



## Product/Process Change Notice - PCN 19\_0189 Rev. -

Analog Devices, Inc. Three Technology Way Norwood, Massachusetts 02062-9106

This notice is to inform you of a change that will be made to certain ADI products (see Appendix A) that you may have purchased in the last 2 years. **Any inquiries or requests with this PCN (additional data or samples) must be sent to ADI within 30 days of publication date.** ADI contact information is listed below.

**PCN Title:** LTM4637 - Notification of Qualification of New Mold Compound

**Publication Date:** 12-Aug-2019

**Effectivity Date:** 14-Nov-2019 *(the earliest date that a customer could expect to receive changed material)*

**Revision Description:**

Initial Release

**Description Of Change:**

A new mold compound has been qualified in LTM4637 which is the next generation mold compound going forward. The new mold compound uses fine filler and facilitates the filling of tighter spaces.

**Reason For Change:**

Higher density component assembly in a uModule substrate requires mold filling in tighter spaces between and underneath components. The new mold compound facilitates this task which also improves assembly yield.

**Impact of the change (positive or negative) on fit, form, function & reliability:**

The change is transparent in customer applications since there is no change in form, fit, function, quality or reliability of the products. The product datasheet is unchanged.

**Product Identification** *(this section will describe how to identify the changed material)*

Production shipment of the product incorporating the new material will begin no sooner than effective date.

**Summary of Supporting Information:**

Qualification has been performed per Industry Standard Test Methods. See attached Qualification Results Summary.

**Supporting Documents**

**Attachment 1: Type:** Qualification Results Summary

ADI\_PCN\_19\_0189\_Rev\_-\_G311E Reliability data.pdf

**For questions on this PCN, please send an email to the regional contacts below or contact your local ADI sales representatives.**

**Americas:**  
PCN\_Americas@analog.com

**Europe:**  
PCN\_Europe@analog.com

**Japan:**  
PCN\_Japan@analog.com

**Rest of Asia:**  
PCN\_ROA@analog.com

**Appendix A - Affected ADI Models**

**Added Parts On This Revision - Product Family / Model Number (5)**

LTM4637 / LTM4637EV#PBF

LTM4637 / LTM4637EY#PBF

LTM4637 / LTM4637V#PBF

LTM4637 / LTM4637Y

LTM4637 / LTM4637Y#PBF

**Appendix B - Revision History**

<b>Rev</b>	<b>Publish Date</b>	<b>Effectivity Date</b>	<b>Rev Description</b>
Rev. -	12-Aug-2019	14-Nov-2019	Initial Release

Analog Devices, Inc.

DocId:6811 Parent DocId:6797 Layout Rev:7

## RELIABILITY DATA G311E QUALIFICATION DATA

**7/30/2019**

**• J-STD-020 MSL 3 PRECONDITIONING: 192h +30°C/60%R.H. SOAK, 3x REFLOW AT +260°C PEAK**

DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE		NUMBER OF FAILURES
LTM8024	311	1843	1843		0
LTM8002	522	1839	1839		0
LTC2975	300	1749	1749		0
LTC3315	384	1821	1821		0
LTM4622	300	1921	1921		0
	1,817	1749	1921		0

**• J-STD-020 MSL 3 PRECONDITIONING: 192h +30°C/60%R.H. SOAK, 3x REFLOW AT +250°C PEAK**

DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE		NUMBER OF FAILURES
LTM8024	311	1843	1843		0
LTM8006	616	1848	1851		0
LTM4638	893	1751	1813		0
LTM4626	413	1803	1813		0
	2,233	1751	1851		0

**• J-STD-020 MSL 3 PRECONDITIONING: 192h +30°C/60%R.H. SOAK, 3x REFLOW AT +245°C PEAK**

DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE		NUMBER OF FAILURES
LTM4630	241	1846	1846		0
LTM4642	299	1903	1903		0
LTM4650	241	1846	1846		0
LTM4664	826	1811	1832		0
LTM4680	786	1806	1829		0
LTM4700	974	1739	1802		0
LTM4644	154	1906	1906		0
LTM4675	300	1903	1903		0
LTM4676	399	1903	1903		0
	4,220	1739	1906		0

**• J-STD-020 MSL 4 PRECONDITIONING: 96h +30°C/60%R.H. SOAK, 3x REFLOW AT +245°C PEAK**

DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE		NUMBER OF FAILURES
LTM4634	400	1813	1813		0
LTM4637	400	1903	1903		0
LTM4677	400	1903	1903		0
LTM4678	261	1840	1840		0
	1,461	1813	1903		0

## RELIABILITY DATA G311E QUALIFICATION DATA

7/30/2019

**• HIGH TEMPERATURE STORAGE +150°C**

DEVICE	SAMPLE	OLDEST	NEWEST	K DEVICE HOURS AT	NUMBER OF
LTM8024	77	1843	1843	77.00	0
LTM8002	154	1839	1839	308.00	0
LTM8006	154	1848	1848	231.00	0
LTM4626	50	1803	1803	100.00	0
LTM4634	50	1813	1813	25.00	0
LTM4638	154	1751	1751	154.00	0
LTM4642	49	1903	1903	49.00	0
LTM4664	109	1811	1832	190.50	0
LTM4677	50	1903	1903	75.00	0
LTM4678	50	1840	1840	75.00	0
LTM4700	231	1739	1802	462.00	0
LTM4680	153	1806	1829	306.00	0
LTM2975	77	1749	1749	77.00	0
LTC3315	48	1821	1821	96.00	0
LTM4637	50	1903	1903	100.00	0
LTM4676	50	1903	1903	75.00	0
	1,506	1739	1903	2,400.50	0

**• TEMP CYCLE FROM -55°C to +125°C <sup>(1)</sup>**

DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
LTM8024	77	1843	1843	77.00	0
LTC2975	77	1749	1749	77.00	0
LTM4626	77	1803	1803	154.00	0
LTM4630	80	1846	1846	120.00	0
LTM4634	84	1813	1813	84.00	0
LTM4638	242	1751	1813	404.00	0
LTM4642	85	1903	1903	42.50	0
LTM4650	80	1846	1846	40.00	0
LTM4664	264	1811	1832	337.00	0
LTM4677	100	1903	1903	200.00	0
LTM4678	77	1840	1840	38.50	0
LTM4680	239	1806	1829	319.00	0
LTM4700	307	1739	1802	537.00	0
LTM4622	100	1921	1921	100.00	0
LTM4675	85	1903	1903	170.00	0
LTM4637	85	1903	1903	85.00	0
LTM4676	85	1903	1903	170.00	0
	2,144	1739	1921	2,955.00	0

**• TEMP CYCLE FROM -65°C to +150°C <sup>(1)</sup>**

DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
LTM8006	154	1848	1851	154.00	0
LTM8002	154	1839	1839	154.00	0
LTC3315	73	1821	1821	73.00	0
	381	1821	1851	381.00	0

**RELIABILITY DATA  
G311E QUALIFICATION DATA**

**7/30/2019**

**• THERMAL SHOCK FROM -55°C to +125°C <sup>(1)</sup>**

DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
LTM8024	77	1843	1843	77.00	0
LTC2975	77	1749	1749	77.00	0
LTM4626	77	1803	1803	77.00	0
LTM4630	80	1846	1903	40.00	0
LTM4634	85	1813	1813	42.50	0
LTM4638	219	1751	1813	319.00	0
LTM4642	100	1903	1903	100.00	0
LTM4650	80	1846	1846	40.00	0
LTM4664	235	1811	1832	305.00	0
LTM4677	99	1903	1903	198.00	0
LTM4678	57	1840	1840	114.00	0
LTM4680	216	1806	1829	361.00	0
LTM4700	290	1739	1802	580.00	0
LTM4622	100	1921	1921	100.00	0
LTM4675	85	1903	1903	170.00	0
LTM4676	85	1903	1903	170.00	0
	1,962	1739	1921	2,770.50	0

**• THERMAL SHOCK FROM -65°C to +150°C <sup>(1)</sup>**

DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
LTM8006	154	1848	1848	308.00	0
LTM8002	154	1839	1839	308.00	0
LTC3315	70	1821	1821	70.00	0
	378	1821	1848	686.00	0

**• UNBIASED HIGHLY ACCELERATED STRESS TEST +110°C/85% R.H. <sup>(1)</sup>**

DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT +130°C	NUMBER OF FAILURES
LTM8024	76	1843	1843	14.59	0
LTM4630	80	1846	1903	7.68	0
LTM4634	99	1813	1813	19.01	0
LTM4642	100	1903	1903	19.20	0
LTM4650	80	1846	1846	7.68	0
LTM4677	100	1903	1903	19.20	0
	535	1813	1903	87.36	0

**RELIABILITY DATA  
G311E QUALIFICATION DATA**

**7/30/2019**

**• UNBIASED HIGHLY ACCELERATED STRESS TEST +130°C/85% R.H. <sup>(1)</sup>**

DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT +130°C	NUMBER OF FAILURES
LTM4626	77	1803	1803	14.78	0
LTM4638	217	1751	1813	35.90	0
LTM4664	254	1811	1832	39.17	0
LTM4678	77	1840	1840	7.39	0
LTM4680	236	1806	1829	45.31	0
LTM4700	279	1739	1802	46.18	0
LTM8002	154	1839	1839	29.57	0
LTM8006	154	1848	1848	29.57	0
LTC2975	77	1749	1749	14.78	0
LTC3315	77	1821	1821	14.78	0
LTM4622	100	1921	1921	9.60	0
LTM4675	100	1903	1903	9.60	0
LTM4637	100	1903	1903	9.60	0
LTM4676	100	1903	1903	19.20	0
	2,002	1739	1921	325.44	0

**• BIASED HIGHLY ACCELERATED STRESS TEST +130°C/85% R.H. <sup>(1)</sup>**

DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT +130°C	NUMBER OF FAILURES
LTM8024	29	1843	1843	2.78	0
LTM8024	60	1839	1839	5.76	0
LTM4626	56	1813	1813	5.38	0
LTM4638	169	1751	1813	25.92	0
LTM4664	51	1811	1832	7.49	0
LTM4680	59	1806	1829	8.54	0
LTM4700	155	1739	1802	26.88	0
LTC2975	69	1749	1749	6.62	0
LTC3315	76	1821	1821	7.30	0
	724	1739	1843	96.67	0

(1) Environmental stress are preceded by J-STD-020 Preconditioning