

# Customer Service Note

## RMA Procedures For Packaged Product and Bare Die Devices

### Introduction

Aptina's returned material authorization (RMA) procedures are similar for both packaged devices and bare die devices. However, some differences are required because die can be damaged very easily if they are not handled and stored properly. This customer service note outlines standard RMA procedures, as well as the differences associated with bare die RMAs.

### Obtaining an RMA

- If you buy direct, contact your Aptina™ sales representative at 408-834-1200.
- If you buy through an Aptina sales representative, contact that sales representative.
- If you buy through distribution, contact the distributor.
- Provide the following information:
  1. Aptina part number, including speed and package
  2. Reason for return
  3. One of the following: PO number, invoice number, or sales order number
  4. Preferred reimbursement method: replacement parts, credit only, or refund

### Packaged Product Return Procedures

- Package product using all antistatic precautions
- Write RMA number on outside of box for proper routing
- Ship package prepaid to:  
Aptina Imaging/RMA Return  
Attn: RMA Clerks  
Aptina SG  
990 Bendemeer Road  
339942 Singapore  
Singapore

### Bare Die Return Procedures

Approval is required for all die RMAs, regardless of whether they are nonfailure-related or failure-related, or have application-related problems.

- Package die product in containers that will prevent shipping damage and provide proper electrostatic discharge (ESD) protection
- Write RMA number on outside of box for proper routing
- Ship package prepaid to:  
Aptina Imaging/RMA Return  
Aptina SG  
990 Bendemeer Road  
339942 Singapore  
Singapore

### Processed Die (MCM) Return Procedures

If failures or application problems occur after the die has been processed by the user, it may be necessary to return a packaged part (for example, a multichip module [MCM]) to Aptina for failure analysis.

Users who cannot easily rework die should send the module or MCM package back to Aptina in appropriate packaging that will prevent shipping damage and provide proper ESD protection.

In the event an MCM must be returned, customers must provide key contact points/schematics so Aptina's technical personnel can identify the necessary memory test points and facilitate correlation efforts. Aptina's Quality Assurance Department may then decapsulate the die and perform failure analysis on the MCM device.

### Whole Wafer Return Procedures

Aptina packages all of its wafers in a cleanroom environment under strict handling procedures and ships all wafers in ESD-safe, cleanroom-approved shipping containers. Wafers returned to Aptina for any reason should be handled under these same conditions, or the customer may be liable for the product.

## RMA Failure Analysis Standards

- Within two business days of an RMA being received by the facility where the failure analysis will be conducted, Aptina's Quality Assurance Department will contact the customer with the preliminary test results.
- Aptina's Quality Assurance Department will issue a completed failure analysis report within three weeks of receiving an RMA.
- Replacement or noncorrelate parts will be shipped upon completion of analysis.

## Aptina Accounting Procedures for RMAs

A credit memo is sent upon receipt of the RMA parts, unless a refund has been requested. Aptina will issue a refund check for the amount of the return upon arrival of the RMA parts, provided all invoices are paid and no future business is expected. Replacement parts are shipped after receipt of the RMA parts, and a billing invoice is sent out the day after shipment. In order to maintain clear communication between accounting departments, please refer to RMA and credit memo numbers as much as possible.

## Conclusion

Although Aptina's RMA procedures are very similar for packaged devices and bare die devices, it is important to note the slightly different requirements for returning die product.

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## Revision History

<b>Rev. A</b> .....	<b>7/08</b>
• Initial release.	