

Device Analysis Report



TI Information - Selective Disclosure

Device Analysis Services

QEM-CCR-2510-01224

ACTION-1124269

Customer:	ARROW (CHINA) ELECTRONICS TRADING COMPANY LIMITED	Assy Site:	ASH
Customer Tracking ID:		Fab Site:	RFB
Customer Part ID:		Technology:	
Customer Contact:	Li Vayne	Analyst:	Amos Chen
Device Type:	TPS54335ADDAR	TI Contact:	Jimmy Tao
		Qty Submitted:	1
Flow Type:	Customer Return	Date Submitted:	2025-10-31

Summary

Device Analysis	Results
Customer Reported Failure Mode	Issue type: Electrical Issue type details: The VSENSE pin voltage is 0, resulting in an output of 0V.
TI Failure Description	Short failure was verified at pin3(PH) vs. GND. Electrically Induced Physical Damage (EIPD) was observed.
What effect does the defect or damage cause?	Short failure was verified at pin3(PH) vs. GND.
Where and what is the defect/damage?	Electrically Induced Physical Damage (EIPD) was observed.
Did the identified physical defect/damage explain the TI reported failure mode?	Yes.

TI Unit #	Cust. Unit #	Lot Trace Code	Symbolization	Wafer Fab Lot #	Assembly Lot #
1		37P11MA		3088109	3052952ASH

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- **Customer Reported Problem Description:**

Issue type: Electrical | Issue type details: The VSENSE pin voltage is 0, resulting in an output of 0V.

- **TI Problem Description:**

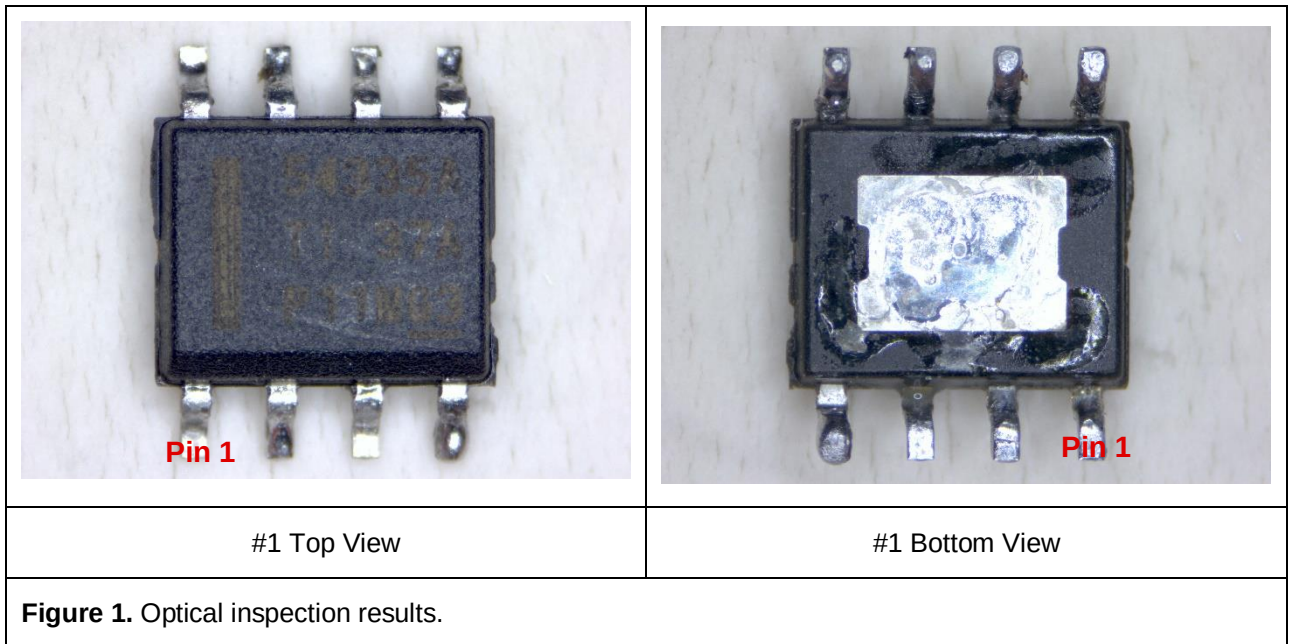
Short failure was verified at pin3(PH) vs. GND.

Electrically Induced Physical Damage (EIPD) was observed.

- **Package Analysis:**
 - **External Package Examination:**

Optical microscope inspection was performed.

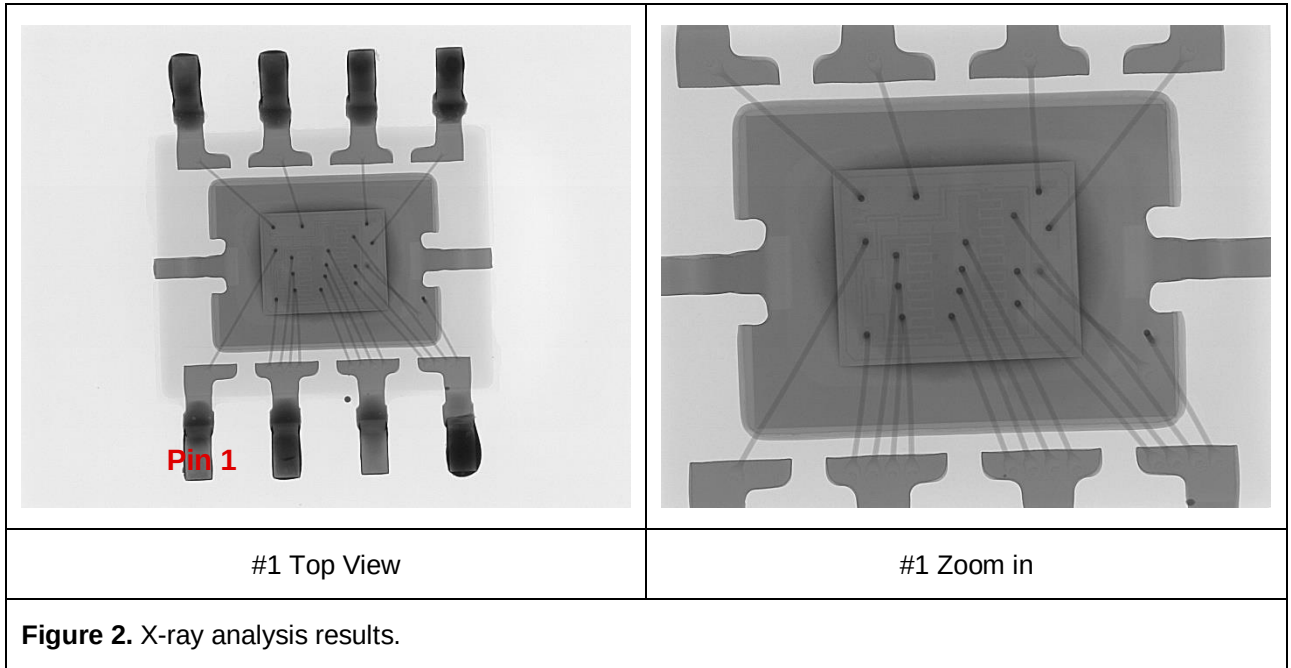
No anomaly was observed during package inspection.



- **X-ray Analysis:**

X-ray analysis was performed.

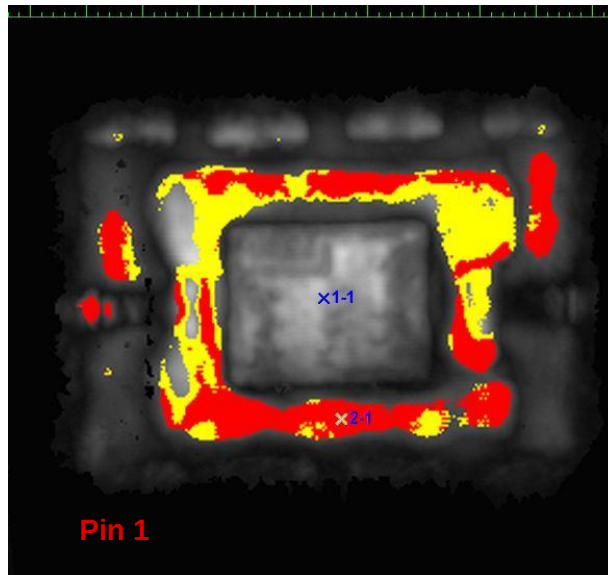
No significant anomalies were observed during X-ray analysis.



- **Scanning Acoustic Microscopy (SAM):**

SAM analysis was performed.

No delamination was observed over die surface.



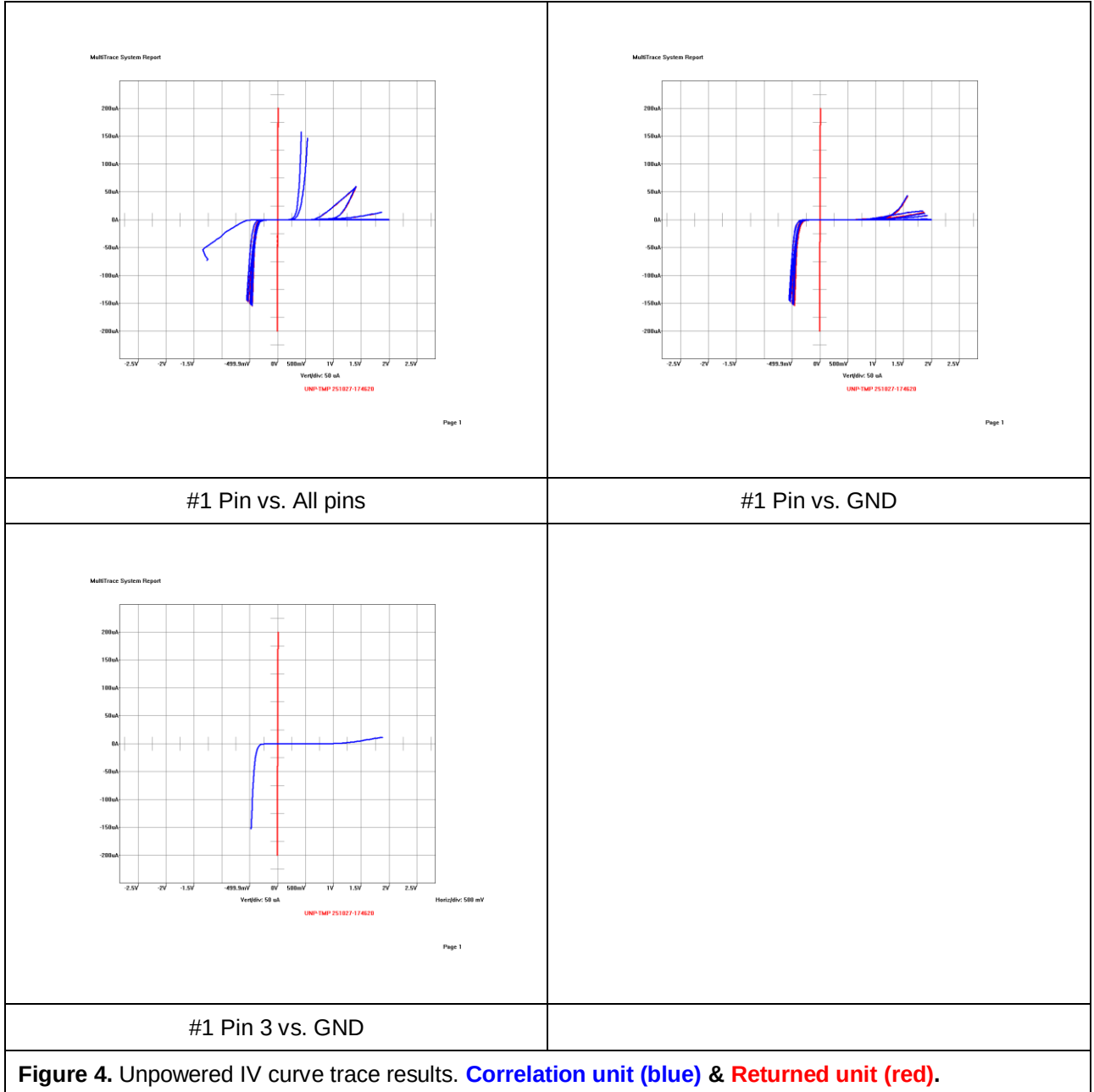
CSAM

Figure 3. SAM analysis results.

- Electrical Characterization:**

Unpowered IV curve trace analysis was performed.

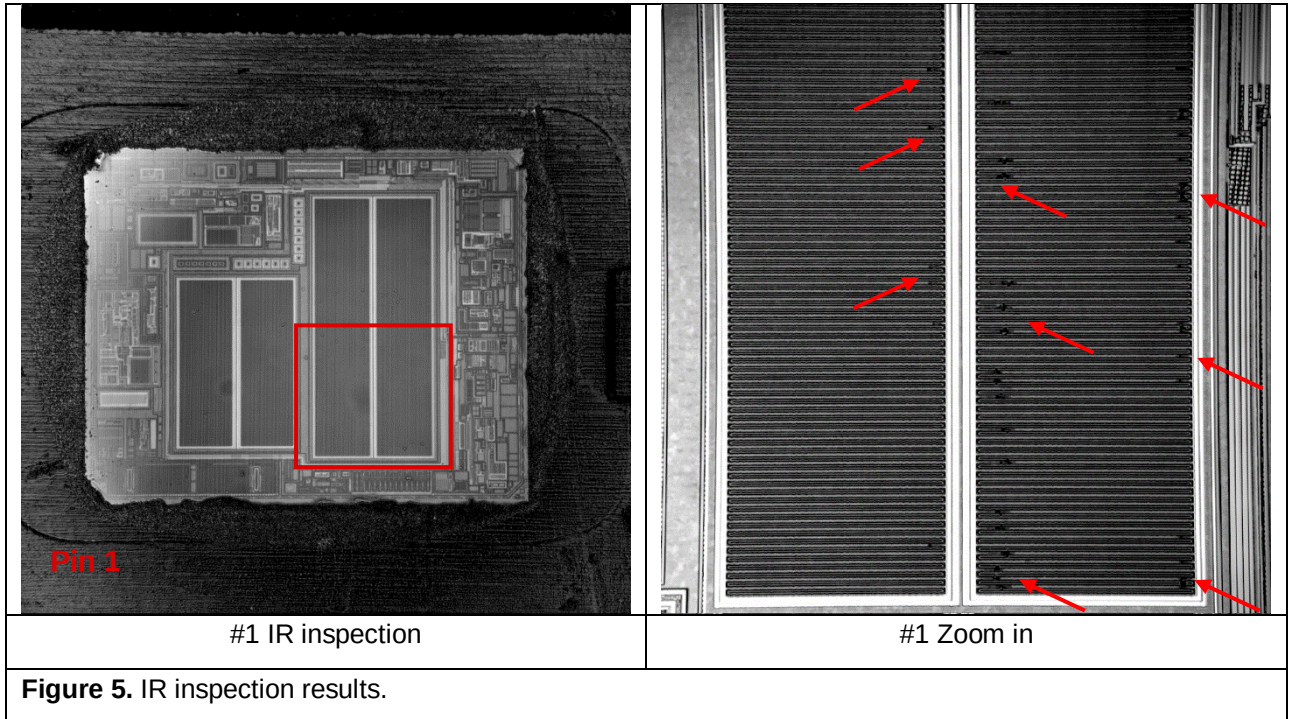
Short failure was verified at pin3(PH) vs. GND.



- **Infrared Inspection:**

Backside IR inspection was performed.

Electrically Induced Physical Damage (EIPD) was observed.



- **Observation:**

Short failure was verified at pin3(PH) vs. GND.

Electrically Induced Physical Damage (EIPD) was observed.

Note 1: Due to digital image capture, the magnification is not calibrated nor is the aspect ratio maintained. Not all tools provide a means recorded in the image for calibrating the measurements. When a calibration marker is supplied in the image, the measurements may be calibrated in the direction of the marker