



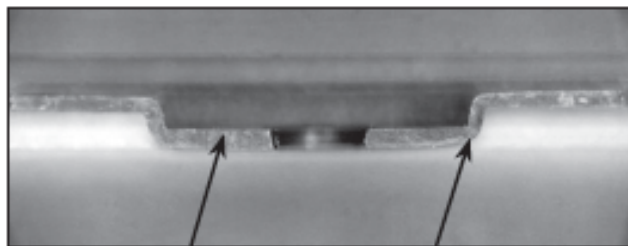
# Conductive Polycarbonate Precision Carrier 3000BD

Technical Data – December, 2004

## Product Description

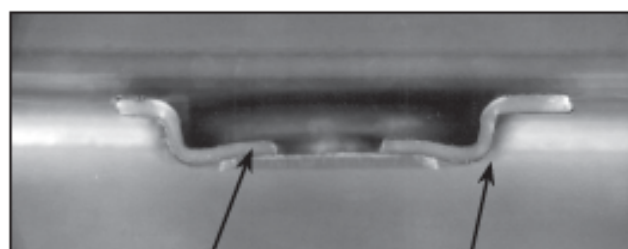
3M™ Conductive Polycarbonate Precision Carrier 3000BD for bare die applications is designed to meet the demanding needs of many bare die, flip chip and micro BGA applications traditionally served by trays or other carrier devices. 3M innovation has led to the development of precision pockets, a technical breakthrough allowing 3M to produce highly precise and accurate pockets conforming to and helping protect your chip. Compare 3M Polycarbonate Carrier 3000BD to a typical, traditional heat-formed pocket:

Precision Polycarbonate Pocket



Flat Pocket Bottom <3° sidewall draft angle

Typical, Traditional Pocket

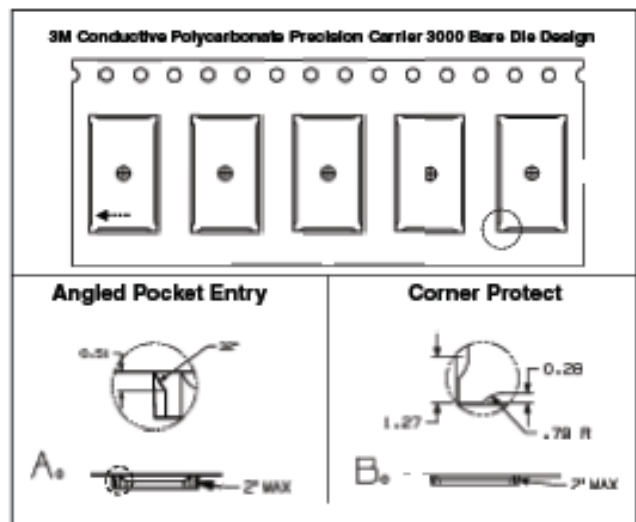


Curved Pocket Bottom "Bathtub" Corners

A large sidewall draft angle in the traditional pocket allows chip movement up the wall and a pocket that is not flat allows Z-axis movement which can cause repeatability problems at the pick-up point.

## Product Format

Polycarbonate Carrier 3000BD is available as a splice-free, 8 mm-44 mm carrier in planetary format on 330 m (13") plastic reels for cleanroom applications. For non-cleanroom applications, Polycarbonate Carrier 3000BD is available in planetary or level-wind format on a recyclable 560 mm (22") cardboard reel. Reel capacity will typically be from 30 to 1,000 meters, depending upon pocket depth, pitch and winding format.



## Component Protection is Critical

3M precision capabilities allow for innovative ways to help protect your chips from corner damage. Polycarbonate Carrier 3000BD corner protection helps prevent die edge chipping, one of the most common problems when shipping die products.\*

\* Corner-protect feature not available in 8 mm carrier widths

Supplier: 3M TECHNOLOGIES (S) PTE LTD  
 Vendor Part No: 3M100701  
 Package Description: Carrier Tape  
 Package Designator: ADP199  
 Result: PASS  
 Date: April 10, 2012

**I. Manufacturability Test**

1. Material on evaluation will not pose any problem with the existing machine.

- a). Tape feeds freely in machine (no jams).
- b). No component pick and place issues.
- c). Spring UPH = 2200
- d). Units do not slide out pocket or occurrence of tombstone
- e). Part counting check - OK

Result : PASS (Pass/Fail)

**2. Peel Force**

Parameter Setting (new material)      POS Result

Temperature	180	min :	40.0
Seal delay :	-	max :	58.9
Pressure :	2.5bar	avg. :	62.85

Cover tape Supplier & Part 3M TECHNOLOGIES (S) PTE LTD / R021-0537X ( 5.4 mm width )

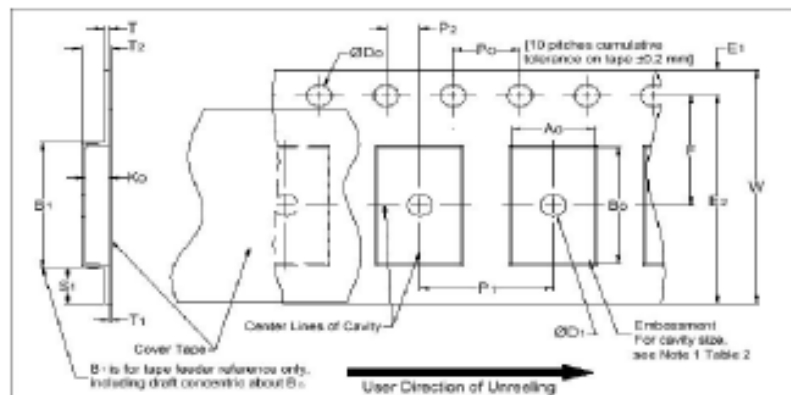
M/C no. used : GFD Peel Backforce tester

Result : PASS (Pass/Fail)

**II. Dimensional Check**

Parameters	Nominal Size	Tolerance		Sample Size												Results		Result
		Lower	Upper	1	2	3	4	5	6	7	8	9	10	11	12	MIN	MAX	
Ao	0.85	0.82	0.88	0.851	0.842	0.846	0.849	0.857	0.845	0.860	0.839	0.850	0.848	0.840	0.856	0.839	0.860	Good
Bo	0.85	0.82	0.88	0.861	0.855	0.857	0.863	0.860	0.855	0.855	0.850	0.855	0.860	0.865	0.859	0.850	0.865	Good
Ko	0.60	0.57	0.63	0.580	0.591	0.578	0.588	0.578	0.592	0.589	0.589	0.577	0.590	0.578	0.588	0.577	0.592	Good

Result : PASS (Pass/Fail)



Representative Carrier Tape Picture (Not actual qualification material)

**III. Fit Analysis**

Result : PASS (Pass/Fail)

**IV. Drop Test**

Result : PASS (Pass/Fail)

**V. Shake Test**

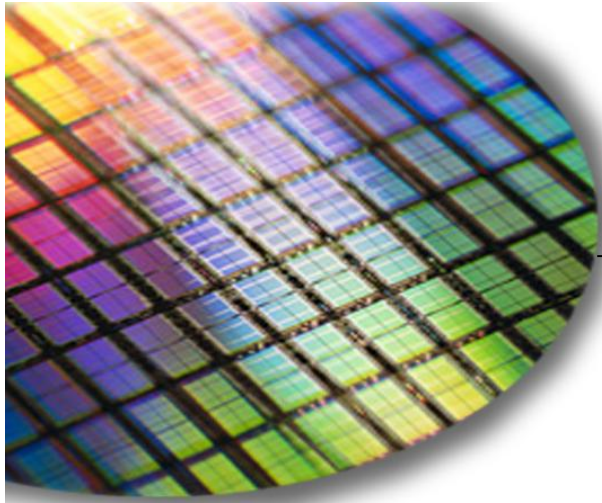
Result : PASS (Pass/Fail)

**VI. Supplier Drawing**

Design per EIA-481: YES (Yes/No)

Evaluation performed by: Michael Foo

Approved and reviewed by: Winnie Cheong



**The World Leader in High-Performance Signal Processing Solutions**

---



# 100 Units hand test results

First Handtest			
UNIT TESTED	Passed	Failed	Parameter failed
100	96	4	four units are failed at O/S parameter
Reject verification			
UNIT TESTED	Passed	Failed	Parameter failed
4	4		

**Four units are failed at O/S parameters during first test, but those units passed during verification**

PCN 12\_0187 Rev. -

	<b>Detailed Dimension Changes</b>	
	<b>Current Carrier (3M105841)</b>	<b>Propose Carrier (3M100701)</b>
a. K0	0.61+/-0.05 (0.56~0.66)	0.60+/-0.03 (0.57~0.63)
b. A0	0.88+/-0.05 (0.83~0.93)	0.85+/-0.03 (0.82~0.88)
c. B0	0.88+/-0.05 (0.83~0.93)	0.85+/-0.03 (0.82~0.88)