Product reliability

Quality and reliability are built into the culture at Texas Instruments with the goal of providing high-quality products to customers. TI periodically monitors the reliability of its products, wafer fab processes, and package technologies, through its Ongoing Reliability Monitor (ORM) program. The ORM program involves collecting environmental reliability stress data on representative sets of devices, processes and packages. The results from the ORM program are updated quarterly in this report.

TI builds simulations, accelerated testing, and robustness evaluations into the product development process. During this process, TI carefully assesses silicon process and package reliability, and silicon/package interaction. TI also evaluates manufacturability of the device to verify a robust silicon and assembly flow to enable continuity of supply to customers.

Non-automotive devices are qualified with Joint Electron Devices Engineering Council (JEDEC) industry standard test methodologies. TI qualifies new devices, significant changes and product families based on JEDEC JESD47. The data shown is representative of the material sets, processes and manufacturing sites used by the device family.

Report for TI part number :	**LM4040A10IDBZR**
Report Date:	**05/15/2025**

FAB process reliability data.This device utilizes multiple fab processes.

Fab Process	Reliability Test	Rolling Year (2Q2024 - 1Q2025) Sample Size	Cumulative Sample Size	Disposition
BIPOLAR	Life test 125C, 1000 Hours or Equivalent JEDEC Condition	2233	23460	Pass

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Fab Process	Reliability Test	Rolling Year (2Q2024 - 1Q2025) Sample Size	Cumulative Sample Size	Disposition
Power BICMOS	Life test 125C, 1000 Hours or Equivalent JEDEC Condition	21354	418001	Pass

Assembly process reliability data.

Package Family	Reliability Test	Rolling Year (2Q2024 - 1Q2025) Sample Size	Cumulative Sample Size	Disposition
SOP/SOT	Biased HAST 130C /85%RH, 96 Hours or Equivalent JEDEC Condition	8786	108818	Pass
SOP/SOT	High temp storage bake 150C, 1000 Hours or Equivalent JEDEC Condition	8330	85426	Pass
SOP/SOT	Temperature cycle -65/150C, 500 Hours or Equivalent JEDEC Condition	16243	199318	Pass
SOP/SOT	Unbiased HAST 130C/85% RH, 96 Hours or Equivalent JEDEC Condition	10703	163221	Pass

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