152 mm)	.025"	(0.635 mm)	27 mm x 27 mm	ST-256-2BG020- 6
272	20 x 20, P4-Row, +4 x 4 center	.006"	(0.152 mm)	.025"	(0.635 mm)	27 mm x 27 mm	ST-272-2BG020- 6
292	20 x 20, P4-Row, +6 x 6 center	.006"	(0.152 mm)	.025"	(0.635 mm)	27 mm x 27 mm	ST-292-2BG020- 6
304	16 x 19, Full Array	.008"	(0.203 mm)	.032"	(0.813 mm)	21 mm x 25 mm	ST-304- 2BG16X19-8
352	26 x 26, P4-Row	.006"	(0.152 mm)	.025"	(0.635 mm)	35 mm x 35 mm	ST-352-2BG026- 6
357	19 x 19, Full Array	.006"	(0.152 mm)	.025"	(0.635 mm)	25 mm x 25 mm	ST-357-2BG019- 6
361	19 x 19, Full Array	.008"	(0.203	.032"	(0.813	25 mm x 25 mm	ST-361-2BG019-



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	-		mm)		mm)		8	
388	26 x 26, P4-Row, +6 x 6 center	.006"	(0.152 mm)	.025"	(0.635 mm)	35 mm x 35 mm	ST-388-2BG026- 6	
420	26 x 26, P5-Row	.006"	(0.152 mm)	.025"	(0.635 mm)	35 mm x 35 mm	ST-420-2BG026- 6	
432	31 x 31, P4-Row	.006"	(0.152 mm)	.025"	(0.635 mm)	40 mm x 40 mm	ST-432-2BG031- 4	
560	33 x 33, P5-Row	.006"	(0.152 mm)	.025	mm)	42.5 mm x 42.5 mm	ST-560-2BG033- 6	
624	25 x 25, Full Array	.008"	(0.203 mm)		mm)	32.5 mm x 32.5 mm	ST-624-2BG025- 8	
625	25 x 25, Full Array	.008"	(0.203 mm)	.032"	(0.813 mm)	32.5 mm x 32.5 mm	ST-625-2BG025- 8	
1.50mm (.059") Pitch								
Ball Count	Grid Size & Ball Pattern	Thickness (in)	Thickness (mm)	Hole Diam. (in)	Hole Diam. (mm)	Component Body	Description	
225	15 x 15, Full Array	.006"	(0.152 mm)	.025"	(0.635 mm)	27 mm x 27 mm	ST-225-1BG015- 6	