

AD8411AWBRZ | [Data Sheet](#)
**Qualification Summary:**

| AEC TEST GROUP                                          | STRESS TEST                                                                       | AEC TEST # | TEST CONDITIONS *1                                                  | REFERENCE TEST METHOD                     | SAMPLE SIZE PER LOT                | NUMBER OF LOTS | RESULTS                                       | REMARKS                                                                  |
|---------------------------------------------------------|-----------------------------------------------------------------------------------|------------|---------------------------------------------------------------------|-------------------------------------------|------------------------------------|----------------|-----------------------------------------------|--------------------------------------------------------------------------|
| <b>Group A</b><br>ACCELERATED ENVIRONMENT STRESS TESTS  | Preconditioning (PC)                                                              | A1         | Per MSL                                                             | J-STD-020<br>JESD22-A113                  | 77                                 | 3              | Pass                                          | Per MSL classification                                                   |
|                                                         | Temperature Humidity Bias (THB) or Biased HAST (HAST)                             | A2         | 85°C/85%RH, 1000 hrs or 130°C/85%RH, 96 hrs                         | JESD22-A101 or JESD22-A110                | 77                                 | 3              | Pass                                          |                                                                          |
|                                                         | Autoclave (AC) or Unbiased HAST (UHAST) or Temperature Humidity Without Bias (TH) | A3         | 121°C/100%RH, 96 hrs or 130°C/85%RH, 96 hrs or 85°C/85%RH, 1000 hrs | JESD22-A102 or JESD22-A118 or JESD22-A101 | 77                                 | 3              | Pass                                          |                                                                          |
|                                                         | Temperature Cycling (TC)                                                          | A4         | Per AEC Temp Grade                                                  | JESD22-A104                               | 77                                 | 3              | Pass                                          |                                                                          |
|                                                         | High Temperature Storage Life (HTSL)                                              | A6         | Per AEC Temp Grade                                                  | JESD22-A103                               | 45                                 | 1              | Pass                                          |                                                                          |
| <b>Group B</b><br>ACCELERATED LIFETIME SIMULATION TESTS | High Temperature Operating Life (HTOL)                                            | B1         | Per AEC Temp Grade                                                  | JESD22-A108                               | 77                                 | 3              | Pass                                          |                                                                          |
|                                                         | Early Life Failure Rate (ELFR)                                                    | B2         | Per AEC Temp Grade                                                  | AECQ100-008                               | 800                                | 3              | Pass                                          |                                                                          |
| <b>Group C</b><br>PACKAGE ASSEMBLY INTEGRITY TESTS      | Wire Bond Shear (WBS)                                                             | C1         | -                                                                   | AECQ100-001                               | 30 bonds from minimum of 5 devices |                | Pass                                          | As applicable                                                            |
|                                                         | Wire Bond Pull (WBP)                                                              | C2         | -                                                                   | MIL-STD883 Method 2011                    |                                    |                | Pass                                          | As applicable                                                            |
|                                                         | Solderability (SD)                                                                | C3         | -                                                                   | J-STD-002                                 | 15                                 | 1              | Pass                                          |                                                                          |
|                                                         | Physical Dimensions (PD)                                                          | C4         | -                                                                   | JESD22-B100 and B108                      | 10                                 | 3              | Pass                                          |                                                                          |
| <b>Group D</b><br>DIE FABRICATION RELIABILITY TESTS     | Electromigration (EM)                                                             | D1         | -                                                                   | -                                         | -                                  | -              | -                                             | Die Fabrication Reliability data may be viewed on-site at Analog Devices |
|                                                         | Time Dependent Dielectric Breakdown (TDDB)                                        | D2         | -                                                                   | -                                         | -                                  | -              | -                                             |                                                                          |
|                                                         | Hot Carrier Injection (HCI)                                                       | D3         | -                                                                   | -                                         | -                                  | -              | -                                             |                                                                          |
|                                                         | Bias Temperature Instability (BTI)                                                | D4         | -                                                                   | -                                         | -                                  | -              | -                                             |                                                                          |
|                                                         | Stress Migration (SM)                                                             | D5         | -                                                                   | -                                         | -                                  | -              | -                                             |                                                                          |
| <b>Group E</b><br>ELECTRICAL VERIFICATION TESTS         | ESD HBM (Human Body Model)                                                        | E2         | -                                                                   | AECQ100-002                               | 3                                  | 1              | See Data Sheet/<br><a href="#">Contact Us</a> |                                                                          |
|                                                         | ESD CDM (Charged Device Model)                                                    | E3         | -                                                                   | AECQ100-011                               | 3                                  | 1              | See Data Sheet/<br><a href="#">Contact Us</a> |                                                                          |
|                                                         | Latch-Up (LU)                                                                     | E4         | -                                                                   | AECQ100-004                               | 3                                  | 1              | Pass                                          |                                                                          |
|                                                         | Electrical Distribution (ED)                                                      | E5         | -                                                                   | AECQ100-009                               | 30                                 | 3              | Pass                                          |                                                                          |

1. Or equivalent JEDEC conditions

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