

RELIABILITY PREDICTION

REPORT for the

CEX7 LX2K

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1. GENERAL

1.1. Scope

This document presents the reliability prediction of the module SRCFGT8KVT002.

The reliability prediction was performed according to TELCORDIA SR-332, Issue 4, Reliability Prediction Procedure for Electronic Equipment [Ref. 1], using dedicated software – RAM Commander™, Version 8.7.

1.2. Abbreviations and Acronyms

FIT	-	Failures/10 ⁹ hours
λ/FR	-	Failure Rate [Fit]
NHA	-	Next Higher Assy
G _B	-	Ground, Fixed, Controlled
G _L	-	Ground, Fixed, Uncontrolled (limited)
MTBF	-	Mean Time Between Failures

2. APPLICABLE DOCUMENTS

- | | |
|---------------------------|---------------------------------------------------|
| [Ref. 1] TELCORDIA SR332, | Reliability Prediction Procedure for Electronic |
| Issue 4 | Equipment |
| [Ref. 2] RiAC-CPE | Reliability Toolkit: Commercial Practices Edition |

3. RELIABILITY PREDICTION TECHNIQUE

3.1. Reliability Prediction Method and Data Sources

The reliability prediction was performed in accordance with:

- Telcordia SR-332 [Ref. 1] for electronic components.
- For chosen components (usually highest contributors to overall failure rate) Telcordia SR-332 [Ref. 1] procedure is substituted by the manufacturer reliability data after adequate adjustment to current temperature and environment.

3.2. Environment & Temperature

The reliability prediction of the CEX7 LX2K Module was performed according to the Telcordia SR-332 [Ref. 1] for following environment and temperatures:

- Environmental condition: G_L (Ground, Fixed, Uncontrolled (Limited))
- Ambient temperature (T_A): 25°C
- Temperature rise of component above ambient temperature is 30°C

3.3. General Assumptions

The following are the general assumptions for the reliability prediction:

- Components failure rate is constant during equipment life period.
- The failures of different components are considered statistically independent.
- The assembly reliability model is a series one - failure of any component causes an assembly failure.
- Software failures are not applicable to the Module

3.4. Calculations Methods

The formula for module/card MTBF calculation is:

$$MTBF = \frac{1}{\sum_{i=1}^n \lambda(i)}$$

where:

$\lambda(i)$ = Failure rate of i^{th} item

n = Number of items

3.5. Component's Quality Levels

The assumed quality level for electronic components is Quality Level II according to the definitions of SR-332 [Ref. 1].

3.6. Component electrical stresses

The following electrical stress were applied for reliability prediction:

- For transistors power and voltage stress was defined as 50% of rated value in accordance with related component specification.
- For resistor Film Chip the PSR=20%
- For resistor Power Chip the PSR=50%
- For Ceramic Chip capacitor the VSR=20%
- For Aluminium capacitor the VSR=50%

4. SUMMARY OF RESULTS AND RECOMMENDATIONS

4.1. Module Level Reliability Prediction Results

The following are the results of the reliability prediction for the CEX7 LX2K Module at 25°C Ambient temperature and G_L Environmental condition.

$$\lambda = 833 \text{ FIT}$$

$$\text{MTBF} = 1,200,585 \text{ hours}$$

Figure 1 represents CEX7 LX2K Module MTBF vs. Ambient Temperature.

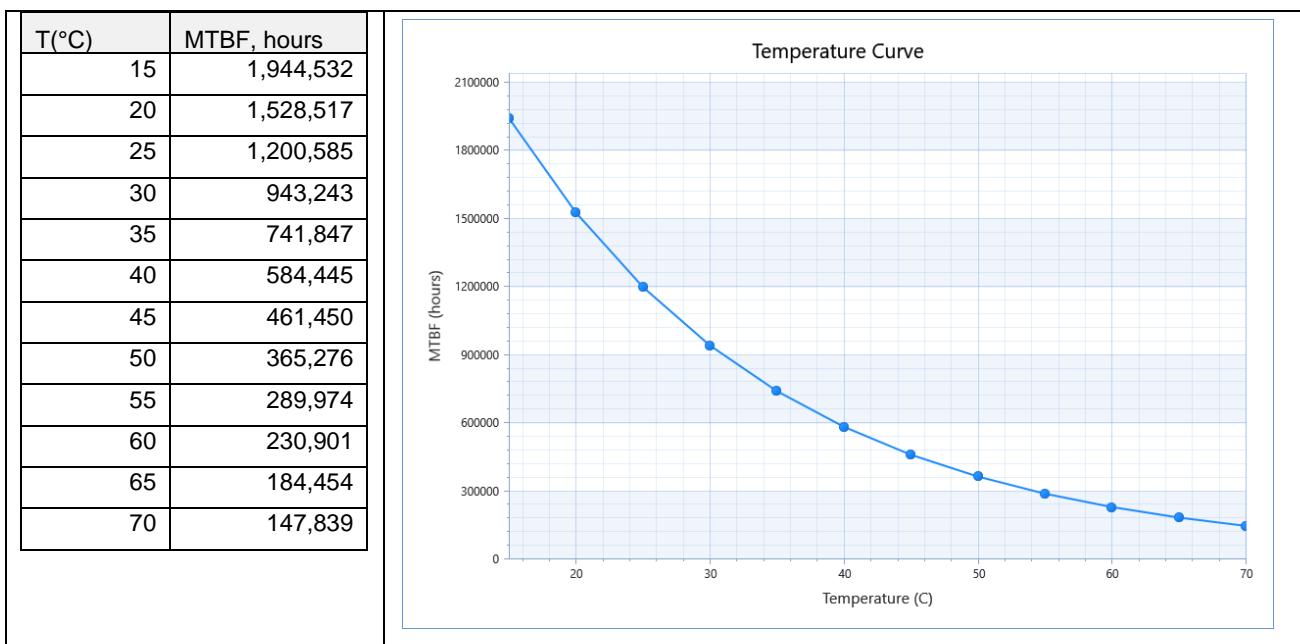


Figure 1: - CEX7 LX2K Module Temperature Curve

4.2. Conclusions

The top contributor is NTSX2102GD (Voltage Level Translator, Qty=14) that contributes 10.2 % of the total failure rate; U27 (KLMBG2JENB-B041 - eMMC 32GByte) that contributes 9.5 % of the total failure.

5. APPENDICES CONTENTS

5.1. Appendix A - Assembly Composite Report

This Appendix describes in detail the results of the reliability prediction at operating state. It provides also the contribution of each component failure rate to the next higher level.

5.2. Appendix B – Pareto Analysis

This appendix provides the list of components sorted by their contribution to total failure rate.

APPENDIX A - ASSEMBLY COMPOSITE REPORT

Project name: CEX7 LX2K

Operating conditions: Environment: GL, Temperature: 25.00 °C

Current mode: Operating

FR Units: FIT

Default prediction Method: Telcordia Issue 4

Assembly Ref.Des.: CEX7 LX2K, ID: 1, Description: 12 Core LX2120 CoM | 32GB eMMC | 512Mb SPI | Commercial Temp.| Rev 1.7 | Corning .

Environment: GMS, Temperature: 25.00 °C,F.R.(FIT): 832.93 , MTBF(hours): 1200585.1

ID	PN	RefDes	Qty	F.R. FIT	F.R.(K) FIT	F.R.(K,Qty) FIT	Contrib. to NHA[%]
1.1	CEX7 LX2K	CEX7 LX2K	1	832.93	832.93	832.93	100.00

Assembly Ref.Des.: CEX7 LX2K, ID: 1.1, Description: .

Environment: GMS, Temperature: 55.00 °C,F.R.(FIT): 832.93 , MTBF(hours): 1200585.1

ID	PN	RefDes	Qty	F.R. FIT	F.R.(K) FIT	F.R.(K,Qty) FIT	Contrib. to NHA[%]
1.1.1	CL05B104KP5NNNC	C3,C8,C10,C16,C84,C85,C87,C99,C105,C130,C172,C184,	92	0.03818	0.03818	3.51	0.4217
1.1.2	0402X103K250SNT	C122,C123,C132,C133,C141,C142,C143,C144	8	0.03818	0.03818	0.3054	0.03667
1.1.3	GRM155R61A105KE15D	C12,C24,C38,C48,C50,C53,C65,C67,C86,C94,C95,C97,C9	68	0.03818	0.03818	2.60	0.3117
1.1.4	CL05B102KB5NNNC	C171,C461,C193,C198	4	0.03818	0.03818	0.1527	0.01833
1.1.5	GRM155R71C104KA88	C47,C55,C69,C82,C127,C167,C199,C101,C456,C459,C460	16	0.03818	0.03818	0.6108	0.07334
1.1.6	GRM1555C1H180FA01D	C100,C118,C479,C480	4	0.03818	0.03818	0.1527	0.01833
1.1.7	CC0402KRX7R6BB103	C1,C33,C35,C206,C469,C473,C477	7	0.03818	0.03818	0.2672	0.03208
1.1.8	0402X104K250SNT	C442,C443,C446,C447,C485,C486,C487,C488,C481,C482,	14	0.03818	0.03818	0.5345	0.06417
1.1.9	GRM155R71H681KA01D	C2,C27,C30	3	0.03818	0.03818	0.1145	0.01375
1.1.10	GRM155R60J225ME95D	C25,C96,C219,C271,C296,C346,C418,C1082	8	0.03818	0.03818	0.3054	0.03667
1.1.11	CL05B105KQ5NQNC	C165	1	0.03818	0.03818	0.03818	0.00458 4
1.1.12	GRM155R71H152JA01D	C173	1	0.03818	0.03818	0.03818	0.00458 4
1.1.13	GRM155R71C103KA01D	C61,C265	2	0.03818	0.03818	0.07635	0.00916 7
1.1.14	GRM155R71H104KE14D	C49,C51,C54,C62,C64,C68,C72,C263	8	0.03818	0.03818	0.3054	0.03667
1.1.15	GRM1555C1H120JZ01D	C83,C93	2	0.03818	0.03818	0.07635	0.00916 7
1.1.16	GRM155R60J475ME87D	C168,C489,C989,C990	4	0.03818	0.03818	0.1527	0.01833
1.1.17	GRM1555C1H560JA01D	C441,C448	2	0.03818	0.03818	0.07635	0.00916 7
1.1.18	GJM1555C1H100GB01D	C89	1	0.03818	0.03818	0.03818	0.00458 4
1.1.19	C1005C0G1H331G050BA	C90	1	0.03818	0.03818	0.03818	0.00458 4
1.1.20	GRM1555C1H471JA01D	C91	1	0.03818	0.03818	0.03818	0.00458 4
1.1.21	0402B103K500CT	C57,C71	2	0.03818	0.03818	0.07635	0.00916 7
1.1.22	GRM155R71C224KA12D	C228,C405	2	0.03818	0.03818	0.07635	0.00916

ID	PN	RefDes	Qty	F.R. FIT	F.R.(K) FIT	F.R.(K,Qty) FIT	Contrib. to NHA[%]
							7
1.1.23	0402X224K250SNT	C134,C135,C136,C137,C138, C139,C145,C146,C147,C148,	36	0.03818	0.03818	1.37	0.165
1.1.24	CL05C151JB5NNNC	C1064	1	0.03818	0.03818	0.03818	0.004584
1.1.25	GRM188R60J106KE47D	C4,C6,C7,C9,C13,C19,C23,C28, C29,C31,C32,C79,C88,C1	46	0.03818	0.03818	1.76	0.2108
1.1.26	GRM188R60J226MEA0D	C14,C15,C17,C18,C20,C21,C22, C26,C34,C36,C37,C40,C5	42	0.03818	0.03818	1.60	0.1925
1.1.27	06036D475KAT2A	C169,C467,C471,C475	4	0.03818	0.03818	0.1527	0.01833
1.1.28	GRM188R71C105KE15D	C107,C464	2	0.03818	0.03818	0.07635	0.009167
1.1.29	GRM21BR61E106KA73L	C43,C140	2	0.03818	0.03818	0.07635	0.009167
1.1.30	GRM21BR60J476ME15L	C108,C109,C110,C111,C112, C113,C114,C115,C116,C117	10	0.03818	0.03818	0.3818	0.04584
1.1.31	GRM31CR60J107ME39L	C42,C44,C58,C250,C274, C368,C387,C417	8	0.03818	0.03818	0.3054	0.03667
1.1.32	CL32A226KAJNNNE	C124,C125	2	0.03818	0.03818	0.07635	0.009167
1.1.33	CC1210MKX5R7BB107	C60,C73,C92,C276,C299,C419,C424	7	0.03818	0.03818	0.2672	0.03208
1.1.34	CL32A226KOJNNWE	C56,C59,C70,C74	4	0.03818	0.03818	0.1527	0.01833
1.1.35	EEF-GX0D561R	C45,C46,C63,C76,C77	5	1.73	1.73	8.63	1.04
1.1.36	LLL185R70J224MA01L	C191,C202,C211,C239,C242, C245,C254,C255,C260,C264,	40	0.03818	0.03818	1.53	0.1833
1.1.37	LLL153C80G105ME21D	C196,C212,C230,C236,C240, C244,C262,C266,C285,C288,	41	0.03818	0.03818	1.57	0.1879
1.1.38	DTSM-31N-V-T/R	U2	1	18.20	18.20	18.20	2.19
1.1.39	10141997-001RLF	CON2	1	24.58	24.58	24.58	2.95
1.1.40	10141996-001RLF	CON1	1	24.58	24.58	24.58	2.95
1.1.41	3-6318490-6	J7, J6	2	20.80	20.80	41.60	5.00
1.1.42	20021121-00012C4LF	U55	1	1.13	1.13	1.13	0.1362
1.1.43	RB521CS-30T2R	D5,D6	2	0.575	0.575	1.15	0.1381
1.1.44	1SA0603G32A0CB01	LED1	1	0.9827	0.9827	0.9827	0.118
1.1.45	MM3Z3V3T1G	D3	1	1.39	1.39	1.39	0.1672
1.1.46	M74VHC1GT08DFT1G	U23,U3003,U3005	3	5.37	5.37	16.10	1.93
1.1.47	RT8073GQW	U1,U4,U5	3	7.76	7.76	23.28	2.80
1.1.48	AR8035-AL1A-R	U20	1	8.22	8.22	8.22	0.9869
1.1.49	TS3A5223RSWR	U22	1	6.63	6.63	6.63	0.7965
1.1.50	NCP51200MNTXG	U25	1	9.28	9.28	9.28	1.11
1.1.51	RT7291AGQUF	U7	1	7.76	7.76	7.76	0.9318
1.1.52	RT7290	U24	1	7.76	7.76	7.76	0.9318
1.1.53	TPS53355	U26	1	7.76	7.76	7.76	0.9318
1.1.54	AP7361C-25E-13	U3	1	6.63	6.63	6.63	0.7965
1.1.55	SMMBT3906LT1G	Q1,Q2	2	3.08	3.08	6.17	0.7405
1.1.56	KLMBG2JENB-B041	U27	1	51.70	79.10	79.10	9.50
1.1.57	CYUSB3304-68LTXC	U52	1	10.30	10.30	10.30	1.24
1.1.58	M24C02-WMN6TP	U49	1	5.98	5.98	5.98	0.7182
1.1.59	SN74LVC1G373DBV	U17	1	5.93	5.93	5.93	0.7114
1.1.60	NC7SZ04M5X	U15,U18	2	4.90	4.90	9.80	1.18
1.1.61	MT35XU512ABA1G12-OAATES	U6	1	34.81	34.81	34.81	4.18
1.1.62	FDMF5820DC	U8,U10	2	19.38	19.38	38.75	4.65
1.1.63	SI52208-A01AGM	U12	1	8.22	8.22	8.22	0.9869

ID	PN	RefDes	Qty	F.R. FIT	F.R.(K) FIT	F.R.(K,Qty) FIT	Contrib. to NHA[%]
1.1.64	LTC3882EUJPBF	U13	1	19.38	19.38	19.38	2.33
1.1.65	NCP114ASN080T1G	U46	1	6.63	6.63	6.63	0.7965
1.1.66	NTSX2102GD	U14,U19,U34,U38,U40,U41,U42, U45,U48,U3004,U3007,U3	14	6.63	6.63	92.87	11.15
1.1.67	SA56004FD	U30	1	6.72	6.72	6.72	0.8071
1.1.68	AT24CM02-SSHM-B	U32	1	37.89	37.89	37.89	4.55
1.1.69	PCF2129AT/2,518	U33	1	7.12	7.12	7.12	0.8553
1.1.70	PT7M3808G01TAEX	U39	1	6.63	6.63	6.63	0.7965
1.1.71	24AA512-I/SN	U47	1	27.43	27.43	27.43	3.29
1.1.72	AMC6821SDBQ	U50	1	9.28	9.28	9.28	1.11
1.1.73	SN74AVC4T774PW	U28	1	5.93	5.93	5.93	0.7114
1.1.74	PCA9547PW,118	U16	1	6.72	6.72	6.72	0.8071
1.1.75	74AVCH2T45DC,125	U36,U37	2	5.93	5.93	11.85	1.42
1.1.76	NVT4857UK	U3013	1	6.72	6.72	6.72	0.8071
1.1.77	LX2120SE72029B	U9	1	33.76	33.76	33.76	4.05
1.1.78	PBY160808T-121Y-N	FB16,FB17,L14,L15	4	0.1547	0.1547	0.619	0.07431
1.1.79	BBPY00160808601Y00	FB1,FB2,FB4,FB6,FB8,FB9, FB13,FB14,FB15	9	0.1547	0.1547	1.39	0.1672
1.1.80	LQM2MPN4R7NG0L	L8	1	0.3714	0.3714	0.3714	0.04459
1.1.81	SDB0630MTR47	L1,L3	2	0.1702	0.1702	0.3404	0.04087
1.1.82	SDB0630MTR33	L2,L9	2	0.1702	0.1702	0.3404	0.04087
1.1.83	SDB0630MT1R5	L4,L10	2	0.1702	0.1702	0.3404	0.04087
1.1.84	BLM18KG300TN1D	FB5,FB7,FB11,FB12,FB18	5	0.1547	0.1547	0.7737	0.09289
1.1.85	ASPI-0630LR-1R5M-T15	L7	1	0.3714	0.3714	0.3714	0.04459
1.1.86	FP1007R3-R17-R	L5,L6	2	0.3714	0.3714	0.7427	0.08917
1.1.87	BLM18KG121TN1	L11,L12,L13	3	0.1547	0.1547	0.4642	0.05573
1.1.88	S3225A025000-F10CCAA	Y1,Y2	2	3.72	3.72	7.44	0.8932
1.1.89	FA-128 26.0000MF10Z-W5	Y3	1	3.72	3.72	3.72	0.4466
1.1.90	X1G0039510002	U44	1	3.84	3.84	3.84	0.461
1.1.91	X1G0039510001	U43	1	3.84	3.84	3.84	0.461
1.1.92	X1G004251012100	U11	1	3.84	3.84	3.84	0.461
1.1.93	RC0402JR-074K7L	R16,R81,R93,R96,R97,R99, R119,R120,R124,R127,R130,R	44	0.08381	0.08381	3.69	0.4428
1.1.94	RC0402FR-076K04L	R360	1	0.08381	0.08381	0.08381	0.01006
1.1.95	RC0402JR-070RL	R23,R25,R46,R47,R56,R57, R58,R60,R61,R63,R70,R71,R1	41	0.08381	0.08381	3.44	0.4126
1.1.96	RC0402JR-071KL	R37,R38,R39,R45,R51,R52,R74, R123,R143,R149,R157,R1	15	0.08381	0.08381	1.26	0.1509
1.1.97	RC0402FR-0749R9L	R49,R50,R188,R404,R405, R406,R407,R408,R409,R510	10	0.08381	0.08381	0.8381	0.1006
1.1.98	RC0402JR-0747KL	R513	1	0.08381	0.08381	0.08381	0.01006
1.1.99	CR-02FL6---10K	R26,R28,R362,R113,R207, R214,R216,R391,R393,R389	10	0.08381	0.08381	0.8381	0.1006
1.1.100	RC0402JR-07150RL	R5	1	0.08381	0.08381	0.08381	0.01006
1.1.101	RC0402JR-07100KL	R101	1	0.08381	0.08381	0.08381	0.01006
1.1.102	RC0402JR-0722RL	R4,R73,R75,R176,R125, R172,R175,R177,R183,R530	10	0.08381	0.08381	0.8381	0.1006
1.1.103	RC0402FR-074K99L	R32,R34,R35,R69,R94,R105,R106	7	0.08381	0.08381	0.5867	0.07044
1.1.104	CR-02FL6---1K5	R160,R181,R182,R196,R199	5	0.08381	0.08381	0.4191	0.05031
1.1.105	CR02FL6--200R	R19,R115,R161,R197,R198, R211,R223	7	0.08381	0.08381	0.5867	0.07044
1.1.106	CR0402-FX-2400GLF	R144,R203	2	0.08381	0.08381	0.1676	0.02013
1.1.107	CRCW040224K0FKED	R7,R13,R121	3	0.08381	0.08381	0.2514	0.03019

ID	PN	RefDes	Qty	F.R. FIT	F.R.(K) FIT	F.R.(K,Qty) FIT	Contrib. to NHA[%]
1.1.108	RC0402FR-072K37L	R83	1	0.08381	0.08381	0.08381	0.01006
1.1.109	RC0402FR-0715KL	R1,R11,R12,R17	4	0.08381	0.08381	0.3353	0.04025
1.1.110	RC0402FR-0728K7L	R2,R3,R8	3	0.08381	0.08381	0.2514	0.03019
1.1.111	RC0402FR-072K2L	R78,R518,R82,R86,R142,R153, R170,R171,R178,R179,R18	12	0.08381	0.08381	1.01	0.1208
1.1.112	RC0402FR-07100RL	R173,R174,R204,R205,R218	5	0.08381	0.08381	0.4191	0.05031
1.1.113	RC0402FR-07330RL	R146,R159	2	0.08381	0.08381	0.1676	0.02013
1.1.114	RC0402FR-0730K1L	R531,R532	2	0.08381	0.08381	0.1676	0.02013
1.1.115	RC0402FR-071RL	R36	1	0.08381	0.08381	0.08381	0.01006
1.1.116	RC0402FR-07187KL	R104	1	0.08381	0.08381	0.08381	0.01006
1.1.117	RC0402FR-0782K5L	R103	1	0.08381	0.08381	0.08381	0.01006
1.1.118	RC0402FR-073RL	R100	1	0.08381	0.08381	0.08381	0.01006
1.1.119	RC0402FR-07300RL	R122	1	0.08381	0.08381	0.08381	0.01006
1.1.120	RC0402FR-0730KL	R6,R14	2	0.08381	0.08381	0.1676	0.02013
1.1.121	RC0402FR-0712KL	R10,R132	2	0.08381	0.08381	0.1676	0.02013
1.1.122	RC0402FR-07162RL	R117,R128,R158,R194,R195,R206	6	0.08381	0.08381	0.5029	0.06038
1.1.123	RC0402FR-072RL	R129,R131,R189,R190,R191,R192	6	0.08381	0.08381	0.5029	0.06038
1.1.124	RC0402FR-0724K9L	R22,R24,R53,R65	4	0.08381	0.08381	0.3353	0.04025
1.1.125	RC0402FR-077K32L	R54	1	0.08381	0.08381	0.08381	0.01006
1.1.126	RC0402FR-072K05L	R43	1	0.08381	0.08381	0.08381	0.01006
1.1.127	RC0402FR-072K67L	R156,R201	2	0.08381	0.08381	0.1676	0.02013
1.1.128	RC0402FR-0768K1L	R44	1	0.08381	0.08381	0.08381	0.01006
1.1.129	RC0402FR-0711K3L	R64	1	0.08381	0.08381	0.08381	0.01006
1.1.130	RC0402FR-071K8L	R9	1	0.08381	0.08381	0.08381	0.01006
1.1.131	RC0402FR-075K76L	R67,R514	2	0.08381	0.08381	0.1676	0.02013
1.1.132	RC0603FR-072R2L	R98	1	0.08381	0.08381	0.08381	0.01006
1.1.133	RC0603JR-070RL	R55	1	0.08381	0.08381	0.08381	0.01006
1.1.134	RC0603FR-0749R9L	R29,R30,R31	3	0.08381	0.08381	0.2514	0.03019
1.1.135	YC124-JR-07100KL	RN1,RN3	2	0.7819	0.7819	1.56	0.1877
1.1.136	YC124-JR-0710KL	RN2,RN4,RN5,RN7,RN8,RN12, RN18,RN20,RN13	9	0.7819	0.7819	7.04	0.8448
1.1.137	YC124-JR-071KL	RN10	1	0.7819	0.7819	0.7819	0.09387
1.1.138	YC124-JR-072K2L	RN6,RN9,RN11,RN14,RN15, RN16,RN19,RN21	8	0.7819	0.7819	6.25	0.7509
1.1.139	DMR-05(A) (P)	SW1	1	12.95	12.95	12.95	1.56
1.1.140	DMG3406L-13	Q4	1	5.99	5.99	5.99	0.7196
1.1.141	BSS138LT3G	Q5	1	19.17	19.17	19.17	2.30
1.1.142	RYE002N05TCL	Q3	1	19.17	19.17	19.17	2.30

APPENDIX B – PARETO ANALYSIS

Project name: CEX7 LX2K

Operating conditions: Environment: GL, Temperature: 25.00 °C

Current mode: Operating

FR Units: FIT

Default prediction Method: Telcordia Issue 4

Start from: CEX7 LX2K

Limited by: 90.000

PN	Qty	Total Failure rate	Item Failure rate contribution	Cumulative contribution
NTSX2102GD	14	92.874	11.150%	11.150%
KLMBG2JENB-B041	1	79.103	9.497%	20.647%
3-6318490-6	2	41.605	4.995%	25.642%
FDMF5820DC	2	38.754	4.653%	30.295%
AT24CM02-SSHM-B	1	37.888	4.549%	34.844%
MT35XU512ABA1G12-0AATES	1	34.809	4.179%	39.023%
LX2120SE72029B	1	33.763	4.054%	43.077%
24AA512-I/SN	1	27.434	3.294%	46.370%
10141996-001RLF	1	24.585	2.952%	49.322%
10141997-001RLF	1	24.585	2.952%	52.273%
RT8073GQW	3	23.283	2.795%	55.069%
LTC3882EUJPBF	1	19.377	2.326%	57.395%
BSS138LT3G	1	19.166	2.301%	59.696%
RYE002N05TCL	1	19.166	2.301%	61.997%
DTSM-31N-V-T/R	1	18.202	2.185%	64.183%
M74VHC1GT08DFT1G	3	16.095	1.932%	66.115%
DMR-05(A) (P)	1	12.954	1.555%	67.670%
74AVCH2T45DC,125	2	11.851	1.423%	69.093%
CYUSB3304-68LTXC	1	10.296	1.236%	70.329%
NC7SZ04M5X	2	9.801	1.177%	71.506%
AMC6821SDBQ	1	9.277	1.114%	72.619%
NCP51200MNTXG	1	9.277	1.114%	73.733%
EEF-GX0D561R	5	8.628	1.036%	74.769%
AR8035-AL1A-R	1	8.220	0.987%	75.756%
SI52208-A01AGM	1	8.220	0.987%	76.743%
RT7290	1	7.761	0.932%	77.675%
RT7291AGQUF	1	7.761	0.932%	78.606%
TPS53355	1	7.761	0.932%	79.538%
S3225A025000-F10CCAA	2	7.440	0.893%	80.431%
PCF2129AT/2,518	1	7.124	0.855%	81.287%
YC124-JR-0710KL	9	7.037	0.845%	82.132%
NVT4857UK	1	6.723	0.807%	82.939%
PCA9547PW,118	1	6.723	0.807%	83.746%
SA56004FD	1	6.723	0.807%	84.553%
AP7361C-25E-13	1	6.634	0.796%	85.349%
NCP114ASN080T1G	1	6.634	0.796%	86.146%
PT7M3808G01TAEX	1	6.634	0.796%	86.942%
TS3A5223RSWR	1	6.634	0.796%	87.739%
YC124-JR-072K2L	8	6.255	0.751%	88.490%
SMMBT3906LT1G	2	6.168	0.740%	89.230%
DMG3406L-13	1	5.994	0.720%	89.950%
M24C02-WMN6TP	1	5.982	0.718%	90.668%