Customer Service Note

Packaging Materials

Introduction

Aptina uses two basic methods to package component image sensors for delivery: tray and tape-and-reel. Our wafer-level products are also packaged using two methods: vendor boxes and film frame. Where possible, we incorporate recyclable materials both in the internal packing materials and in the external coverings. Table 1 provides complete descriptions of the materials, their properties, and the industry standards met for component packaging methods. Table 2 provides descriptions for the wafer-level packaging methods.

Packaging Materials Tables

Table 1: Component Packaging Materials

Element	Description[1]	
General		
Boxes	Material: Style: Color: Recyclable:	Corrugated fiberboard RETT w/DF (roll-end tuck-top with dust flaps) Natural kraft Yes
Labels	Base material: Adhesive material: Recyclable: No	Matte-coated facestock or synthetic paper Acrylic- or water-based adhesive
Bags	Moisture-barrier bags[2] Material: Standards: MVTR (g/100 sq in/ 24 hrs): Surface resistivity: Recyclable:	 Static dissipative polymer/aluminum foil/static dissipative polyethylene Meets the electrical and physical requirements of IPC/JEDEC J-STD-033A, MIL-PRF-81705 Type 1, EIA 583, EIA 541, and EOS/ESD standards <0.0003 (FTMS 101 MTH2065) <10^{12} ohms/square (ASTM D-257) or <10^{11} ohms (ANSI/ESD STM11.11) No
	Static-shielding bags[3] Material: Standards: Surface resistivity: Recyclable:	 Static dissipative polyester/metallized shield/static dissipative polyethylene Meets the requirements of MIL-PRF-81705 Type III and EIA 541 <10^{12} ohms/square (ASTM D-257) No

Table 1: Component Packaging Materials (continued)

Element	Description[1]
Desiccants[2]	Content material: Montmorillonite (bentonite) clay Packet material: Tyvek, spunbonded olefin Recyclable: Individual materials are recyclable, not recyclable as a system
Humidity indicator cards (HICs)[2]	Material: Blotting paper impregnated with cobaltous chloride Recyclable: Yes
Tray[4]	
Tray banding	Material: Static dissipative polypropylene Surface resistivity: $<10^9$ to $<10^{11}$ ohms/square Recyclable: Yes
Trays	For specific information regarding the various trays Aptina uses, please contact our Quality Assurance department
Internal padding	Expanded polyethylene foam end-cap Material: Low-density polyethylene Surface resistivity: 10^9 to 10^{11} ohms/square Recyclable: Yes OR Padpak Material: Kraft paper Recyclable: Yes
Tape-and-reel[5]	
Take-up reels	Color: White or blue Material: High-impact polystyrene, topically coated with antistatic material Surface resistivity: $<10^{11}$ ohms/square (both sides) per ASTM D-257 Recyclable: Yes
Carrier tape	Material: Polystyrene with carbon Surface resistivity: $<10^{12} \geq 10^5$ ohms/square (both sides) per ASTM D-257, static dissipative per EIA 541 Recyclable: Yes
Cover tape	Material: Antistatic polyester film/antistatic adhesive coating Surface resistivity: $<10^{12} \geq 10^5$ ohms/square (both sides) per ASTM D-257, static dissipative per EIA 541 Recyclable: No

Notes:
1. Contact the factory for questions regarding omitted information.
2. Provided with MST Level 2 through 5A products shipped in trays and tape-and-reels only.
3. Provided with MST Level 1 product only.
4. Applicable to product shipped in trays only.
5. Applicable to product shipped in tape-and-reel only.

Table 2: Wafer-Level Product Packaging Materials

Element	Description[1]	
General		
Boxes	Material: Style: Color: Recyclable:	Corrugated fiberboard RETT w/DF (roll-end tuck-top with dust flaps) or RETT (roll-end tuck-top) Natural kraft Yes
Labels	Base material: Adhesive material: Recyclable:	Matte-coated facestock or synthetic paper Acrylic- or water-based adhesive No
Vendor box[2]		
Vendor box	Material: Standards: Surface resistivity: Recyclable:	Body case: polycarbonate Lid: polycarbonate Carrier and upper holder: polybutylene terephthalate Gasket: polybutylene terephthalate Reuse possible
Film frame[3]		
Film frame shipping container	Material: Standards: Surface resistivity: Recyclable:	Polypropylene No
Film frame	Material: Standards: Surface resistivity: Recyclable:	

Notes:
1. Contact the factory for questions regarding omitted information.
2. Applicable to product shipped in vendor boxes only.
3. Applicable to product shipped in film frame containers only.

3080 North 1st Street, San Jose, CA 95134, prodmktg@aptina.com www.aptina.com

Revision History

Rev. A 6/08

- Initial release.