

RELIABILITY DATA LTM8002 Qualification Data

7/26/2019

• 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
LTM8002	899 899	1817	1840		0 0
• HIGH TEMPERATURE STORAGE +150°C					
DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT +150°C	NUMBER OF FAILURES
LTM8002	199 199	1817	1840	321.00 321.00	0 0
• TEMP CYCLE FROM -55°C to +125°C ⁽¹⁾					
DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
LTM8002	25 25	1817	1840	50.00 50.00	0 0
• TEMP CYCLE FROM -65°C to +150°C ⁽¹⁾					
DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
LTM8002	234 234	1817	1840	237.00 237.00	0 0
• THERMAL SHOCK FROM -55°C to +125°C ⁽¹⁾					
DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE CYCLES	NUMBER OF FAILURES
LTM8002	25 25	1817	1840	50.00 50.00	0 0
• THERMAL SHOCK FROM -65°C to +150°C ⁽¹⁾					
DEVICE	SAMPLE	OLDEST	NEWEST	K DEVICE CYCLES	NUMBER OF
LTM8002	234 234	1817	1840	429.50 429.50	0 0
• BIASED HIGHLY ACCELERATED STRESS TEST +130°C/85% R.H. ⁽¹⁾					
DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT +130°C	NUMBER OF FAILURES
LTM8002	139 139	1817	1840	9.71 9.71	0 0
• UNBIASED HIGHLY ACCELERATED STRESS TEST +130°C/85% R.H. ⁽¹⁾					
DEVICE TYPE	SAMPLE SIZE	OLDEST DATE CODE	NEWEST DATE CODE	K DEVICE HOURS AT +130°C	NUMBER OF FAILURES
LTM8002	231 231	1817	1840	44.35 44.35	0 0

(1) Environmental stress are preceded by J-STD-020 Level 3 Preconditioning

RELIABILITY DATA					
G311E QUALIFICATION DATA					
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• 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
	1,517	1749	1843		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
	3,367	1739	1903		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
LTM4677	400	1903	1903		0
LTM4678	261	1840	1840		0
	800	1813	1903		0
• 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
	1,406	1739	1903	2,225.50	0
• TEMP CYCLE FROM -55°C to +125°C ⁽¹⁾					
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
	1,789	1739	1903	2,430.00	0

RELIABILITY DATA					
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• TEMP CYCLE FROM -65°C to +150°C ⁽¹⁾					
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
• THERMAL SHOCK FROM -55°C to +125°C ⁽¹⁾					
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
	1,692	1739	1903	2,330.50	0
• THERMAL SHOCK FROM -65°C to +150°C ⁽¹⁾					
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. ⁽¹⁾					
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
• UNBIASED HIGHLY ACCELERATED STRESS TEST +130°C/85% R.H. ⁽¹⁾					
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
	1,602	1739	1848	277.44	0
• BIASED HIGHLY ACCELERATED STRESS TEST +130°C/85% R.H. ⁽¹⁾					
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