



MTBF PREDICTION REPORT

PA Department

DFI



MTBF PREDICTION REPORT

Model: WL051-ECC-4305UE

Revision: 021

Completed Date	2020/11/12
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1. Purpose:

This MTBF prediction report presents the product reliability by the Relex reliability analysis tools, which is developed by Relex Software Corporation. When performing a reliability prediction analysis, there are several calculated values that provide measures of reliability. These values include failure rate, MTBF, reliability and availability. This report should provide the reliable and worth result for MTBF and failure rate reference.

2. Prediction Models:

For motherboard product, this report is based on Telcordia (formerly Bellcore). The Telcordia reliability prediction model was originally developed by AT&T Bell Labs. Bell Labs modified the equations from MIL-HDBK-217 to better represent what their equipment was experiencing in the field.

3. Definition:

- Failure Rate: Failure rate is defined as the rate of occurrence of failure. It is basically the anticipated number of times that an item fails in a specified period of time.
- MTBF: MTBF stands for Mean Time between Failures. MTBF is the inverse of the failure rate for constant failure rate systems. MTBF can be described as the number of hours to pass before for a component, assembly, or system.
- Description: A description of the item on the Relex file.
- Environment: It is based on those outlined in the Telcordia (Bellcore) standards.
- Temperature: Present the operation temperature (in degrees Celsius) to meet the requirement.

4. MTBF Result and Relex Software Report:

Temperature (Celsius)	MTBF (hours)
25	564107
45	402731
60	293920
70	233191
80	182929

File Name: WL051-ECC-4305UE.rfp
System: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 564107
Failure Rate: 1,772.71
Temperature: 25
Environment: GB, GC - Ground Benign, Controlled

Assembly Name	Part Number	Quantity	Failure Rate (Fit)	MTBF (Hrs)
WL051-ECC-4305UE	774-WL0511-700G	1	1772.71	564,107

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 564107
Failure Rate: 1,772.7122
Temperature: 25
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
112-900032-300G	IC TTL,Two-Input OR Gate,NC7SZ32P5X/SC70-5 (ON)RoHS	1.9772	6	14.2597
113-500004-300G	IC TTL,Single Inverter Gate,SN74LVC1G04DCK/SC70-5(TI)RoHS	1.9772	1	2.9741
113-500007-210S	IC TTL,Single Buffer/Driver With Open-Drain Output,SN74LVC1G07DCKR/SC70-5(TI)	1.9772	2	5.3538
113-500008-210G	IC TTL,Single 2-Input Positive-AND Gate,SN74LVC1G08DCKR/SC70-5(TI)RoHS	1.9772	15	33.3651
113-833306-400G	IC TTL,Dual FET Bus Switch,SN74CB3Q3306ADCUR/VSSOP8(US8-DCU) (TI)RoHS	1.9772	2	5.3538
113-906408-400G	IC LOW-VOLTAGE 8-BIT I2C AND SMBus I/O EXPANDER,UQFN16, TCA6408ARSVR(TI)RoHS	1.9772	1	2.9741
121-000104-420G	IC 4-BIT BIDIRECTIONAL VOLTAGE-LEVEL TRANSLATOR,NTS0104GU12/XQFN12(NXP) RoHS	1.9772	1	2.9741
121-002069-200G	IC Power-Distribution Switches,1.5A,TPS2069DDBVT/SOT23-5(TI)RoHS	1.9772	1	2.9741
121-007111-400G	IC Power Switch RSET with Flag,JW7111DFNB#TRPBF/DFN-6(2x2)(JOULWATT) RoHS	1.9772	1	2.9741
121-022976-200G	IC Switch,5.7-V,6-A,14-mΩ On-Resistance Dual-Channel Load,TPS22976DPU/WSO-14(TI)RoHS	1.9772	3	7.6379
121-081439-401G	IC Single 3.3V or 5V RS232/RS422/RS485 Multiprotocol Transceiver,F81439AN/TQFN-40(5x5) (FINTEK)RoHS	1.9772	1	2.9741
121-302045-400G	IC Integrated Driver and MOSFET,NCP302045MNTWG/PQFN-33(5*5)(ON) RoHS	1.9772	4	9.8732
135-300403-200G	SPI SERIAL FLASH 4Mbit,MX25L4006EZUI-12G/USON-8(MXIC)RoHS	4.4178	1	6.8575
135-301004-201G	EEPROM 8K(1024*8)M24C08-WMN6TP/SO-8(ST) RoHS	4.4178	1	6.8575
135-301282-220G	SPI SERIAL FLASH 128Mbit,W25Q128JVSQ/SOIC-8 (WINBOND)RoHS	4.4178	1	6.8575
136-112180-200G	8-bit Flash Microcontroller PIC12F1822-I/SN/SOIC-8 (MICROCHIP)RoHS	4.4178	1	6.8575
141-006850-401G	IC Synchronous Buck Converter,4.5-26Vin,12A,NB685AGQ/QFN16(MPS)RoHS	1.9772	1	2.9741
141-262001-200G	AUDIO CODEC,ALC262-VC2-GR/LQFP-48(REALTEK) RoHS	1.9772	1	2.9741
141-562150-400G	IC Synchronous Step-down Converter,TPS56C215RNN/VQFN-18(TI)RoHS	1.9772	3	7.6379
141-568210-400G	IC Converter,4.5V~17V Input,8A Synchronous Step-Down SWIFT,TPS568215OARNN/VQFN-18(TI)RoHS	1.9772	1	2.9741
141-620850-200G	IC Synchronous Buck Converter,2.5-6,3A,TLV62085RLT/VSON-7(TI)RoHS	1.9772	1	2.9741
141-812450-400G	IC PWM CTRL, NCP81245MNTXG/QFN-52(ON)RoHS	1.9772	1	2.9741
147-002190-410G	IC CHIP,Giga LAN PHY,WGI219V SLKJ5/QFN-48 (INTEL)RoHS	1.9772	1	2.9741

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MTBF (hrs): 564107
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Temperature: 25
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
147-055250-200G	IC CHIP Super I/O, NCT5525D/LQFP-64(NUVOTON) RoHS	1.9772	1	2.9741
147-822100-410G	IC CHIP Giga LAN Ctrl,-40~105°C,WGI210IT SLJXT/QFN-64(INTEL)RoHS	1.9772	1	2.9741
171-204005-210G	DIODE SCHOTTKY BARRIER 40V,200mA,BAS40-05-7-F/SOT23-3(DIODES)RoHS	0.2189	7	2.0671
171-205200-220G	DIODE SCHOTTKY,30V,200mA,RB520S-30H/SOD523(SMARTENGRAND)RoHS	0.2189	3	1.0099
171-214148-503S	DIODE Switching,SMD,1N4148W-TG-WS/SOD-123 (WILLAS)	0.2189	1	0.4229
171-360120-500G	DIODE TVS,12V,600W,Bidirectional,SMBJ12CA/DO-214AA(LITTELFUSE)RoHS	0.2189	1	0.4229
171-404010-200S	DIODE 4-CHANNEL ESD PROTECTION,TPD4S010DQAR/SON-DQA10(TI)	1.9772	4	9.8732
171-451715-200G	DIODE Zener,15V,Vz=14.34V~14.98V,UDZVTE-1715B/SOD-323FL(ROHM)RoHS	0.2189	1	0.4229
171-451756-200G	DIODE Zener,5.6V,Vz=5.49V~5.73V,UDZVTE-175.6B/SOD-323F(ROHM)RoHS	0.2189	2	0.7270
171-841023-200G	DIODE TVS Array,3.3V,AZ1023-04F.R7G/DFN2510P10E(AMAZING)RoHS	0.2189	2	0.7270
172-006401-200S	MOSFET P-Ch,VDS:-30V,ID:-5A,VGS:±12V,@-10V,RDS:49mΩ,AO6401/TSOP6(AOS)	7.2970	1	10.7463
172-207002-241G	MOSFET N-Ch,VDS:60V,ID:300mA,VGS:±20V,@10V,RDS:3Ω,2N7002K/SOT23-3(PANJIT)RoHS	7.2970	3	27.7940
172-223904-206S	TRANSISTOR NPN,MMBT3904LT1G/SOT23(ON)	1.1741	4	6.4928
172-223904-400G	TRANSISTOR Dual NPN,MBT3904DW1T1G/SOT-363 (ON)RoHS	1.1741	4	6.4928
172-223906-207S	TRANSISTOR PNP,PMBS3906/SOT23(NXP)	1.1741	1	2.0814
172-239040-210G	TRANSISTOR DUAL NPN,Ic ≤ 200mA,Vcbo:60V,Vceo:40V,MMBT3904DT H/SOT563-6(SMARTENGRAND)RoHS	1.1741	2	3.6275
172-301380-220G	MOSFET Dual N-Ch,VDS:50V,ID:350mA,VGS:±20V,@10V,RDS:1.6Ω,BSS138KDT/SOT563-6(SMARTENGRAND)RoHS	7.2970	29	229.4666
172-302003-210G	MOSFET N-Ch,VDS:30V,ID:7A,VGS:±20V,@10V,RDS:20mΩ,EMB20N03VA/EDFN-8(2x2)(EXCELLIANCE)RoHS	7.2970	2	19.4351
172-330140-200G	MOSFET N-Ch,VDS:30V,ID:9.5A,VGS:±20V,@10V,RDS:12mΩ,FKBB3014/PRPAK-8(3x3)(FETEK)RoHS	7.2970	1	10.7463
172-331030-200G	MOSFET P-Ch,VDS:-30V,ID:-7.7A,VGS:±25V,@-10V,RDS:20mΩ,FKBB3103/PRPAK-8(3x3)(FETEK) RoHS	7.2970	5	44.0671
213-151015-200C	MLCC 101P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.0911	1	0.1028
213-151203-109G	MLCC 12pF/50V,NPO,F(1%),SMD,0201,CC0201FRNPO9BN120(YAGEO) RoHS	0.0911	4	0.3877

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Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
213-151505-200C	MLCC 15pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.0911	1	0.1028
213-151805-200C	MLCC 18pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.0911	4	0.3877
213-152205-200C	MLCC 22pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.0911	1	0.1028
213-152215-200C	MLCC 221P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.0911	6	0.5752
213-152705-200C	MLCC 27pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.0911	4	0.3877
213-153319-200C	MLCC 331P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.0911	10	0.9479
213-154705-200C	MLCC 47pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.0911	2	0.1987
213-251028-200C	MLCC 102P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.0911	11	1.0407
213-251028-300C	MLCC 102P/50V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.0911	4	0.3877
213-251029-110C	MLCC 102P/25V,X7R,K(10%)SMD,0201(None JP) RoHS	0.0911	2	0.1987
213-251038-250C	MLCC 103P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.0911	4	0.3877
213-251049-130C	MLCC 104P/10V,X5R,K(10%),SMD,0201,(None JP) RoHS	0.0911	83	7.6671
213-251049-200C	MLCC 104P/16V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.0911	76	7.0249
213-251049-270J	MLCC 104P/25V,X5R,K(10%),SMD,0402,(JP)RoHS	0.0911	7	0.6685
213-251049-380C	MLCC 104P/100V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.0911	1	0.1028
213-251059-109G	MLCC 105P/6.3V,X5R,K(10%),SMD,0201,CC0201KRX5R5BB105(YAGEO) RoHS	0.0911	54	5.0048
213-251059-200C	MLCC 105P/6.3V,X5R,K(10%),SMD,0402,(None JP) RoHS	0.0911	1	0.1028
213-251059-220J	MLCC 105P/10V,X5R,K(10%),SMD,0402,(JP)RoHS	0.0911	4	0.3877
213-251059-230J	MLCC 105P/16V,X5R,K(10%),SMD,0402,(JP)RoHS	0.0911	36	3.3494
213-251059-270C	MLCC 105P/6.3V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.0911	1	0.1028
213-251059-330J	MLCC 105P/25V,X5R,K(10%),SMD,0603,(JP)RoHS	0.0911	5	0.4816
213-251068-200J	MLCC 106P/6.3V,X5R,M(20%),SMD,0402,(JP)RoHS	0.0911	68	6.2906
213-251068-300J	MLCC 106P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS	0.0911	26	2.4280
213-251069-320J	MLCC 106P/10V,X5R,K(10%),SMD,0603,(JP)RoHS	0.0911	7	0.6685
213-251069-500C	MLCC 106P/6.3V,X5R,K(10%),SMD, 0805,(None JP) RoHS	0.0911	1	0.1028
213-251069-540J	MLCC 106P/16V,X5R,K(10%),SMD,0805,(JP)RoHS	0.0911	12	1.1336
213-251228-200C	MLCC 122P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.0911	1	0.1028

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Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
213-251528-200C	MLCC 152P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.0911	6	0.5752
213-252229-200C	MLCC 222P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.0911	4	0.3877
213-252239-220J	MLCC 223P/50V,X7R,K(10%),SMD,0402,(JP)RoHS	0.0911	1	0.1028
213-252249-140C	MLCC 224P/6.3V,X5R,K(10%),SMD,0201,(None JP) RoHS	0.0911	16	1.5042
213-252249-210C	MLCC 224P/10V,X5R,K(10%),SMD,0402,(None JP) RoHS	0.0911	1	0.1028
213-252249-330C	MLCC 224P/25V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.0911	5	0.4816
213-252259-330C	MLCC 225P/16V,X5R,K(10%)SMD,0603,(None JP) RoHS	0.0911	1	0.1028
213-252262-610J	MLCC 226P/6.3V,X5R,M(20%),SMD,1206,(JP)RoHS	0.0911	3	0.2935
213-252268-310J	MLCC 226P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS	0.0911	50	4.6372
213-252268-500C	MLCC 226P/25V,X5R,M(20%),SMD,0805,(None JP) RoHS	0.0911	12	1.1336
213-252269-510J	MLCC 226P/6.3V,X5R,M(20%),SMD,0805,(JP)RoHS	0.0911	4	0.3877
213-252269-620J	MLCC 226P/16V,X5R,K(10%),SMD,1206,(JP)RoHS	0.0911	2	0.1987
213-253939-240J	MLCC 393P/25V,X7R,K(10%),SMD,0402,(JP)RoHS	0.0911	1	0.1028
213-254715-200C	MLCC 471P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.0911	7	0.6685
213-254718-210C	MLCC 471P/25V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.0911	8	0.7618
213-254739-210C	MLCC 473P/16V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.0911	7	0.6685
213-254758-210C	MLCC 475P/6.3V,X5R,M(20%),SMD,0402,(None JP) RoHS	0.0911	2	0.1987
213-254759-300C	MLCC 475P/6.3V,X5R,K(10%),SMD,0603,(None JP) RoHS	0.0911	1	0.1028
213-254759-320C	MLCC 475P/10V,X5R,K(10%),SMD,0603,(None JP) RoHS	0.0911	14	1.3190
213-254768-306G	MLCC 476P/6.3V,X5R,M(20%),SMD,0603,GRM188R60J476M(MURATA)RoHS	0.0911	2	0.1987
213-254768-500J	MLCC 476P/6.3V,X5R,M(20%),SMD,0805,(JP)RoHS	0.0911	9	0.8549
217-104778-700G	POLYMER(ALM) CAP 470uF/2V,4.5mΩ,4000mA,SMD,V7343,105°C/2000H,M(20%),bottom of round shape,EEFSX0D471E4 (PANASONIC)RoHS	0.7181	3	2.5481
217-301078-325G	POLYMER(TAN) CAP 100uF/6.3V,40mΩ,1.8A,SMD,B3528,105°C/2000H,M(20%),T520B107M006ATE040(KEMET)RoHS	0.7181	3	2.5481
217-302278-326G	POLYMER(TAN)CAP 220uF/6.3V,45mΩ,1700mA,105°C/2000H,M(20%),B3528(1.9),T520B227M006ATE045(KEMET) RoHS	0.7181	4	3.3261

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217-303378-720G	POLYMER(TAN) CAP 330uF/2.5V,9mΩ,3900mA,SMD,D7343-D2E,105°C/2000H,M(20%),2R5TPE330M9(SANYO)RoHS	0.7181	1	0.9480
217-373368-400G	POLYMER(TAN) CAP,33uF/16V,50mΩ,1400mA,SMD,T3528-12,105°C/2000H,M(20%),T521T336M016ATE050(KEMET)RoHS	0.7181	1	0.9480
223-015122-600G	CHOKE 0.15uH,M (20%),RDC≤0.66mΩ,Idc≤36A,Isat=45A,SMD,(7.6*6.6*3.8),PCME064T-R15MS0R667(CYNTEC)RoHS	0.0831	3	0.2835
223-015222-610G	CHOKE 1.5uH,M (20%),RDC≤15mΩ,Irms=9A,Isat=16A,SMD,(7.3*6.6*3.0),MCS0630-1R5MN2(PDC)RoHS	0.0831	1	0.1030
223-033121-700G	CHOKE 0.33uH,M(20%),RDC:7.8mΩ (typ),Irms:10A,Isat:18A,SMD (4.45*4.06*1.8mm),TMPC0402HP-R33MG-Z02(TAI TECH)RoHS	0.0831	1	0.1030
223-047120-830G	CHOKE 0.47uH,M(20%),DCR:23mΩ (Typ.),Irms:5.2A,Isat:6.6A,SMD (2.5*2*1mm),MCS25GC-R47MHC(PDC)RoHS	0.0831	1	0.1030
223-047121-700G	CHOKE 0.47uH,M (20%),RDC≤14mΩ,Irms=7A,Isat=9.5A,SMT (4.7*4.3),MCS0420-R47MN2(PDC)RoHS	0.0831	1	0.1030
223-047121-900G	CHOKE 0.47uH,M (20%),Rdc<8.5mΩ,Idc=13A,Isat=12A,SMD, (4.85x4.7x2.8),PCMB053T-R47MS(CYNTEC)RoHS	0.0831	2	0.1942
223-068121-900G	CHOKE 0.68uH,M (20%),RDC≤9.2mΩ,Idc=10A,Isat=15A,SMD (4.85x4.7x2.8),CMMB053T-R68MS(CYNTEC)RoHS	0.0831	1	0.1030
223-322220-300G	INDUCTOR 2.2uH,M(20%),RDC=0.25Ω +/- 30%,Idc≤130mA,SMD, (1.6*0.8*0.8),MLZ1608A2R2WT000(TDK)RoHS	0.0831	2	0.1942
223-347220-800G	INDUCTOR 4.7uH,M (20%),RDC≤0.24Ω,Irms≤2.1A,SMD(1008), (2.5*2.0*1.2mm)MHCD252012A-4R7M-A8S (CHILISIN)RoHS	0.0831	1	0.1030
223-490040-540G	COMMON CHOKE 90Ω,25%,Irated≤500mA,RDC≤300mΩ,USB3.1 Gen2,10GHz,SMD(0805) (2*1.2*1.5mm),GCMF2012PM-900T(GOTREND) RoHS	0.0831	6	0.5464
223-490090-500S	COMMON CHOKE 90Ω,60-100Ω,300mA (Max),RDC≤300mΩ,HDMI/USB3.0 6GHz,SMD0805 (2*1.2*1.2mm),GLECM2012B-900QT(GOTREND)	0.0831	4	0.3713
223-523000-410G	CM FILTER Cd=0.25pF,Rs=3Ω,SMD (1.57*1.17*0.57),PCMF2USB3S/WLCSP10(NXP) RoHS	0.0831	4	0.3713
231-171330-200G	REGULATOR GS7133TD-R,3A,TDFN10(GSTEK)RoHS	1.9474	1	3.7871

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241-224006-310G	X'TAL 24MHz,16pF,±30ppm,ESR:50Ω(Max),TOPR=-40°C~+105°C,SMD3225(4PAD),7M24000082(TXC) RoHS	1.4698	1	2.4229
241-225006-350G	X'TAL 25MHz,18pF,±30ppm,ESR:50Ω(Max),TOPR=-40°C~+105°C,SMD3225(4PAD),7M25000175(TXC) RoHS	1.4698	2	4.2797
241-432773-300G	X'TAL 32.768kHz,12.5pf,*/-20ppm,TOPR=-40°C~+125°C,SMD3215(2PAD),FC-13A,X1A000091000100(Seiko Epson)RoHS	1.4698	1	2.4229
251-160808-083S	BEAD CORE 160808 80Ω,300mA,25%,SMT0603,SBK160808T-800Y-N (CHILISIN)	0.4535	2	1.5088
251-160808-615S	BEAD CORE 160808 600Ω,1A,25%,SMT0603,PBY160808T-601Y-N (CHILISIN)	0.4535	1	0.8779
253-100110-500G	POLY SWITCH,PTC,1.1A/6V,SMD0805,0805L110ULY R(LITTELFUSE)RoHS	0.4000	1	0.6546
253-100115-604S	POLY SWITCH,PTC,1.1A/8V,SMD1206,1206L110THY R(LITTELFUSE)RoHS	0.4000	2	1.1579
253-100155-604S	POLY SWITCH,PTC,1.5A/8V,SMD1206,1206L150THW R(LITTELFUSE)	0.4000	1	0.6546
253-100266-403S	POLY SWITCH 2.6A/13.2V,SMD1812,miniSMDC260F/13.2 (LITTELFUSE)RoHS	0.4000	1	0.6546
261-361515-200C	RES ARRAY 150Ω 8P4R J(5%),0402*4,(None JP) RoHS	0.0605	2	0.1490
263-180005-100C	RES 0Ω,J(5%),SMD,0201,(None JP)RoHS	0.0605	129	8.0210
263-180005-200C	RES 0Ω,J(5%),SMD,0402,(None JP)RoHS	0.0605	20	1.2961
263-180005-300C	RES 0Ω,J(5%),SMD,0603,(None JP)RoHS	0.0605	9	0.6024
263-180100-210C	RES 10Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	8	0.5386
263-180100-310C	RES 10Ω,F(1%),SMD,0603,(None JP)RoHS	0.0605	4	0.2814
263-180330-110C	RES 33Ω,F(1%),SMD,0201,(None JP)RoHS	0.0605	15	0.9821
263-180430-210C	RES 43Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-180510-110C	RES 51Ω,F(1%),SMD,0201,(None JP)RoHS	0.0605	5	0.3464
263-180519-210C	RES 5.1Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-180560-210C	RES 56Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-180750-110C	RES 75Ω,F(1%),SMD,0201,(None JP)RoHS	0.0605	5	0.3464
263-181000-110C	RES 100Ω,F(1%),SMD,0201,(None JP)RoHS	0.0605	11	0.7295
263-181000-210C	RES 100Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	6	0.4110
263-181001-110C	RES 1KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0605	29	1.8580
263-181001-210C	RES 1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	8	0.5386
263-181002-110C	RES 10KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0605	99	6.1795
263-181002-210C	RES 10KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	12	0.7928
263-181003-110C	RES 100KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0605	34	2.1690
263-181003-210C	RES 100KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	10	0.6660
263-181004-110C	RES 1MΩ,F(1%),SMD,0201,(None JP)RoHS	0.0605	2	0.1490
263-181004-210C	RES 1MΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	2	0.1490
263-181005-210C	RES 10MΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 564107
Failure Rate: 1,772.7122
Temperature: 25
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
263-181022-210C	RES 10.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-181101-210C	RES 1.1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-181130-210C	RES 113Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-181182-210C	RES 11.8KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-181201-210C	RES 1.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	3	0.2157
263-181202-110C	RES 12KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0605	1	0.0805
263-181202-210C	RES 12KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	3	0.2157
263-181203-210C	RES 120KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-181210-210C	RES 121Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-181213-210C	RES 121KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-181302-210C	RES 13KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-181402-210C	RES 14KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-181500-210C	RES 150Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	2	0.1490
263-181502-210C	RES 15KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-181503-210C	RES 150KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	2	0.1490
263-181505-100C	RES 15Ω,J(5%),SMD,0201,(None JP)RoHS	0.0605	4	0.2814
263-181602-210C	RES 16KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	2	0.1490
263-181623-210C	RES 162KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-181782-210C	RES 17.8KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-181803-210C	RES 180KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	3	0.2157
263-181962-210C	RES 19.6KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-182000-210C	RES 200Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	3	0.2157
263-182001-210C	RES 2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	5	0.3464
263-182002-110C	RES 20KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0605	8	0.5386
263-182002-210C	RES 20KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	6	0.4110
263-182003-210C	RES 200KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-182200-210C	RES 220Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-182201-110C	RES 2.2KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0605	7	0.4746
263-182201-210C	RES 2.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	2	0.1490
263-182202-110C	RES 22KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0605	4	0.2814
263-182208-210C	RES 2.2Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-182208-310C	RES 2.2Ω,F(1%),SMD,0603,(None JP)RoHS	0.0605	6	0.4110
263-182208-510C	RES 2.2Ω,F(1%),SMD,0805,(None JP)RoHS	0.0605	4	0.2814
263-182400-110C	RES 240Ω,F(1%),SMD,0201,(None JP)RoHS	0.0605	3	0.2157
263-182401-210C	RES 2.4KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-182492-210C	RES 24.9KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	2	0.1490
263-182499-210C	RES 24.9Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	2	0.1490
263-182612-210C	RES 26.1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-182702-218G	RES 27KΩ,F(1%),SMD,0402,RTT022702FTH(RALEC) RoHS	0.0605	1	0.0805
263-183000-310C	RES 300Ω,F(1%),SMD,0603,(None JP)RoHS	0.0605	2	0.1490
263-183002-210C	RES 30KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-183011-210C	RES 3.01KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-183013-210C	RES 301KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	3	0.2157
263-183300-210C	RES 330Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	4	0.2814
263-183301-110C	RES 3.3KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0605	6	0.4110
263-183301-210C	RES 3.3KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	4	0.2814

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Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 564107
Failure Rate: 1,772.7122
Temperature: 25
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
263-183302-110C	RES 33KΩ,F(1%),SMD,0201(None JP)RoHS	0.0605	1	0.0805
263-183303-210C	RES 330KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	2	0.1490
263-183483-210C	RES 348KΩ,F(1%),SMD,0402(None JP)RoHS	0.0605	1	0.0805
263-183652-210C	RES 36.5KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	2	0.1490
263-183922-110C	RES 39.2KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0605	1	0.0805
263-183922-210C	RES 39.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-184221-210C	RES 4.22KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-184321-210C	RES 4.32KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	2	0.1490
263-184532-210C	RES 45.3KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-184539-210C	RES 45.3Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-184700-110C	RES 470Ω,F(1%),SMD,0201(None JP)RoHS	0.0605	9	0.6024
263-184701-110C	RES 4.7KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0605	33	2.1069
263-184701-210C	RES 4.7KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	2	0.1490
263-184702-110C	RES 47KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0605	11	0.7295
263-184871-210C	RES 4.87KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	3	0.2157
263-184990-110C	RES 499Ω,F(1%),SMD,0201,(None JP)RoHS	0.0605	1	0.0805
263-184990-210C	RES 499Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-184991-210C	RES 4.99KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-184999-110C	RES 49.9Ω,F(1%),SMD,0201,(None JP)RoHS	0.0605	4	0.2814
263-184999-210C	RES 49.9Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	9	0.6024
263-185102-210C	RES 51KΩ,F(1%),SMD,0402(None JP)RoHS	0.0605	3	0.2157
263-185602-210C	RES 56KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	4	0.2814
263-185622-210C	RES 56.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-186041-210C	RES 6.04KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-186049-210C	RES 60.4Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	2	0.1490
263-187501-210C	RES 7.5KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	2	0.1490
263-187502-210C	RES 75KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-188069-210C	RES 80.6Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-188201-210C	RES 8.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-188871-210C	RES 8.87KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-189100-210C	RES 910Ω,F(1%),SMD,0402,(None JP)RoHS	0.0605	1	0.0805
263-189762-210C	RES 97.6KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0605	2	0.1490
273-010400-300G	THERM RES 100KΩ,0603(B:25/85=3950,3%)RoHS	0.9957	5	7.0942
273-100402-301S	THERM RES 10KΩ,J(5%),SMD,0603, (B25/85=3435,3%),TSM1A103J34D3RZ(TKS)	0.9957	2	3.3397
314-WL0511-029G	PCB WL051 R.2(12L 100x72x1.6mm, 2 panelization) OSP(CIRCUITECH)RoHS	2.4655	1	4.6984
342-122101-100G	DISPLAYPORT/HDMI CONN,21P,MALE,R/A,DIP,GF,845-002-217CRL (REGO)RoHS	2.0862	1	3.6121
342-310022-110G	Screw CONN. Terminal Block,Green,2Pos,300V,16A,PIT:5.0mm,MB612- 50002(DECA) RoHS	2.0862	1	3.6121
343-124000-210G	eDP conn, 40P, F, 90D, 0.5mm, G/F, SMT, BLACK, SSL00-40L3(KEL)RoHS	2.0862	1	3.6121

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Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 564107
Failure Rate: 1,772.7122
Temperature: 25
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
343-501402-200G	Giga LAN CONN RJ45,SMT,GF,W/Transformer,W/LED,MRJG-11S88RS (MATRIX),RoHS	2.0862	2	6.3217
343-501820-110G	USB 3.1 GEN2 CONN*2, 18P, A Type, Green, F, G/F, 90D, DIP, U2131D-UADH-0401R(HDSY)RoHS	2.0862	1	3.6121
346-120310-201G	PIN PLUG 2*3, 1.27mm, H=5mm, 180D, SMD, SHY- JCL180806P(V-STAR)RoHS	14.6036	2	44.2517
346-120511-201G	PIN PLUG 2*5, 1.27mm, H=5mm, 180D, SMD, SHY- JCL180810P(V-STAR)RoHS	14.6036	4	79.5338
346-510223-102G	WAFER 1*2,2.0mm,M,H=6.1mm,180D,DIP,WHITE,721-81- 02TW00(PINREX)RoHS	14.6036	1	25.2847
348-220800-200S	SOCKET SPI 8Pin,GF,H=5.65mm,180D,SMT,ACA-SPI -004-K01(LOTES)	1.1379	1	1.8544
348-370750-230G	NGFF CONN 67P/0.5mm,E Key,R/A,SMD,AS0BC21- S40BE-7H,(FOXCONN)HF	2.0862	1	3.6121
348-370750-240G	NGFF CONN 67P/0.5mm,H=8.5mm,B key,90D,BLACK,SMD,APCI0161-P002H(LOTES)HF	2.0862	2	6.3217
348-652600-200G	DDR4 SO DIMM 1*260P,10u",H=8.0mm 1.2V,RVS,90D,SMD,ASAA826-E8RB0-7H(FOXCONN) HF	2.0862	1	3.6121
622-010140-000G	BATTERY CR2032(MURATA) 3V 220mAh,-30°C ~+70°C,W/CABLE(L=150mm&TAPE),BIN-CR2032-I- CT-SL-PV-01(RE-ENERGY)RoHS Belong to UN3090	25.0000	1	34.9638
686-110322-100G	PIN PLUG 1*3,2.0mm,M,H=5.9mm,180D,DIP,W/BLACK JUMPER,22S-96-03GB01(PINREX)RoHS	2.0862	1	3.6121
143-10200A-401G	CPU Intel Celeron 4305UE 2.0GHz C/2M,V0,CL8068404210005 SRFDZ/FCBGA-1528 (INTEL)RoHS	422.0000	1	422.0000
292-301000-500S	BUZZER 3V,100mA,12Ω,4Khz,85db,SMD (5*4.2mm),SMT-G5030A(KEPO)	600.0000	1	600.0000

MTBF (hrs): 402731
Failure Rate: 2,483.05
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

Assembly Name	Part Number	Quantity	Failure Rate (Fit)	MTBF (Hrs)
WL051-ECC-4305UE	774-WL0511-700G	1	2483.05	402,731

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 402731
Failure Rate: 2,483.0471
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
112-900032-300G	IC TTL,Two-Input OR Gate,NC7SZ32P5X/SC70-5 (ON)RoHS	4.6582	6	33.5948
113-500004-300G	IC TTL,Single Inverter Gate,SN74LVC1G04DCK/SC70-5(TI)RoHS	4.6582	1	7.0069
113-500007-210S	IC TTL,Single Buffer/Driver With Open-Drain Output,SN74LVC1G07DCKR/SC70-5(TI)	4.6582	2	12.6132
113-500008-210G	IC TTL,Single 2-Input Positive-AND Gate,SN74LVC1G08DCKR/SC70-5(TI)RoHS	4.6582	15	78.6058
113-833306-400G	IC TTL,Dual FET Bus Switch,SN74CB3Q3306ADCUR/VSSOP8(US8-DCU) (TI)RoHS	4.6582	2	12.6132
113-906408-400G	IC LOW-VOLTAGE 8-BIT I2C AND SMBus I/O EXPANDER,UQFN16, TCA6408ARSVR(TI)RoHS	4.6582	1	7.0069
121-000104-420G	IC 4-BIT BIDIRECTIONAL VOLTAGE-LEVEL TRANSLATOR,NTS0104GU12/XQFN12(NXP) RoHS	4.6582	1	7.0069
121-002069-200G	IC Power-Distribution Switches,1.5A,TPS2069DDBVT/SOT23-5(TI)RoHS	4.6582	1	7.0069
121-007111-400G	IC Power Switch RSET with Flag,JW7111DFNB#TRPBF/DFN-6(2x2)(JOULWATT) RoHS	4.6582	1	7.0069
121-022976-200G	IC Switch,5.7-V,6-A,14-mΩ On-Resistance Dual-Channel Load,TPS22976DPU/WSO-14(TI)RoHS	4.6582	3	17.9944
121-081439-401G	IC Single 3.3V or 5V RS232/RS422/RS485 Multiprotocol Transceiver,F81439AN/TQFN-40(5x5) (FINTEK)RoHS	4.6582	1	7.0069
121-302045-400G	IC Integrated Driver and MOSFET,NCP302045MNTWG/PQFN-33(5*5)(ON) RoHS	4.6582	4	23.2605
135-300403-200G	SPI SERIAL FLASH 4Mbit,MX25L4006EZUI-12G/USON-8(MXIC)RoHS	10.4080	1	16.1558
135-301004-201G	EEPROM 8K(1024*8)M24C08-WMN6TP/SO-8(ST) RoHS	10.4080	1	16.1558
135-301282-220G	SPI SERIAL FLASH 128Mbit,W25Q128JVSQ/SOIC-8 (WINBOND)RoHS	10.4080	1	16.1558
136-112180-200G	8-bit Flash Microcontroller PIC12F1822-I/SN/SOIC-8 (MICROCHIP)RoHS	10.4080	1	16.1558
141-006850-401G	IC Synchronous Buck Converter,4.5-26Vin,12A,NB685AGQ/QFN16(MPS)RoHS	4.6582	1	7.0069
141-262001-200G	AUDIO CODEC,ALC262-VC2-GR/LQFP-48(REALTEK) RoHS	4.6582	1	7.0069
141-562150-400G	IC Synchronous Step-down Converter,TPS56C215RNN/VQFN-18(TI)RoHS	4.6582	3	17.9944
141-568210-400G	IC Converter,4.5V~17V Input,8A Synchronous Step-Down SWIFT,TPS568215OARNN/VQFN-18(TI)RoHS	4.6582	1	7.0069
141-620850-200G	IC Synchronous Buck Converter,2.5-6,3A,TLV62085RLT/VSON-7(TI)RoHS	4.6582	1	7.0069
141-812450-400G	IC PWM CTRL, NCP81245MNTXG/QFN-52(ON)RoHS	4.6582	1	7.0069
147-002190-410G	IC CHIP,Giga LAN PHY,WGI219V SLKJ5/QFN-48 (INTEL)RoHS	4.6582	1	7.0069

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 402731
Failure Rate: 2,483.0471
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
147-055250-200G	IC CHIP Super I/O, NCT5525D/LQFP-64(NUVOTON) RoHS	4.6582	1	7.0069
147-822100-410G	IC CHIP Giga LAN Ctrl,-40~105°C,WGI210IT SLJXT/QFN-64(INTEL)RoHS	4.6582	1	7.0069
171-204005-210G	DIODE SCHOTTKY BARRIER 40V,200mA,BAS40-05-7-F/SOT23-3(DIODES)RoHS	0.3751	7	3.5423
171-205200-220G	DIODE SCHOTTKY,30V,200mA,RB520S-30H/SOD523(SMARTENGRAND)RoHS	0.3751	3	1.7307
171-214148-503S	DIODE Switching,SMD,1N4148W-TG-WS/SOD-123 (WILLAS)	0.3751	1	0.7247
171-360120-500G	DIODE TVS,12V,600W,Bidirectional,SMBJ12CA/DO-214AA(LITTELFUSE)RoHS	0.3751	1	0.7247
171-404010-200S	DIODE 4-CHANNEL ESD PROTECTION,TPD4S010DQAR/SON-DQA10(TI)	4.6582	4	23.2605
171-451715-200G	DIODE Zener,15V,Vz=14.34V~14.98V,UDZVTE-1715B/SOD-323FL(ROHM)RoHS	0.3751	1	0.7247
171-451756-200G	DIODE Zener,5.6V,Vz=5.49V~5.73V,UDZVTE-175.6B/SOD-323F(ROHM)RoHS	0.3751	2	1.2458
171-841023-200G	DIODE TVS Array,3.3V,AZ1023-04F.R7G/DFN2510P10E(AMAZING)RoHS	0.3751	2	1.2458
172-006401-200S	MOSFET P-Ch,VDS:-30V,ID:-5A,VGS:±12V,@-10V,RDS:49mΩ,AO6401/TSOP6(AOS)	12.5047	1	18.4158
172-207002-241G	MOSFET N-Ch,VDS:60V,ID:300mA,VGS:±20V,@10V,RDS:3Ω,2N7002K/SOT23-3(PANJIT)RoHS	12.5047	3	47.6300
172-223904-206S	TRANSISTOR NPN,MMBT3904LT1G/SOT23(ON)	2.0121	4	11.1266
172-223904-400G	TRANSISTOR Dual NPN,MBT3904DW1T1G/SOT-363 (ON)RoHS	2.0121	4	11.1266
172-223906-207S	TRANSISTOR PNP,PMBS3906/SOT23(NXP)	2.0121	1	3.5668
172-239040-210G	TRANSISTOR DUAL NPN,Ic ≤ 200mA,Vcbo:60V,Vceo:40V,MMBT3904DT H/SOT563-6(SMARTENGRAND)RoHS	2.0121	2	6.2164
172-301380-220G	MOSFET Dual N-Ch,VDS:50V,ID:350mA,VGS:±20V,@10V,RDS:1.6Ω,BSS138KDT/SOT563-6(SMARTENGRAND)RoHS	12.5047	29	393.2328
172-302003-210G	MOSFET N-Ch,VDS:30V,ID:7A,VGS:±20V,@10V,RDS:20mΩ,EMB20N03VA/EDFN-8(2x2)(EXCELLIANCE)RoHS	12.5047	2	33.3055
172-330140-200G	MOSFET N-Ch,VDS:30V,ID:9.5A,VGS:±20V,@10V,RDS:12mΩ,FKBB3014/PRPAK-8(3x3)(FETEK)RoHS	12.5047	1	18.4158
172-331030-200G	MOSFET P-Ch,VDS:-30V,ID:-7.7A,VGS:±25V,@-10V,RDS:20mΩ,FKBB3103/PRPAK-8(3x3)(FETEK) RoHS	12.5047	5	75.5170
213-151015-200C	MLCC 101P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1030	1	0.1162
213-151203-109G	MLCC 12pF/50V,NPO,F(1%),SMD,0201,CC0201FRNPO9BN120(YAGEO) RoHS	0.1030	4	0.4382

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MTBF (hrs): 402731
Failure Rate: 2,483.0471
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
213-151505-200C	MLCC 15pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1030	1	0.1162
213-151805-200C	MLCC 18pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1030	4	0.4382
213-152205-200C	MLCC 22pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1030	1	0.1162
213-152215-200C	MLCC 221P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1030	6	0.6501
213-152705-200C	MLCC 27pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1030	4	0.4382
213-153319-200C	MLCC 331P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1030	10	1.0713
213-154705-200C	MLCC 47pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1030	2	0.2246
213-251028-200C	MLCC 102P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1030	11	1.1763
213-251028-300C	MLCC 102P/50V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.1030	4	0.4382
213-251029-110C	MLCC 102P/25V,X7R,K(10%)SMD,0201(None JP) RoHS	0.1030	2	0.2246
213-251038-250C	MLCC 103P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1030	4	0.4382
213-251049-130C	MLCC 104P/10V,X5R,K(10%),SMD,0201,(None JP) RoHS	0.1030	83	8.6656
213-251049-200C	MLCC 104P/16V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1030	76	7.9397
213-251049-270J	MLCC 104P/25V,X5R,K(10%),SMD,0402,(JP)RoHS	0.1030	7	0.7556
213-251049-380C	MLCC 104P/100V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.1030	1	0.1162
213-251059-109G	MLCC 105P/6.3V,X5R,K(10%),SMD,0201,CC0201KRX5R5BB105(YAGEO) RoHS	0.1030	54	5.6566
213-251059-200C	MLCC 105P/6.3V,X5R,K(10%),SMD,0402,(None JP) RoHS	0.1030	1	0.1162
213-251059-220J	MLCC 105P/10V,X5R,K(10%),SMD,0402,(JP)RoHS	0.1030	4	0.4382
213-251059-230J	MLCC 105P/16V,X5R,K(10%),SMD,0402,(JP)RoHS	0.1030	36	3.7856
213-251059-270C	MLCC 105P/6.3V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1030	1	0.1162
213-251059-330J	MLCC 105P/25V,X5R,K(10%),SMD,0603,(JP)RoHS	0.1030	5	0.5443
213-251068-200J	MLCC 106P/6.3V,X5R,M(20%),SMD,0402,(JP)RoHS	0.1030	68	7.1099
213-251068-300J	MLCC 106P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS	0.1030	26	2.7442
213-251069-320J	MLCC 106P/10V,X5R,K(10%),SMD,0603,(JP)RoHS	0.1030	7	0.7556
213-251069-500C	MLCC 106P/6.3V,X5R,K(10%),SMD, 0805,(None JP) RoHS	0.1030	1	0.1162
213-251069-540J	MLCC 106P/16V,X5R,K(10%),SMD,0805,(JP)RoHS	0.1030	12	1.2812
213-251228-200C	MLCC 122P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1030	1	0.1162

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MTBF (hrs): 402731
Failure Rate: 2,483.0471
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
213-251528-200C	MLCC 152P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1030	6	0.6501
213-252229-200C	MLCC 222P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1030	4	0.4382
213-252239-220J	MLCC 223P/50V,X7R,K(10%),SMD,0402,(JP)RoHS	0.1030	1	0.1162
213-252249-140C	MLCC 224P/6.3V,X5R,K(10%),SMD,0201,(None JP) RoHS	0.1030	16	1.7001
213-252249-210C	MLCC 224P/10V,X5R,K(10%),SMD,0402,(None JP) RoHS	0.1030	1	0.1162
213-252249-330C	MLCC 224P/25V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.1030	5	0.5443
213-252259-330C	MLCC 225P/16V,X5R,K(10%)SMD,0603,(None JP) RoHS	0.1030	1	0.1162
213-252262-610J	MLCC 226P/6.3V,X5R,M(20%),SMD,1206,(JP)RoHS	0.1030	3	0.3317
213-252268-310J	MLCC 226P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS	0.1030	50	5.2411
213-252268-500C	MLCC 226P/25V,X5R,M(20%),SMD,0805,(None JP) RoHS	0.1030	12	1.2812
213-252269-510J	MLCC 226P/6.3V,X5R,M(20%),SMD,0805,(JP)RoHS	0.1030	4	0.4382
213-252269-620J	MLCC 226P/16V,X5R,K(10%),SMD,1206,(JP)RoHS	0.1030	2	0.2246
213-253939-240J	MLCC 393P/25V,X7R,K(10%),SMD,0402,(JP)RoHS	0.1030	1	0.1162
213-254715-200C	MLCC 471P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1030	7	0.7556
213-254718-210C	MLCC 471P/25V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1030	8	0.8610
213-254739-210C	MLCC 473P/16V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1030	7	0.7556
213-254758-210C	MLCC 475P/6.3V,X5R,M(20%),SMD,0402,(None JP) RoHS	0.1030	2	0.2246
213-254759-300C	MLCC 475P/6.3V,X5R,K(10%),SMD,0603,(None JP) RoHS	0.1030	1	0.1162
213-254759-320C	MLCC 475P/10V,X5R,K(10%),SMD,0603,(None JP) RoHS	0.1030	14	1.4908
213-254768-306G	MLCC 476P/6.3V,X5R,M(20%),SMD,0603,GRM188R60J476M(MURATA)RoHS	0.1030	2	0.2246
213-254768-500J	MLCC 476P/6.3V,X5R,M(20%),SMD,0805,(JP)RoHS	0.1030	9	0.9662
217-104778-700G	POLYMER(ALM) CAP 470uF/2V,4.5mΩ,4000mA,SMD,V7343,105°C/2000H,M(20%),bottom of round shape,EEFSX0D471E4 (PANASONIC)RoHS	1.0368	3	3.6789
217-301078-325G	POLYMER(TAN) CAP 100uF/6.3V,40mΩ,1.8A,SMD,B3528,105°C/2000H,M(20%),T520B107M006ATE040(KEMET)RoHS	1.0368	3	3.6789
217-302278-326G	POLYMER(TAN)CAP 220uF/6.3V,45mΩ,1700mA,105°C/2000H,M(20%),B3528(1.9),T520B227M006ATE045(KEMET) RoHS	1.0368	4	4.8021

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MTBF (hrs): 402731
Failure Rate: 2,483.0471
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
217-303378-720G	POLYMER(TAN) CAP 330uF/2.5V,9mΩ,3900mA,SMD,D7343-D2E,105°C/2000H,M(20%),2R5TPE330M9(SANYO)RoHS	1.0368	1	1.3687
217-373368-400G	POLYMER(TAN) CAP,33uF/16V,50mΩ,1400mA,SMD,T3528-12,105°C/2000H,M(20%),T521T336M016ATE050(KEMET)RoHS	1.0368	1	1.3687
223-015122-600G	CHOKE 0.15uH,M (20%),RDC≤0.66mΩ,Idc≤36A,Isat=45A,SMD,(7.6*6.6*3.8),PCME064T-R15MS0R667(CYNTEC)RoHS	0.1200	3	0.4094
223-015222-610G	CHOKE 1.5uH,M (20%),RDC≤15mΩ,Irms=9A,Isat=16A,SMD,(7.3*6.6*3.0),MCS0630-1R5MN2(PDC)RoHS	0.1200	1	0.1487
223-033121-700G	CHOKE 0.33uH,M(20%),RDC:7.8mΩ (typ),Irms:10A,Isat:18A,SMD (4.45*4.06*1.8mm),TMPC0402HP-R33MG-Z02(TAI TECH)RoHS	0.1200	1	0.1487
223-047120-830G	CHOKE 0.47uH,M(20%),DCR:23mΩ (Typ.),Irms:5.2A,Isat:6.6A,SMD (2.5*2*1mm),MCS25GC-R47MHC(PDC)RoHS	0.1200	1	0.1487
223-047121-700G	CHOKE 0.47uH,M (20%),RDC≤14mΩ,Irms=7A,Isat=9.5A,SMT (4.7*4.3),MCS0420-R47MN2(PDC)RoHS	0.1200	1	0.1487
223-047121-900G	CHOKE 0.47uH,M (20%),Rdc<8.5mΩ,Idc=13A,Isat=12A,SMD, (4.85x4.7x2.8),PCMB053T-R47MS(CYNTEC)RoHS	0.1200	2	0.2804
223-068121-900G	CHOKE 0.68uH,M (20%),RDC≤9.2mΩ,Idc=10A,Isat=15A,SMD (4.85x4.7x2.8),CMMB053T-R68MS(CYNTEC)RoHS	0.1200	1	0.1487
223-322220-300G	INDUCTOR 2.2uH,M(20%),RDC=0.25Ω +/- 30%,Idc≤130mA,SMD, (1.6*0.8*0.8),MLZ1608A2R2WT000(TDK)RoHS	0.1200	2	0.2804
223-347220-800G	INDUCTOR 4.7uH,M (20%),RDC≤0.24Ω,Irms≤2.1A,SMD(1008), (2.5*2.0*1.2mm)MHCD252012A-4R7M-A8S (CHILISIN)RoHS	0.1200	1	0.1487
223-490040-540G	COMMON CHOKE 90Ω,25%,Irated≤500mA,RDC≤300mΩ,USB3.1 Gen2,10GHz,SMD(0805) (2*1.2*1.5mm),GCMF2012PM-900T(GOTREND) RoHS	0.1200	6	0.7888
223-490090-500S	COMMON CHOKE 90Ω,60-100Ω,300mA (Max),RDC≤300mΩ,HDMI/USB3.0 6GHz,SMD0805 (2*1.2*1.2mm),GLECM2012B-900QT(GOTREND)	0.1200	4	0.5361
223-523000-410G	CM FILTER Cd=0.25pF,Rs=3Ω,SMD (1.57*1.17*0.57),PCMF2USB3S/WLCSP10(NXP) RoHS	0.1200	4	0.5361
231-171330-200G	REGULATOR GS7133TD-R,3A,TDFN10(GSTEK)RoHS	7.6721	1	14.9200

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MTBF (hrs): 402731
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Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
241-224006-310G	X'TAL 24MHz,16pF,±30ppm,ESR:50Ω(Max),TOPR=-40°C~+105°C,SMD3225(4PAD),7M24000082(TXC) RoHS	3.9138	1	6.4515
241-225006-350G	X'TAL 25MHz,18pF,±30ppm,ESR:50Ω(Max),TOPR=-40°C~+105°C,SMD3225(4PAD),7M25000175(TXC) RoHS	3.9138	2	11.3958
241-432773-300G	X'TAL 32.768kHz,12.5pf,*/-20ppm,TOPR=-40°C~+125°C,SMD3215(2PAD),FC-13A,X1A000091000100(Seiko Epson)RoHS	3.9138	1	6.4515
251-160808-083S	BEAD CORE 160808 80Ω,300mA,25%,SMT0603,SBK160808T-800Y-N (CHILISIN)	0.6548	2	2.1784
251-160808-615S	BEAD CORE 160808 600Ω,1A,25%,SMT0603,PBY160808T-601Y-N (CHILISIN)	0.6548	1	1.2675
253-100110-500G	POLY SWITCH,PTC,1.1A/6V,SMD0805,0805L110ULY R(LITTELFUSE)RoHS	0.4000	1	0.6546
253-100115-604S	POLY SWITCH,PTC,1.1A/8V,SMD1206,1206L110THY R(LITTELFUSE)RoHS	0.4000	2	1.1579
253-100155-604S	POLY SWITCH,PTC,1.5A/8V,SMD1206,1206L150THW R(LITTELFUSE)	0.4000	1	0.6546
253-100266-403S	POLY SWITCH 2.6A/13.2V,SMD1812,miniSMDC260F/13.2 (LITTELFUSE)RoHS	0.4000	1	0.6546
261-361515-200C	RES ARRAY 150Ω 8P4R J(5%),0402*4,(None JP) RoHS	0.0873	2	0.2152
263-180005-100C	RES 0Ω,J(5%),SMD,0201,(None JP)RoHS	0.0873	129	11.5804
263-180005-200C	RES 0Ω,J(5%),SMD,0402,(None JP)RoHS	0.0873	20	1.8713
263-180005-300C	RES 0Ω,J(5%),SMD,0603,(None JP)RoHS	0.0873	9	0.8697
263-180100-210C	RES 10Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	8	0.7776
263-180100-310C	RES 10Ω,F(1%),SMD,0603,(None JP)RoHS	0.0873	4	0.4062
263-180330-110C	RES 33Ω,F(1%),SMD,0201,(None JP)RoHS	0.0873	15	1.4180
263-180430-210C	RES 43Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-180510-110C	RES 51Ω,F(1%),SMD,0201,(None JP)RoHS	0.0873	5	0.5001
263-180519-210C	RES 5.1Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-180560-210C	RES 56Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-180750-110C	RES 75Ω,F(1%),SMD,0201,(None JP)RoHS	0.0873	5	0.5001
263-181000-110C	RES 100Ω,F(1%),SMD,0201,(None JP)RoHS	0.0873	11	1.0532
263-181000-210C	RES 100Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	6	0.5934
263-181001-110C	RES 1KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0873	29	2.6826
263-181001-210C	RES 1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	8	0.7776
263-181002-110C	RES 10KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0873	99	8.9218
263-181002-210C	RES 10KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	12	1.1446
263-181003-110C	RES 100KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0873	34	3.1316
263-181003-210C	RES 100KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	10	0.9615
263-181004-110C	RES 1MΩ,F(1%),SMD,0201,(None JP)RoHS	0.0873	2	0.2152
263-181004-210C	RES 1MΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	2	0.2152
263-181005-210C	RES 10MΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162

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MTBF (hrs): 402731
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Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
263-181022-210C	RES 10.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-181101-210C	RES 1.1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-181130-210C	RES 113Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-181182-210C	RES 11.8KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-181201-210C	RES 1.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	3	0.3114
263-181202-110C	RES 12KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0873	1	0.1162
263-181202-210C	RES 12KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	3	0.3114
263-181203-210C	RES 120KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-181210-210C	RES 121Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-181213-210C	RES 121KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-181302-210C	RES 13KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-181402-210C	RES 14KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-181500-210C	RES 150Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	2	0.2152
263-181502-210C	RES 15KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-181503-210C	RES 150KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	2	0.2152
263-181505-100C	RES 15Ω,J(5%),SMD,0201,(None JP)RoHS	0.0873	4	0.4062
263-181602-210C	RES 16KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	2	0.2152
263-181623-210C	RES 162KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-181782-210C	RES 17.8KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-181803-210C	RES 180KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	3	0.3114
263-181962-210C	RES 19.6KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-182000-210C	RES 200Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	3	0.3114
263-182001-210C	RES 2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	5	0.5001
263-182002-110C	RES 20KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0873	8	0.7776
263-182002-210C	RES 20KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	6	0.5934
263-182003-210C	RES 200KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-182200-210C	RES 220Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-182201-110C	RES 2.2KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0873	7	0.6852
263-182201-210C	RES 2.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	2	0.2152
263-182202-110C	RES 22KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0873	4	0.4062
263-182208-210C	RES 2.2Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-182208-310C	RES 2.2Ω,F(1%),SMD,0603,(None JP)RoHS	0.0873	6	0.5934
263-182208-510C	RES 2.2Ω,F(1%),SMD,0805,(None JP)RoHS	0.0873	4	0.4062
263-182400-110C	RES 240Ω,F(1%),SMD,0201,(None JP)RoHS	0.0873	3	0.3114
263-182401-210C	RES 2.4KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-182492-210C	RES 24.9KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	2	0.2152
263-182499-210C	RES 24.9Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	2	0.2152
263-182612-210C	RES 26.1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-182702-218G	RES 27KΩ,F(1%),SMD,0402,RTT022702FTH(RALEC) RoHS	0.0873	1	0.1162
263-183000-310C	RES 300Ω,F(1%),SMD,0603,(None JP)RoHS	0.0873	2	0.2152
263-183002-210C	RES 30KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-183011-210C	RES 3.01KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-183013-210C	RES 301KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	3	0.3114
263-183300-210C	RES 330Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	4	0.4062
263-183301-110C	RES 3.3KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0873	6	0.5934
263-183301-210C	RES 3.3KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	4	0.4062

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 402731
Failure Rate: 2,483.0471
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
263-183302-110C	RES 33KΩ,F(1%),SMD,0201(None JP)RoHS	0.0873	1	0.1162
263-183303-210C	RES 330KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	2	0.2152
263-183483-210C	RES 348KΩ,F(1%),SMD,0402(None JP)RoHS	0.0873	1	0.1162
263-183652-210C	RES 36.5KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	2	0.2152
263-183922-110C	RES 39.2KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0873	1	0.1162
263-183922-210C	RES 39.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-184221-210C	RES 4.22KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-184321-210C	RES 4.32KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	2	0.2152
263-184532-210C	RES 45.3KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-184539-210C	RES 45.3Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-184700-110C	RES 470Ω,F(1%),SMD,0201(None JP)RoHS	0.0873	9	0.8697
263-184701-110C	RES 4.7KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0873	33	3.0418
263-184701-210C	RES 4.7KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	2	0.2152
263-184702-110C	RES 47KΩ,F(1%),SMD,0201,(None JP)RoHS	0.0873	11	1.0532
263-184871-210C	RES 4.87KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	3	0.3114
263-184990-110C	RES 499Ω,F(1%),SMD,0201,(None JP)RoHS	0.0873	1	0.1162
263-184990-210C	RES 499Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-184991-210C	RES 4.99KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-184999-110C	RES 49.9Ω,F(1%),SMD,0201,(None JP)RoHS	0.0873	4	0.4062
263-184999-210C	RES 49.9Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	9	0.8697
263-185102-210C	RES 51KΩ,F(1%),SMD,0402(None JP)RoHS	0.0873	3	0.3114
263-185602-210C	RES 56KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	4	0.4062
263-185622-210C	RES 56.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-186041-210C	RES 6.04KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-186049-210C	RES 60.4Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	2	0.2152
263-187501-210C	RES 7.5KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	2	0.2152
263-187502-210C	RES 75KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-188069-210C	RES 80.6Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-188201-210C	RES 8.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-188871-210C	RES 8.87KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-189100-210C	RES 910Ω,F(1%),SMD,0402,(None JP)RoHS	0.0873	1	0.1162
263-189762-210C	RES 97.6KΩ,F(1%),SMD,0402,(None JP)RoHS	0.0873	2	0.2152
273-010400-300G	THERM RES 100KΩ,0603(B:25/85=3950,3%)RoHS	2.6513	5	18.8899
273-100402-301S	THERM RES 10KΩ,J(5%),SMD,0603, (B25/85=3435,3%),TSM1A103J34D3RZ(TKS)	2.6513	2	8.8927
314-WL0511-029G	PCB WL051 R.2(12L 100x72x1.6mm, 2 panelization) OSP(CIRCUITECH)RoHS	6.5651	1	12.5107
342-122101-100G	DISPLAYPORT/HDMI CONN,21P,MALE,R/A,DIP,GF,845-002-217CRL (REGO)RoHS	5.5551	1	9.6181
342-310022-110G	Screw CONN. Terminal Block,Green,2Pos,300V,16A,PIT:5.0mm,MB612- 50002(DECA) RoHS	5.5551	1	9.6181
343-124000-210G	eDP conn, 40P, F, 90D, 0.5mm, G/F, SMT, BLACK, SSL00-40L3(KEL)RoHS	5.5551	1	9.6181

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Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 402731
Failure Rate: 2,483.0471
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
343-501402-200G	Giga LAN CONN RJ45,SMT,GF,W/Transformer,W/LED,MRJG-11S88RS (MATRIX),RoHS	5.5551	2	16.8329
343-501820-110G	USB 3.1 GEN2 CONN*2, 18P, A Type, Green, F, G/F, 90D, DIP, U2131D-UADH-0401R(HDSY)RoHS	5.5551	1	9.6181
346-120310-201G	PIN PLUG 2*3, 1.27mm, H=5mm, 180D, SMD, SHY- JCL180806P(V-STAR)RoHS	38.8854	2	117.8306
346-120511-201G	PIN PLUG 2*5, 1.27mm, H=5mm, 180D, SMD, SHY- JCL180810P(V-STAR)RoHS	38.8854	4	211.7774
346-510223-102G	WAFER 1*2,2.0mm,M,H=6.1mm,180D,DIP,WHITE,721-81- 02TW00(PINREX)RoHS	38.8854	1	67.3264
348-220800-200S	SOCKET SPI 8Pin,GF,H=5.65mm,180D,SMT,ACA-SPI -004-K01(LOTES)	3.0300	1	4.9378
348-370750-230G	NGFF CONN 67P/0.5mm,E Key,R/A,SMD,AS0BC21- S40BE-7H,(FOXCONN)HF	5.5551	1	9.6181
348-370750-240G	NGFF CONN 67P/0.5mm,H=8.5mm,B key,90D,BLACK,SMD,APCI0161-P002H(LOTES)HF	5.5551	2	16.8329
348-652600-200G	DDR4 SO DIMM 1*260P,10u",H=8.0mm 1.2V,RVS,90D,SMD,ASAA826-E8RB0-7H(FOXCONN) HF	5.5551	1	9.6181
622-010140-000G	BATTERY CR2032(MURATA) 3V 220mAh,-30°C ~+70°C,W/CABLE(L=150mm&TAPE),BIN-CR2032-I- CT-SL-PV-01(RE-ENERGY)RoHS Belong to UN3090	25.0000	1	34.9638
686-110322-100G	PIN PLUG 1*3,2.0mm,M,H=5.9mm,180D,DIP,W/BLACK JUMPER,22S-96-03GB01(PINREX)RoHS	5.5551	1	9.6181
143-10200A-401G	CPU Intel Celeron 4305UE 2.0GHz C/2M,V0,CL8068404210005 SRFDZ/FCBGA-1528 (INTEL)RoHS	422.0000	1	422.0000
292-301000-500S	BUZZER 3V,100mA,12Ω,4KHz,85db,SMD (5*4.2mm),SMT-G5030A(KEPO)	600.0000	1	600.0000

File Name: WL051-ECC-4305UE.rfp
System: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 293920
Failure Rate: 3,402.28
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

Assembly Name	Part Number	Quantity	Failure Rate (Fit)	MTBF (Hrs)
WL051-ECC-4305UE	774-WL0511-700G	1	3402.28	293,920

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 293920
Failure Rate: 3,402.2839
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
112-900032-300G	IC TTL,Two-Input OR Gate,NC7SZ32P5X/SC70-5 (ON)RoHS	8.2795	6	59.7113
113-500004-300G	IC TTL,Single Inverter Gate,SN74LVC1G04DCK/SC70-5(TI)RoHS	8.2795	1	12.4540
113-500007-210S	IC TTL,Single Buffer/Driver With Open-Drain Output,SN74LVC1G07DCKR/SC70-5(TI)	8.2795	2	22.4187
113-500008-210G	IC TTL,Single 2-Input Positive-AND Gate,SN74LVC1G08DCKR/SC70-5(TI)RoHS	8.2795	15	139.7136
113-833306-400G	IC TTL,Dual FET Bus Switch,SN74CB3Q3306ADCUR/VSSOP8(US8-DCU) (TI)RoHS	8.2795	2	22.4187
113-906408-400G	IC LOW-VOLTAGE 8-BIT I2C AND SMBus I/O EXPANDER,UQFN16, TCA6408ARSVR(TI)RoHS	8.2795	1	12.4540
121-000104-420G	IC 4-BIT BIDIRECTIONAL VOLTAGE-LEVEL TRANSLATOR,NTS0104GU12/XQFN12(NXP) RoHS	8.2795	1	12.4540
121-002069-200G	IC Power-Distribution Switches,1.5A,TPS2069DDBVT/SOT23-5(TI)RoHS	8.2795	1	12.4540
121-007111-400G	IC Power Switch RSET with Flag,JW7111DFNB#TRPBF/DFN-6(2x2)(JOULWATT) RoHS	8.2795	1	12.4540
121-022976-200G	IC Switch,5.7-V,6-A,14-mΩ On-Resistance Dual-Channel Load,TPS22976DPU/WSO-14(TI)RoHS	8.2795	3	31.9831
121-081439-401G	IC Single 3.3V or 5V RS232/RS422/RS485 Multiprotocol Transceiver,F81439AN/TQFN-40(5x5) (FINTEK)RoHS	8.2795	1	12.4540
121-302045-400G	IC Integrated Driver and MOSFET,NCP302045MNTWG/PQFN-33(5*5)(ON) RoHS	8.2795	4	41.3430
135-300403-200G	SPI SERIAL FLASH 4Mbit,MX25L4006EZUI-12G/USON-8(MXIC)RoHS	18.4992	1	28.7152
135-301004-201G	EEPROM 8K(1024*8)M24C08-WMN6TP/SO-8(ST) RoHS	18.4992	1	28.7152
135-301282-220G	SPI SERIAL FLASH 128Mbit,W25Q128JVSQ/SOIC-8 (WINBOND)RoHS	18.4992	1	28.7152
136-112180-200G	8-bit Flash Microcontroller PIC12F1822-I/SN/SOIC-8 (MICROCHIP)RoHS	18.4992	1	28.7152
141-006850-401G	IC Synchronous Buck Converter,4.5-26Vin,12A,NB685AGQ/QFN16(MPS)RoHS	8.2795	1	12.4540
141-262001-200G	AUDIO CODEC,ALC262-VC2-GR/LQFP-48(REALTEK) RoHS	8.2795	1	12.4540
141-562150-400G	IC Synchronous Step-down Converter,TPS56C215RNN/VQFN-18(TI)RoHS	8.2795	3	31.9831
141-568210-400G	IC Converter,4.5V~17V Input,8A Synchronous Step-Down SWIFT,TPS568215OARNN/VQFN-18(TI)RoHS	8.2795	1	12.4540
141-620850-200G	IC Synchronous Buck Converter,2.5-6,3A,TLV62085RLT/VSON-7(TI)RoHS	8.2795	1	12.4540
141-812450-400G	IC PWM CTRL, NCP81245MNTXG/QFN-52(ON)RoHS	8.2795	1	12.4540
147-002190-410G	IC CHIP,Giga LAN PHY,WGI219V SLKJ5/QFN-48 (INTEL)RoHS	8.2795	1	12.4540

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 293920
Failure Rate: 3,402.2839
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
147-055250-200G	IC CHIP Super I/O, NCT5525D/LQFP-64(NUVOTON) RoHS	8.2795	1	12.4540
147-822100-410G	IC CHIP Giga LAN Ctrl,-40~105°C,WGI210IT SLJXT/QFN-64(INTEL)RoHS	8.2795	1	12.4540
171-204005-210G	DIODE SCHOTTKY BARRIER 40V,200mA,BAS40-05-7-F/SOT23-3(DIODES)RoHS	0.5385	7	5.0850
171-205200-220G	DIODE SCHOTTKY,30V,200mA,RB520S-30H/SOD523(SMARTENGRAND)RoHS	0.5385	3	2.4844
171-214148-503S	DIODE Switching,SMD,1N4148W-TG-WS/SOD-123 (WILLAS)	0.5385	1	1.0403
171-360120-500G	DIODE TVS,12V,600W,Bidirectional,SMBJ12CA/DO-214AA(LITTELFUSE)RoHS	0.5385	1	1.0403
171-404010-200S	DIODE 4-CHANNEL ESD PROTECTION,TPD4S010DQAR/SON-DQA10(TI)	8.2795	4	41.3430
171-451715-200G	DIODE Zener,15V,Vz=14.34V~14.98V,UDZVTE-1715B/SOD-323FL(ROHM)RoHS	0.5385	1	1.0403
171-451756-200G	DIODE Zener,5.6V,Vz=5.49V~5.73V,UDZVTE-175.6B/SOD-323F(ROHM)RoHS	0.5385	2	1.7884
171-841023-200G	DIODE TVS Array,3.3V,AZ1023-04F.R7G/DFN2510P10E(AMAZING)RoHS	0.5385	2	1.7884
172-006401-200S	MOSFET P-Ch,VDS:-30V,ID:-5A,VGS:±12V,@-10V,RDS:49mΩ,AO6401/TSOP6(AOS)	17.9506	1	26.4362
172-207002-241G	MOSFET N-Ch,VDS:60V,ID:300mA,VGS:±20V,@10V,RDS:3Ω,2N7002K/SOT23-3(PANJIT)RoHS	17.9506	3	68.3735
172-223904-206S	TRANSISTOR NPN,MMBT3904LT1G/SOT23(ON)	2.8884	4	15.9723
172-223904-400G	TRANSISTOR Dual NPN,MBT3904DW1T1G/SOT-363 (ON)RoHS	2.8884	4	15.9723
172-223906-207S	TRANSISTOR PNP,PMBS3906/SOT23(NXP)	2.8884	1	5.1202
172-239040-210G	TRANSISTOR DUAL NPN,Ic≤200mA,Vcbo:60V,Vceo:40V,MMBT3904DT H/SOT563-6(SMARTENGRAND)RoHS	2.8884	2	8.9237
172-301380-220G	MOSFET Dual N-Ch,VDS:50V,ID:350mA,VGS:±20V,@10V,RDS:1.6Ω,BSS138KDT/H/SOT563-6(SMARTENGRAND)RoHS	17.9506	29	564.4909
172-302003-210G	MOSFET N-Ch,VDS:30V,ID:7A,VGS:±20V,@10V,RDS:20mΩ,EMB20N03VA/EDFN-8(2x2)(EXCELLIANCE)RoHS	17.9506	2	47.8105
172-330140-200G	MOSFET N-Ch,VDS:30V,ID:9.5A,VGS:±20V,@10V,RDS:12mΩ,FKBB3014/PRPAK-8(3x3)(FETEK)RoHS	17.9506	1	26.4362
172-331030-200G	MOSFET P-Ch,VDS:-30V,ID:-7.7A,VGS:±25V,@-10V,RDS:20mΩ,FKBB3103/PRPAK-8(3x3)(FETEK) RoHS	17.9506	5	108.4057
213-151015-200C	MLCC 101P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1118	1	0.1261
213-151203-109G	MLCC 12pF/50V,NPO,F(1%),SMD,0201,CC0201FRNPO9BN120(YAGEO) RoHS	0.1118	4	0.4757

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 293920
Failure Rate: 3,402.2839
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
213-151505-200C	MLCC 15pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1118	1	0.1261
213-151805-200C	MLCC 18pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1118	4	0.4757
213-152205-200C	MLCC 22pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1118	1	0.1261
213-152215-200C	MLCC 221P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1118	6	0.7057
213-152705-200C	MLCC 27pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1118	4	0.4757
213-153319-200C	MLCC 331P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1118	10	1.1630
213-154705-200C	MLCC 47pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1118	2	0.2438
213-251028-200C	MLCC 102P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1118	11	1.2770
213-251028-300C	MLCC 102P/50V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.1118	4	0.4757
213-251029-110C	MLCC 102P/25V,X7R,K(10%)SMD,0201(None JP) RoHS	0.1118	2	0.2438
213-251038-250C	MLCC 103P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1118	4	0.4757
213-251049-130C	MLCC 104P/10V,X5R,K(10%),SMD,0201,(None JP) RoHS	0.1118	83	9.4077
213-251049-200C	MLCC 104P/16V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1118	76	8.6196
213-251049-270J	MLCC 104P/25V,X5R,K(10%),SMD,0402,(JP)RoHS	0.1118	7	0.8203
213-251049-380C	MLCC 104P/100V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.1118	1	0.1261
213-251059-109G	MLCC 105P/6.3V,X5R,K(10%),SMD,0201,CC0201KRX5R5BB105(YAGEO) RoHS	0.1118	54	6.1410
213-251059-200C	MLCC 105P/6.3V,X5R,K(10%),SMD,0402,(None JP) RoHS	0.1118	1	0.1261
213-251059-220J	MLCC 105P/10V,X5R,K(10%),SMD,0402,(JP)RoHS	0.1118	4	0.4757
213-251059-230J	MLCC 105P/16V,X5R,K(10%),SMD,0402,(JP)RoHS	0.1118	36	4.1098
213-251059-270C	MLCC 105P/6.3V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1118	1	0.1261
213-251059-330J	MLCC 105P/25V,X5R,K(10%),SMD,0603,(JP)RoHS	0.1118	5	0.5909
213-251068-200J	MLCC 106P/6.3V,X5R,M(20%),SMD,0402,(JP)RoHS	0.1118	68	7.7187
213-251068-300J	MLCC 106P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS	0.1118	26	2.9791
213-251069-320J	MLCC 106P/10V,X5R,K(10%),SMD,0603,(JP)RoHS	0.1118	7	0.8203
213-251069-500C	MLCC 106P/6.3V,X5R,K(10%),SMD, 0805,(None JP) RoHS	0.1118	1	0.1261
213-251069-540J	MLCC 106P/16V,X5R,K(10%),SMD,0805,(JP)RoHS	0.1118	12	1.3909
213-251228-200C	MLCC 122P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1118	1	0.1261

File Name: WL051-ECC-4305UE.rfp
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Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 293920
Failure Rate: 3,402.2839
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
213-251528-200C	MLCC 152P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1118	6	0.7057
213-252229-200C	MLCC 222P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1118	4	0.4757
213-252239-220J	MLCC 223P/50V,X7R,K(10%),SMD,0402,(JP)RoHS	0.1118	1	0.1261
213-252249-140C	MLCC 224P/6.3V,X5R,K(10%),SMD,0201,(None JP) RoHS	0.1118	16	1.8457
213-252249-210C	MLCC 224P/10V,X5R,K(10%),SMD,0402,(None JP) RoHS	0.1118	1	0.1261
213-252249-330C	MLCC 224P/25V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.1118	5	0.5909
213-252259-330C	MLCC 225P/16V,X5R,K(10%)SMD,0603,(None JP) RoHS	0.1118	1	0.1261
213-252262-610J	MLCC 226P/6.3V,X5R,M(20%),SMD,1206,(JP)RoHS	0.1118	3	0.3601
213-252268-310J	MLCC 226P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS	0.1118	50	5.6900
213-252268-500C	MLCC 226P/25V,X5R,M(20%),SMD,0805,(None JP) RoHS	0.1118	12	1.3909
213-252269-510J	MLCC 226P/6.3V,X5R,M(20%),SMD,0805,(JP)RoHS	0.1118	4	0.4757
213-252269-620J	MLCC 226P/16V,X5R,K(10%),SMD,1206,(JP)RoHS	0.1118	2	0.2438
213-253939-240J	MLCC 393P/25V,X7R,K(10%),SMD,0402,(JP)RoHS	0.1118	1	0.1261
213-254715-200C	MLCC 471P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1118	7	0.8203
213-254718-210C	MLCC 471P/25V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1118	8	0.9347
213-254739-210C	MLCC 473P/16V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1118	7	0.8203
213-254758-210C	MLCC 475P/6.3V,X5R,M(20%),SMD,0402,(None JP) RoHS	0.1118	2	0.2438
213-254759-300C	MLCC 475P/6.3V,X5R,K(10%),SMD,0603,(None JP) RoHS	0.1118	1	0.1261
213-254759-320C	MLCC 475P/10V,X5R,K(10%),SMD,0603,(None JP) RoHS	0.1118	14	1.6184
213-254768-306G	MLCC 476P/6.3V,X5R,M(20%),SMD,0603,GRM188R60J476M(MURATA)RoHS	0.1118	2	0.2438
213-254768-500J	MLCC 476P/6.3V,X5R,M(20%),SMD,0805,(JP)RoHS	0.1118	9	1.0489
217-104778-700G	POLYMER(ALM) CAP 470uF/2V,4.5mΩ,4000mA,SMD,V7343,105°C/2000H,M(20%),bottom of round shape,EEFSX0D471E4 (PANASONIC)RoHS	1.3266	3	4.7073
217-301078-325G	POLYMER(TAN) CAP 100uF/6.3V,40mΩ,1.8A,SMD,B3528,105°C/2000H,M(20%),T520B107M006ATE040(KEMET)RoHS	1.3266	3	4.7073
217-302278-326G	POLYMER(TAN)CAP 220uF/6.3V,45mΩ,1700mA,105°C/2000H,M(20%),B3528(1.9),T520B227M006ATE045(KEMET) RoHS	1.3266	4	6.1444

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MTBF (hrs): 293920
Failure Rate: 3,402.2839
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
217-303378-720G	POLYMER(TAN) CAP 330uF/2.5V,9mΩ,3900mA,SMD,D7343-D2E,105°C/2000H,M(20%),2R5TPE330M9(SANYO)RoHS	1.3266	1	1.7512
217-373368-400G	POLYMER(TAN) CAP,33uF/16V,50mΩ,1400mA,SMD,T3528-12,105°C/2000H,M(20%),T521T336M016ATE050(KEMET)RoHS	1.3266	1	1.7512
223-015122-600G	CHOKE 0.15uH,M (20%),RDC≤0.66mΩ,Idc≤36A,Isat=45A,SMD,(7.6*6.6*3.8),PCME064T-R15MS0R667(CYNTEC)RoHS	0.1536	3	0.5238
223-015222-610G	CHOKE 1.5uH,M (20%),RDC≤15mΩ,Irms=9A,Isat=16A,SMD,(7.3*6.6*3.0),MCS0630-1R5MN2(PDC)RoHS	0.1536	1	0.1903
223-033121-700G	CHOKE 0.33uH,M(20%),RDC:7.8mΩ (typ),Irms:10A,Isat:18A,SMD (4.45*4.06*1.8mm),TMPC0402HP-R33MG-Z02(TAI TECH)RoHS	0.1536	1	0.1903
223-047120-830G	CHOKE 0.47uH,M(20%),DCR:23mΩ (Typ.),Irms:5.2A,Isat:6.6A,SMD (2.5*2*1mm),MCS25GC-R47MHC(PDC)RoHS	0.1536	1	0.1903
223-047121-700G	CHOKE 0.47uH,M (20%),RDC≤14mΩ,Irms=7A,Isat=9.5A,SMT (4.7*4.3),MCS0420-R47MN2(PDC)RoHS	0.1536	1	0.1903
223-047121-900G	CHOKE 0.47uH,M (20%),Rdc<8.5mΩ,Idc=13A,Isat=12A,SMD, (4.85x4.7x2.8),PCMB053T-R47MS(CYNTEC)RoHS	0.1536	2	0.3588
223-068121-900G	CHOKE 0.68uH,M (20%),RDC≤9.2mΩ,Idc=10A,Isat=15A,SMD (4.85x4.7x2.8),CMMB053T-R68MS(CYNTEC)RoHS	0.1536	1	0.1903
223-322220-300G	INDUCTOR 2.2uH,M(20%),RDC=0.25Ω +/- 30%,Idc≤130mA,SMD, (1.6*0.8*0.8),MLZ1608A2R2WT000(TDK)RoHS	0.1536	2	0.3588
223-347220-800G	INDUCTOR 4.7uH,M (20%),RDC≤0.24Ω,Irms≤2.1A,SMD(1008), (2.5*2.0*1.2mm)MHCD252012A-4R7M-A8S (CHILISIN)RoHS	0.1536	1	0.1903
223-490040-540G	COMMON CHOKE 90Ω,25%,Irated≤500mA,RDC≤300mΩ,USB3.1 Gen2,10GHz,SMD(0805) (2*1.2*1.5mm),GCMF2012PM-900T(GOTREND) RoHS	0.1536	6	1.0093
223-490090-500S	COMMON CHOKE 90Ω,60-100Ω,300mA (Max),RDC≤300mΩ,HDMI/USB3.0 6GHz,SMD0805 (2*1.2*1.2mm),GLECM2012B-900QT(GOTREND)	0.1536	4	0.6860
223-523000-410G	CM FILTER Cd=0.25pF,Rs=3Ω,SMD (1.57*1.17*0.57),PCMF2USB3S/WLCSP10(NXP) RoHS	0.1536	4	0.6860
231-171330-200G	REGULATOR GS7133TD-R,3A,TDFN10(GSTEK)RoHS	19.2561	1	37.4477

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MTBF (hrs): 293920
Failure Rate: 3,402.2839
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
241-224006-310G	X'TAL 24MHz,16pF,±30ppm,ESR:50Ω(Max),TOPR=-40°C~+105°C,SMD3225(4PAD),7M24000082(TXC) RoHS	7.5521	1	12.4488
241-225006-350G	X'TAL 25MHz,18pF,±30ppm,ESR:50Ω(Max),TOPR=-40°C~+105°C,SMD3225(4PAD),7M25000175(TXC) RoHS	7.5521	2	21.9893
241-432773-300G	X'TAL 32.768kHz,12.5pf,*/-20ppm,TOPR=-40°C~+125°C,SMD3215(2PAD),FC-13A,X1A000091000100(Seiko Epson)RoHS	7.5521	1	12.4488
251-160808-083S	BEAD CORE 160808 80Ω,300mA,25%,SMT0603,SBK160808T-800Y-N (CHILISIN)	0.8378	2	2.7874
251-160808-615S	BEAD CORE 160808 600Ω,1A,25%,SMT0603,PBY160808T-601Y-N (CHILISIN)	0.8378	1	1.6218
253-100110-500G	POLY SWITCH,PTC,1.1A/6V,SMD0805,0805L110ULY R(LITTELFUSE)RoHS	0.4000	1	0.6546
253-100115-604S	POLY SWITCH,PTC,1.1A/8V,SMD1206,1206L110THY R(LITTELFUSE)RoHS	0.4000	2	1.1579
253-100155-604S	POLY SWITCH,PTC,1.5A/8V,SMD1206,1206L150THW R(LITTELFUSE)	0.4000	1	0.6546
253-100266-403S	POLY SWITCH 2.6A/13.2V,SMD1812,miniSMDC260F/13.2 (LITTELFUSE)RoHS	0.4000	1	0.6546
261-361515-200C	RES ARRAY 150Ω 8P4R J(5%),0402*4,(None JP) RoHS	0.1117	2	0.2753
263-180005-100C	RES 0Ω,J(5%),SMD,0201,(None JP)RoHS	0.1117	129	14.8175
263-180005-200C	RES 0Ω,J(5%),SMD,0402,(None JP)RoHS	0.1117	20	2.3943
263-180005-300C	RES 0Ω,J(5%),SMD,0603,(None JP)RoHS	0.1117	9	1.1128
263-180100-210C	RES 10Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	8	0.9949
263-180100-310C	RES 10Ω,F(1%),SMD,0603,(None JP)RoHS	0.1117	4	0.5198
263-180330-110C	RES 33Ω,F(1%),SMD,0201,(None JP)RoHS	0.1117	15	1.8143
263-180430-210C	RES 43Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-180510-110C	RES 51Ω,F(1%),SMD,0201,(None JP)RoHS	0.1117	5	0.6399
263-180519-210C	RES 5.1Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-180560-210C	RES 56Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-180750-110C	RES 75Ω,F(1%),SMD,0201,(None JP)RoHS	0.1117	5	0.6399
263-181000-110C	RES 100Ω,F(1%),SMD,0201,(None JP)RoHS	0.1117	11	1.3476
263-181000-210C	RES 100Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	6	0.7593
263-181001-110C	RES 1KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1117	29	3.4324
263-181001-210C	RES 1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	8	0.9949
263-181002-110C	RES 10KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1117	99	11.4157
263-181002-210C	RES 10KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	12	1.4645
263-181003-110C	RES 100KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1117	34	4.0069
263-181003-210C	RES 100KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	10	1.2303
263-181004-110C	RES 1MΩ,F(1%),SMD,0201,(None JP)RoHS	0.1117	2	0.2753
263-181004-210C	RES 1MΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	2	0.2753
263-181005-210C	RES 10MΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487

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Calculation Model: Telcordia Issue 4



MTBF (hrs): 293920
Failure Rate: 3,402.2839
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
263-181022-210C	RES 10.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-181101-210C	RES 1.1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-181130-210C	RES 113Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-181182-210C	RES 11.8KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-181201-210C	RES 1.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	3	0.3984
263-181202-110C	RES 12KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1117	1	0.1487
263-181202-210C	RES 12KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	3	0.3984
263-181203-210C	RES 120KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-181210-210C	RES 121Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-181213-210C	RES 121KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-181302-210C	RES 13KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-181402-210C	RES 14KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-181500-210C	RES 150Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	2	0.2753
263-181502-210C	RES 15KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-181503-210C	RES 150KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	2	0.2753
263-181505-100C	RES 15Ω,J(5%),SMD,0201,(None JP)RoHS	0.1117	4	0.5198
263-181602-210C	RES 16KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	2	0.2753
263-181623-210C	RES 162KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-181782-210C	RES 17.8KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-181803-210C	RES 180KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	3	0.3984
263-181962-210C	RES 19.6KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-182000-210C	RES 200Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	3	0.3984
263-182001-210C	RES 2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	5	0.6399
263-182002-110C	RES 20KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1117	8	0.9949
263-182002-210C	RES 20KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	6	0.7593
263-182003-210C	RES 200KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-182200-210C	RES 220Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-182201-110C	RES 2.2KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1117	7	0.8767
263-182201-210C	RES 2.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	2	0.2753
263-182202-110C	RES 22KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1117	4	0.5198
263-182208-210C	RES 2.2Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-182208-310C	RES 2.2Ω,F(1%),SMD,0603,(None JP)RoHS	0.1117	6	0.7593
263-182208-510C	RES 2.2Ω,F(1%),SMD,0805,(None JP)RoHS	0.1117	4	0.5198
263-182400-110C	RES 240Ω,F(1%),SMD,0201,(None JP)RoHS	0.1117	3	0.3984
263-182401-210C	RES 2.4KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-182492-210C	RES 24.9KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	2	0.2753
263-182499-210C	RES 24.9Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	2	0.2753
263-182612-210C	RES 26.1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-182702-218G	RES 27KΩ,F(1%),SMD,0402,RTT022702FTH(RALEC) RoHS	0.1117	1	0.1487
263-183000-310C	RES 300Ω,F(1%),SMD,0603,(None JP)RoHS	0.1117	2	0.2753
263-183002-210C	RES 30KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-183011-210C	RES 3.01KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-183013-210C	RES 301KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	3	0.3984
263-183300-210C	RES 330Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	4	0.5198
263-183301-110C	RES 3.3KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1117	6	0.7593
263-183301-210C	RES 3.3KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	4	0.5198

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MTBF (hrs): 293920
Failure Rate: 3,402.2839
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
263-183302-110C	RES 33KΩ,F(1%),SMD,0201(None JP)RoHS	0.1117	1	0.1487
263-183303-210C	RES 330KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	2	0.2753
263-183483-210C	RES 348KΩ,F(1%),SMD,0402(None JP)RoHS	0.1117	1	0.1487
263-183652-210C	RES 36.5KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	2	0.2753
263-183922-110C	RES 39.2KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1117	1	0.1487
263-183922-210C	RES 39.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-184221-210C	RES 4.22KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-184321-210C	RES 4.32KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	2	0.2753
263-184532-210C	RES 45.3KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-184539-210C	RES 45.3Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-184700-110C	RES 470Ω,F(1%),SMD,0201(None JP)RoHS	0.1117	9	1.1128
263-184701-110C	RES 4.7KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1117	33	3.8921
263-184701-210C	RES 4.7KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	2	0.2753
263-184702-110C	RES 47KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1117	11	1.3476
263-184871-210C	RES 4.87KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	3	0.3984
263-184990-110C	RES 499Ω,F(1%),SMD,0201,(None JP)RoHS	0.1117	1	0.1487
263-184990-210C	RES 499Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-184991-210C	RES 4.99KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-184999-110C	RES 49.9Ω,F(1%),SMD,0201,(None JP)RoHS	0.1117	4	0.5198
263-184999-210C	RES 49.9Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	9	1.1128
263-185102-210C	RES 51KΩ,F(1%),SMD,0402(None JP)RoHS	0.1117	3	0.3984
263-185602-210C	RES 56KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	4	0.5198
263-185622-210C	RES 56.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-186041-210C	RES 6.04KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-186049-210C	RES 60.4Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	2	0.2753
263-187501-210C	RES 7.5KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	2	0.2753
263-187502-210C	RES 75KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-188069-210C	RES 80.6Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-188201-210C	RES 8.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-188871-210C	RES 8.87KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-189100-210C	RES 910Ω,F(1%),SMD,0402,(None JP)RoHS	0.1117	1	0.1487
263-189762-210C	RES 97.6KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1117	2	0.2753
273-010400-300G	THERM RES 100KΩ,0603(B:25/85=3950,3%)RoHS	5.1159	5	36.4499
273-100402-301S	THERM RES 10KΩ,J(5%),SMD,0603, (B25/85=3435,3%),TSM1A103J34D3RZ(TKS)	5.1159	2	17.1593
314-WL0511-029G	PCB WL051 R.2(12L 100x72x1.6mm, 2 panelization) OSP(CIRCUITECH)RoHS	12.6680	1	24.1406
342-122101-100G	DISPLAYPORT/HDMI CONN,21P,MALE,R/A,DIP,GF,845-002-217CRL (REGO)RoHS	10.7191	1	18.5590
342-310022-110G	Screw CONN. Terminal Block,Green,2Pos,300V,16A,PIT:5.0mm,MB612- 50002(DECA) RoHS	10.7191	1	18.5590
343-124000-210G	eDP conn, 40P, F, 90D, 0.5mm, G/F, SMT, BLACK, SSL00-40L3(KEL)RoHS	10.7191	1	18.5590

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 293920
Failure Rate: 3,402.2839
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
343-501402-200G	Giga LAN CONN RJ45,SMT,GF,W/Transformer,W/LED,MRJG-11S88RS (MATRIX),RoHS	10.7191	2	32.4809
343-501820-110G	USB 3.1 GEN2 CONN*2, 18P, A Type, Green, F, G/F, 90D, DIP, U2131D-UADH-0401R(HDSY)RoHS	10.7191	1	18.5590
346-120310-201G	PIN PLUG 2*3, 1.27mm, H=5mm, 180D, SMD, SHY- JCL180806P(V-STAR)RoHS	75.0334	2	227.3661
346-120511-201G	PIN PLUG 2*5, 1.27mm, H=5mm, 180D, SMD, SHY- JCL180810P(V-STAR)RoHS	75.0334	4	408.6460
346-510223-102G	WAFER 1*2,2.0mm,M,H=6.1mm,180D,DIP,WHITE,721-81- 02TW00(PINREX)RoHS	75.0334	1	129.9132
348-220800-200S	SOCKET SPI 8Pin,GF,H=5.65mm,180D,SMT,ACA-SPI -004-K01(LOTES)	5.8468	1	9.5280
348-370750-230G	NGFF CONN 67P/0.5mm,E Key,R/A,SMD,AS0BC21- S40BE-7H,(FOXCONN)HF	10.7191	1	18.5590
348-370750-240G	NGFF CONN 67P/0.5mm,H=8.5mm,B key,90D,BLACK,SMD,APCI0161-P002H(LOTES)HF	10.7191	2	32.4809
348-652600-200G	DDR4 SO DIMM 1*260P,10u",H=8.0mm 1.2V,RVS,90D,SMD,ASAA826-E8RB0-7H(FOXCONN) HF	10.7191	1	18.5590
622-010140-000G	BATTERY CR2032(MURATA) 3V 220mAh,-30°C ~+70°C,W/CABLE(L=150mm&TAPE),BIN-CR2032-I- CT-SL-PV-01(RE-ENERGY)RoHS Belong to UN3090	25.0000	1	34.9638
686-110322-100G	PIN PLUG 1*3,2.0mm,M,H=5.9mm,180D,DIP,W/BLACK JUMPER,22S-96-03GB01(PINREX)RoHS	10.7191	1	18.5590
143-10200A-401G	CPU Intel Celeron 4305UE 2.0GHz C/2M,V0,CL8068404210005 SRFDZ/FCBGA-1528 (INTEL)RoHS	422.0000	1	422.0000
292-301000-500S	BUZZER 3V,100mA,12Ω,4KHz,85db,SMD (5*4.2mm),SMT-G5030A(KEPO)	600.0000	1	600.0000

File Name: WL051-ECC-4305UE.rfp
System: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 233191
Failure Rate: 4,288.33
Temperature: 70
Environment: GB, GC - Ground Benign, Controlled

Assembly Name	Part Number	Quantity	Failure Rate (Fit)	MTBF (Hrs)
WL051-ECC-4305UE	774-WL0511-700G	1	4288.33	233,191

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 233191
Failure Rate: 4,288.3285
Temperature: 70
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
112-900032-300G	IC TTL,Two-Input OR Gate,NC7SZ32P5X/SC70-5 (ON)RoHS	11.8139	6	85.2005
113-500004-300G	IC TTL,Single Inverter Gate,SN74LVC1G04DCK/SC70-5(TI)RoHS	11.8139	1	17.7702
113-500007-210S	IC TTL,Single Buffer/Driver With Open-Drain Output,SN74LVC1G07DCKR/SC70-5(TI)	11.8139	2	31.9886
113-500008-210G	IC TTL,Single 2-Input Positive-AND Gate,SN74LVC1G08DCKR/SC70-5(TI)RoHS	11.8139	15	199.3537
113-833306-400G	IC TTL,Dual FET Bus Switch,SN74CB3Q3306ADCUR/VSSOP8(US8-DCU) (TI)RoHS	11.8139	2	31.9886
113-906408-400G	IC LOW-VOLTAGE 8-BIT I2C AND SMBus I/O EXPANDER,UQFN16, TCA6408ARSVR(TI)RoHS	11.8139	1	17.7702
121-000104-420G	IC 4-BIT BIDIRECTIONAL VOLTAGE-LEVEL TRANSLATOR,NTS0104GU12/XQFN12(NXP) RoHS	11.8139	1	17.7702
121-002069-200G	IC Power-Distribution Switches,1.5A,TPS2069DDBVT/SOT23-5(TI)RoHS	11.8139	1	17.7702
121-007111-400G	IC Power Switch RSET with Flag,JW7111DFNB#TRPBF/DFN-6(2x2)(JOULWATT) RoHS	11.8139	1	17.7702
121-022976-200G	IC Switch,5.7-V,6-A,14-mΩ On-Resistance Dual-Channel Load,TPS22976DPU/WSO-14(TI)RoHS	11.8139	3	45.6358
121-081439-401G	IC Single 3.3V or 5V RS232/RS422/RS485 Multiprotocol Transceiver,F81439AN/TQFN-40(5x5) (FINTEK)RoHS	11.8139	1	17.7702
121-302045-400G	IC Integrated Driver and MOSFET,NCP302045MNTWG/PQFN-33(5*5)(ON) RoHS	11.8139	4	58.9913
135-300403-200G	SPI SERIAL FLASH 4Mbit,MX25L4006EZUI-12G/USON-8(MXIC)RoHS	26.3960	1	40.9730
135-301004-201G	EEPROM 8K(1024*8)M24C08-WMN6TP/SO-8(ST) RoHS	26.3960	1	40.9730
135-301282-220G	SPI SERIAL FLASH 128Mbit,W25Q128JVSQ/SOIC-8 (WINBOND)RoHS	26.3960	1	40.9730
136-112180-200G	8-bit Flash Microcontroller PIC12F1822-I/SN/SOIC-8 (MICROCHIP)RoHS	26.3960	1	40.9730
141-006850-401G	IC Synchronous Buck Converter,4.5-26Vin,12A,NB685AGQ/QFN16(MPS)RoHS	11.8139	1	17.7702
141-262001-200G	AUDIO CODEC,ALC262-VC2-GR/LQFP-48(REALTEK) RoHS	11.8139	1	17.7702
141-562150-400G	IC Synchronous Step-down Converter,TPS56C215RNN/VQFN-18(TI)RoHS	11.8139	3	45.6358
141-568210-400G	IC Converter,4.5V~17V Input,8A Synchronous Step-Down SWIFT,TPS568215OARNN/VQFN-18(TI)RoHS	11.8139	1	17.7702
141-620850-200G	IC Synchronous Buck Converter,2.5-6,3A,TLV62085RLT/VSON-7(TI)RoHS	11.8139	1	17.7702
141-812450-400G	IC PWM CTRL, NCP81245MNTXG/QFN-52(ON)RoHS	11.8139	1	17.7702
147-002190-410G	IC CHIP,Giga LAN PHY,WGI219V SLKJ5/QFN-48 (INTEL)RoHS	11.8139	1	17.7702

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 233191
Failure Rate: 4,288.3285
Temperature: 70
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
147-055250-200G	IC CHIP Super I/O, NCT5525D/LQFP-64(NUVOTON) RoHS	11.8139	1	17.7702
147-822100-410G	IC CHIP Giga LAN Ctrl,-40~105°C,WGI210IT SLJXT/QFN-64(INTEL)RoHS	11.8139	1	17.7702
171-204005-210G	DIODE SCHOTTKY BARRIER 40V,200mA,BAS40-05-7-F/SOT23-3(DIODES)RoHS	0.6734	7	6.3582
171-205200-220G	DIODE SCHOTTKY,30V,200mA,RB520S-30H/SOD523(SMARTENGRAND)RoHS	0.6734	3	3.1065
171-214148-503S	DIODE Switching,SMD,1N4148W-TG-WS/SOD-123 (WILLAS)	0.6734	1	1.3007
171-360120-500G	DIODE TVS,12V,600W,Bidirectional,SMBJ12CA/DO-214AA(LITTELFUSE)RoHS	0.6734	1	1.3007
171-404010-200S	DIODE 4-CHANNEL ESD PROTECTION,TPD4S010DQAR/SON-DQA10(TI)	11.8139	4	58.9913
171-451715-200G	DIODE Zener,15V,Vz=14.34V~14.98V,UDZVTE-1715B/SOD-323FL(ROHM)RoHS	0.6734	1	1.3007
171-451756-200G	DIODE Zener,5.6V,Vz=5.49V~5.73V,UDZVTE-175.6B/SOD-323F(ROHM)RoHS	0.6734	2	2.2362
171-841023-200G	DIODE TVS Array,3.3V,AZ1023-04F.R7G/DFN2510P10E(AMAZING)RoHS	0.6734	2	2.2362
172-006401-200S	MOSFET P-Ch,VDS:-30V,ID:-5A,VGS:±12V,@-10V,RDS:49mΩ,AO6401/TSOP6(AOS)	22.4451	1	33.0553
172-207002-241G	MOSFET N-Ch,VDS:60V,ID:300mA,VGS:±20V,@10V,RDS:3Ω,2N7002K/SOT23-3(PANJIT)RoHS	22.4451	3	85.4929
172-223904-206S	TRANSISTOR NPN,MMBT3904LT1G/SOT23(ON)	3.6116	4	19.9715
172-223904-400G	TRANSISTOR Dual NPN,MBT3904DW1T1G/SOT-363 (ON)RoHS	3.6116	4	19.9715
172-223906-207S	TRANSISTOR PNP,PMBS3906/SOT23(NXP)	3.6116	1	6.4022
172-239040-210G	TRANSISTOR DUAL NPN,Ic≤200mA,Vcbo:60V,Vceo:40V,MMBT3904DT H/SOT563-6(SMARTENGRAND)RoHS	3.6116	2	11.1581
172-301380-220G	MOSFET Dual N-Ch,VDS:50V,ID:350mA,VGS:±20V,@10V,RDS:1.6Ω,BSS138KDT/H/SOT563-6(SMARTENGRAND)RoHS	22.4451	29	705.8286
172-302003-210G	MOSFET N-Ch,VDS:30V,ID:7A,VGS:±20V,@10V,RDS:20mΩ,EMB20N03VA/EDFN-8(2x2)(EXCELLIANCE)RoHS	22.4451	2	59.7814
172-330140-200G	MOSFET N-Ch,VDS:30V,ID:9.5A,VGS:±20V,@10V,RDS:12mΩ,FKBB3014/PRPAK-8(3x3)(FETEK)RoHS	22.4451	1	33.0553
172-331030-200G	MOSFET P-Ch,VDS:-30V,ID:-7.7A,VGS:±25V,@-10V,RDS:20mΩ,FKBB3103/PRPAK-8(3x3)(FETEK) RoHS	22.4451	5	135.5484
213-151015-200C	MLCC 101P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1176	1	0.1327
213-151203-109G	MLCC 12pF/50V,NPO,F(1%),SMD,0201,CC0201FRNPO9BN120(YAGEO) RoHS	0.1176	4	0.5005

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 233191
Failure Rate: 4,288.3285
Temperature: 70
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
213-151505-200C	MLCC 15pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1176	1	0.1327
213-151805-200C	MLCC 18pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1176	4	0.5005
213-152205-200C	MLCC 22pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1176	1	0.1327
213-152215-200C	MLCC 221P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1176	6	0.7425
213-152705-200C	MLCC 27pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1176	4	0.5005
213-153319-200C	MLCC 331P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1176	10	1.2236
213-154705-200C	MLCC 47pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1176	2	0.2565
213-251028-200C	MLCC 102P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1176	11	1.3435
213-251028-300C	MLCC 102P/50V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.1176	4	0.5005
213-251029-110C	MLCC 102P/25V,X7R,K(10%)SMD,0201(None JP) RoHS	0.1176	2	0.2565
213-251038-250C	MLCC 103P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1176	4	0.5005
213-251049-130C	MLCC 104P/10V,X5R,K(10%),SMD,0201,(None JP) RoHS	0.1176	83	9.8978
213-251049-200C	MLCC 104P/16V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1176	76	9.0687
213-251049-270J	MLCC 104P/25V,X5R,K(10%),SMD,0402,(JP)RoHS	0.1176	7	0.8630
213-251049-380C	MLCC 104P/100V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.1176	1	0.1327
213-251059-109G	MLCC 105P/6.3V,X5R,K(10%),SMD,0201,CC0201KRX5R5BB105(YAGEO) RoHS	0.1176	54	6.4609
213-251059-200C	MLCC 105P/6.3V,X5R,K(10%),SMD,0402,(None JP) RoHS	0.1176	1	0.1327
213-251059-220J	MLCC 105P/10V,X5R,K(10%),SMD,0402,(JP)RoHS	0.1176	4	0.5005
213-251059-230J	MLCC 105P/16V,X5R,K(10%),SMD,0402,(JP)RoHS	0.1176	36	4.3239
213-251059-270C	MLCC 105P/6.3V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1176	1	0.1327
213-251059-330J	MLCC 105P/25V,X5R,K(10%),SMD,0603,(JP)RoHS	0.1176	5	0.6217
213-251068-200J	MLCC 106P/6.3V,X5R,M(20%),SMD,0402,(JP)RoHS	0.1176	68	8.1208
213-251068-300J	MLCC 106P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS	0.1176	26	3.1343
213-251069-320J	MLCC 106P/10V,X5R,K(10%),SMD,0603,(JP)RoHS	0.1176	7	0.8630
213-251069-500C	MLCC 106P/6.3V,X5R,K(10%),SMD, 0805,(None JP) RoHS	0.1176	1	0.1327
213-251069-540J	MLCC 106P/16V,X5R,K(10%),SMD,0805,(JP)RoHS	0.1176	12	1.4634
213-251228-200C	MLCC 122P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1176	1	0.1327

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Assembly: 774-WL0511-700G
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Calculation Model: Telcordia Issue 4



MTBF (hrs): 233191
Failure Rate: 4,288.3285
Temperature: 70
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
213-251528-200C	MLCC 152P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1176	6	0.7425
213-252229-200C	MLCC 222P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1176	4	0.5005
213-252239-220J	MLCC 223P/50V,X7R,K(10%),SMD,0402,(JP)RoHS	0.1176	1	0.1327
213-252249-140C	MLCC 224P/6.3V,X5R,K(10%),SMD,0201,(None JP) RoHS	0.1176	16	1.9418
213-252249-210C	MLCC 224P/10V,X5R,K(10%),SMD,0402,(None JP) RoHS	0.1176	1	0.1327
213-252249-330C	MLCC 224P/25V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.1176	5	0.6217
213-252259-330C	MLCC 225P/16V,X5R,K(10%)SMD,0603,(None JP) RoHS	0.1176	1	0.1327
213-252262-610J	MLCC 226P/6.3V,X5R,M(20%),SMD,1206,(JP)RoHS	0.1176	3	0.3789
213-252268-310J	MLCC 226P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS	0.1176	50	5.9864
213-252268-500C	MLCC 226P/25V,X5R,M(20%),SMD,0805,(None JP) RoHS	0.1176	12	1.4634
213-252269-510J	MLCC 226P/6.3V,X5R,M(20%),SMD,0805,(JP)RoHS	0.1176	4	0.5005
213-252269-620J	MLCC 226P/16V,X5R,K(10%),SMD,1206,(JP)RoHS	0.1176	2	0.2565
213-253939-240J	MLCC 393P/25V,X7R,K(10%),SMD,0402,(JP)RoHS	0.1176	1	0.1327
213-254715-200C	MLCC 471P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1176	7	0.8630
213-254718-210C	MLCC 471P/25V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1176	8	0.9834
213-254739-210C	MLCC 473P/16V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1176	7	0.8630
213-254758-210C	MLCC 475P/6.3V,X5R,M(20%),SMD,0402,(None JP) RoHS	0.1176	2	0.2565
213-254759-300C	MLCC 475P/6.3V,X5R,K(10%),SMD,0603,(None JP) RoHS	0.1176	1	0.1327
213-254759-320C	MLCC 475P/10V,X5R,K(10%),SMD,0603,(None JP) RoHS	0.1176	14	1.7027
213-254768-306G	MLCC 476P/6.3V,X5R,M(20%),SMD,0603,GRM188R60J476M(MURATA)RoHS	0.1176	2	0.2565
213-254768-500J	MLCC 476P/6.3V,X5R,M(20%),SMD,0805,(JP)RoHS	0.1176	9	1.1036
217-104778-700G	POLYMER(ALM) CAP 470uF/2V,4.5mΩ,4000mA,SMD,V7343,105°C/2000H,M(20%),bottom of round shape,EEFSX0D471E4 (PANASONIC)RoHS	1.5449	3	5.4819
217-301078-325G	POLYMER(TAN) CAP 100uF/6.3V,40mΩ,1.8A,SMD,B3528,105°C/2000H,M(20%),T520B107M006ATE040(KEMET)RoHS	1.5449	3	5.4819
217-302278-326G	POLYMER(TAN)CAP 220uF/6.3V,45mΩ,1700mA,105°C/2000H,M(20%),B3528(1.9),T520B227M006ATE045(KEMET) RoHS	1.5449	4	7.1556

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Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 233191
Failure Rate: 4,288.3285
Temperature: 70
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
217-303378-720G	POLYMER(TAN) CAP 330uF/2.5V,9mΩ,3900mA,SMD,D7343-D2E,105°C/2000H,M(20%),2R5TPE330M9(SANYO)RoHS	1.5449	1	2.0394
217-373368-400G	POLYMER(TAN) CAP,33uF/16V,50mΩ,1400mA,SMD,T3528-12,105°C/2000H,M(20%),T521T336M016ATE050(KEMET)RoHS	1.5449	1	2.0394
223-015122-600G	CHOKE 0.15uH,M (20%),RDC ≤ 0.66mΩ,Idc ≤ 36A,Isat=45A,SMD, (7.6*6.6*3.8),PCME064T-R15MS0R667(CYNTEC)RoHS	0.1789	3	0.6100
223-015222-610G	CHOKE 1.5uH,M (20%),RDC ≤ 15mΩ,Irms=9A,Isat=16A,SMD, (7.3*6.6*3.0),MCS0630-1R5MN2(PDC)RoHS	0.1789	1	0.2216
223-033121-700G	CHOKE 0.33uH,M(20%),RDC:7.8mΩ (typ),Irms:10A,Isat:18A,SMD (4.45*4.06*1.8mm),TMPC0402HP-R33MG-Z02(TAI TECH)RoHS	0.1789	1	0.2216
223-047120-830G	CHOKE 0.47uH,M(20%),DCR:23mΩ (Typ.),Irms:5.2A,Isat:6.6A,SMD (2.5*2*1mm),MCS25GC-R47MHC(PDC)RoHS	0.1789	1	0.2216
223-047121-700G	CHOKE 0.47uH,M (20%),RDC ≤ 14mΩ,Irms=7A,Isat=9.5A,SMT (4.7*4.3),MCS0420-R47MN2(PDC)RoHS	0.1789	1	0.2216
223-047121-900G	CHOKE 0.47uH,M (20%),Rdc<8.5mΩ,Idc=13A,Isat=12A,SMD, (4.85x4.7x2.8),PCMB053T-R47MS(CYNTEC)RoHS	0.1789	2	0.4178
223-068121-900G	CHOKE 0.68uH,M (20%),RDC ≤ 9.2mΩ,Idc=10A,Isat=15A,SMD (4.85x4.7x2.8),CMMB053T-R68MS(CYNTEC)RoHS	0.1789	1	0.2216
223-322220-300G	INDUCTOR 2.2uH,M(20%),RDC=0.25Ω +/- 30%,Idc ≤ 130mA,SMD, (1.6*0.8*0.8),MLZ1608A2R2WT000(TDK)RoHS	0.1789	2	0.4178
223-347220-800G	INDUCTOR 4.7uH,M (20%),RDC ≤ 0.24Ω,Irms ≤ 2.1A,SMD(1008), (2.5*2.0*1.2mm)MHCD252012A-4R7M-A8S (CHILISIN)RoHS	0.1789	1	0.2216
223-490040-540G	COMMON CHOKE 90Ω,25%,Irated ≤ 500mA,RDC ≤ 300mΩ,USB3.1 Gen2,10GHz,SMD(0805) (2*1.2*1.5mm),GCMF2012PM-900T(GOTREND) RoHS	0.1789	6	1.1754
223-490090-500S	COMMON CHOKE 90Ω,60-100Ω,300mA (Max),RDC ≤ 300mΩ,HDMI/USB3.0 6GHz,SMD0805 (2*1.2*1.2mm),GLECM2012B-900QT(GOTREND)	0.1789	4	0.7989
223-523000-410G	CM FILTER Cd=0.25pF,Rs=3Ω,SMD (1.57*1.17*0.57),PCMF2USB3S/WLCSP10(NXP) RoHS	0.1789	4	0.7989
231-171330-200G	REGULATOR GS7133TD-R,3A,TDFN10(GSTEK)RoHS	34.0082	1	66.1366

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 233191
Failure Rate: 4,288.3285
Temperature: 70
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
241-224006-310G	X'TAL 24MHz,16pF,±30ppm,ESR:50Ω(Max),TOPR=-40°C~+105°C,SMD3225(4PAD),7M24000082(TXC) RoHS	11.3372	1	18.6882
241-225006-350G	X'TAL 25MHz,18pF,±30ppm,ESR:50Ω(Max),TOPR=-40°C~+105°C,SMD3225(4PAD),7M25000175(TXC) RoHS	11.3372	2	33.0105
241-432773-300G	X'TAL 32.768kHz,12.5pf,*/-20ppm,TOPR=-40°C~+125°C,SMD3215(2PAD),FC-13A,X1A000091000100(Seiko Epson)RoHS	11.3372	1	18.6882
251-160808-083S	BEAD CORE 160808 80Ω,300mA,25%,SMT0603,SBK160808T-800Y-N (CHILISIN)	0.9757	2	3.2461
251-160808-615S	BEAD CORE 160808 600Ω,1A,25%,SMT0603,PBY160808T-601Y-N (CHILISIN)	0.9757	1	1.8887
253-100110-500G	POLY SWITCH,PTC,1.1A/6V,SMD0805,0805L110ULY R(LITTELFUSE)RoHS	0.4000	1	0.6546
253-100115-604S	POLY SWITCH,PTC,1.1A/8V,SMD1206,1206L110THY R(LITTELFUSE)RoHS	0.4000	2	1.1579
253-100155-604S	POLY SWITCH,PTC,1.5A/8V,SMD1206,1206L150THW R(LITTELFUSE)	0.4000	1	0.6546
253-100266-403S	POLY SWITCH 2.6A/13.2V,SMD1812,miniSMDC260F/13.2 (LITTELFUSE)RoHS	0.4000	1	0.6546
261-361515-200C	RES ARRAY 150Ω 8P4R J(5%),0402*4,(None JP) RoHS	0.1301	2	0.3206
263-180005-100C	RES 0Ω,J(5%),SMD,0201,(None JP)RoHS	0.1301	129	17.2560
263-180005-200C	RES 0Ω,J(5%),SMD,0402,(None JP)RoHS	0.1301	20	2.7884
263-180005-300C	RES 0Ω,J(5%),SMD,0603,(None JP)RoHS	0.1301	9	1.2959
263-180100-210C	RES 10Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	8	1.1587
263-180100-310C	RES 10Ω,F(1%),SMD,0603,(None JP)RoHS	0.1301	4	0.6053
263-180330-110C	RES 33Ω,F(1%),SMD,0201,(None JP)RoHS	0.1301	15	2.1129
263-180430-210C	RES 43Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-180510-110C	RES 51Ω,F(1%),SMD,0201,(None JP)RoHS	0.1301	5	0.7453
263-180519-210C	RES 5.1Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-180560-210C	RES 56Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-180750-110C	RES 75Ω,F(1%),SMD,0201,(None JP)RoHS	0.1301	5	0.7453
263-181000-110C	RES 100Ω,F(1%),SMD,0201,(None JP)RoHS	0.1301	11	1.5693
263-181000-210C	RES 100Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	6	0.8843
263-181001-110C	RES 1KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1301	29	3.9973
263-181001-210C	RES 1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	8	1.1587
263-181002-110C	RES 10KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1301	99	13.2944
263-181002-210C	RES 10KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	12	1.7056
263-181003-110C	RES 100KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1301	34	4.6664
263-181003-210C	RES 100KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	10	1.4328
263-181004-110C	RES 1MΩ,F(1%),SMD,0201,(None JP)RoHS	0.1301	2	0.3206
263-181004-210C	RES 1MΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	2	0.3206
263-181005-210C	RES 10MΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 233191
Failure Rate: 4,288.3285
Temperature: 70
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
263-181022-210C	RES 10.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-181101-210C	RES 1.1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-181130-210C	RES 113Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-181182-210C	RES 11.8KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-181201-210C	RES 1.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	3	0.4640
263-181202-110C	RES 12KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1301	1	0.1731
263-181202-210C	RES 12KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	3	0.4640
263-181203-210C	RES 120KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-181210-210C	RES 121Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-181213-210C	RES 121KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-181302-210C	RES 13KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-181402-210C	RES 14KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-181500-210C	RES 150Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	2	0.3206
263-181502-210C	RES 15KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-181503-210C	RES 150KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	2	0.3206
263-181505-100C	RES 15Ω,J(5%),SMD,0201,(None JP)RoHS	0.1301	4	0.6053
263-181602-210C	RES 16KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	2	0.3206
263-181623-210C	RES 162KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-181782-210C	RES 17.8KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-181803-210C	RES 180KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	3	0.4640
263-181962-210C	RES 19.6KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-182000-210C	RES 200Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	3	0.4640
263-182001-210C	RES 2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	5	0.7453
263-182002-110C	RES 20KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1301	8	1.1587
263-182002-210C	RES 20KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	6	0.8843
263-182003-210C	RES 200KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-182200-210C	RES 220Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-182201-110C	RES 2.2KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1301	7	1.0210
263-182201-210C	RES 2.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	2	0.3206
263-182202-110C	RES 22KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1301	4	0.6053
263-182208-210C	RES 2.2Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-182208-310C	RES 2.2Ω,F(1%),SMD,0603,(None JP)RoHS	0.1301	6	0.8843
263-182208-510C	RES 2.2Ω,F(1%),SMD,0805,(None JP)RoHS	0.1301	4	0.6053
263-182400-110C	RES 240Ω,F(1%),SMD,0201,(None JP)RoHS	0.1301	3	0.4640
263-182401-210C	RES 2.4KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-182492-210C	RES 24.9KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	2	0.3206
263-182499-210C	RES 24.9Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	2	0.3206
263-182612-210C	RES 26.1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-182702-218G	RES 27KΩ,F(1%),SMD,0402,RTT022702FTH(RALEC) RoHS	0.1301	1	0.1731
263-183000-310C	RES 300Ω,F(1%),SMD,0603,(None JP)RoHS	0.1301	2	0.3206
263-183002-210C	RES 30KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-183011-210C	RES 3.01KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-183013-210C	RES 301KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	3	0.4640
263-183300-210C	RES 330Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	4	0.6053
263-183301-110C	RES 3.3KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1301	6	0.8843
263-183301-210C	RES 3.3KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	4	0.6053

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Assembly: 774-WL0511-700G

Ref Des:

Calculation Model: Telcordia Issue 4



MTBF (hrs): 233191

Failure Rate: 4,288.3285

Temperature: 70

Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
263-183302-110C	RES 33KΩ,F(1%),SMD,0201(None JP)RoHS	0.1301	1	0.1731
263-183303-210C	RES 330KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	2	0.3206
263-183483-210C	RES 348KΩ,F(1%),SMD,0402(None JP)RoHS	0.1301	1	0.1731
263-183652-210C	RES 36.5KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	2	0.3206
263-183922-110C	RES 39.2KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1301	1	0.1731
263-183922-210C	RES 39.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-184221-210C	RES 4.22KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-184321-210C	RES 4.32KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	2	0.3206
263-184532-210C	RES 45.3KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-184539-210C	RES 45.3Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-184700-110C	RES 470Ω,F(1%),SMD,0201(None JP)RoHS	0.1301	9	1.2959
263-184701-110C	RES 4.7KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1301	33	4.5327
263-184701-210C	RES 4.7KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	2	0.3206
263-184702-110C	RES 47KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1301	11	1.5693
263-184871-210C	RES 4.87KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	3	0.4640
263-184990-110C	RES 499Ω,F(1%),SMD,0201,(None JP)RoHS	0.1301	1	0.1731
263-184990-210C	RES 499Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-184991-210C	RES 4.99KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-184999-110C	RES 49.9Ω,F(1%),SMD,0201,(None JP)RoHS	0.1301	4	0.6053
263-184999-210C	RES 49.9Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	9	1.2959
263-185102-210C	RES 51KΩ,F(1%),SMD,0402(None JP)RoHS	0.1301	3	0.4640
263-185602-210C	RES 56KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	4	0.6053
263-185622-210C	RES 56.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-186041-210C	RES 6.04KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-186049-210C	RES 60.4Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	2	0.3206
263-187501-210C	RES 7.5KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	2	0.3206
263-187502-210C	RES 75KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-188069-210C	RES 80.6Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-188201-210C	RES 8.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-188871-210C	RES 8.87KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-189100-210C	RES 910Ω,F(1%),SMD,0402,(None JP)RoHS	0.1301	1	0.1731
263-189762-210C	RES 97.6KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1301	2	0.3206
273-010400-300G	THERM RES 100KΩ,0603(B:25/85=3950,3%)RoHS	7.6800	5	54.7189
273-100402-301S	THERM RES 10KΩ,J(5%),SMD,0603, (B25/85=3435,3%),TSM1A103J34D3RZ(TKS)	7.6800	2	25.7596
314-WL0511-029G	PCB WL051 R.2(12L 100x72x1.6mm, 2 panelization) OSP(CIRCUITECH)RoHS	19.0173	1	36.2400
342-122101-100G	DISPLAYPORT/HDMI CONN,21P,MALE,R/A,DIP,GF,845-002-217CRL (REGO)RoHS	16.0915	1	27.8610
342-310022-110G	Screw CONN. Terminal Block,Green,2Pos,300V,16A,PIT:5.0mm,MB612- 50002(DECA) RoHS	16.0915	1	27.8610
343-124000-210G	eDP conn, 40P, F, 90D, 0.5mm, G/F, SMT, BLACK, SSL00-40L3(KEL)RoHS	16.0915	1	27.8610

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 233191
Failure Rate: 4,288.3285
Temperature: 70
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
343-501402-200G	Giga LAN CONN RJ45,SMT,GF,W/Transformer,W/LED,MRJG-11S88RS (MATRIX),RoHS	16.0915	2	48.7605
343-501820-110G	USB 3.1 GEN2 CONN*2, 18P, A Type, Green, F, G/F, 90D, DIP, U2131D-UADH-0401R(HDSY)RoHS	16.0915	1	27.8610
346-120310-201G	PIN PLUG 2*3, 1.27mm, H=5mm, 180D, SMD, SHY- JCL180806P(V-STAR)RoHS	112.6407	2	341.3237
346-120511-201G	PIN PLUG 2*5, 1.27mm, H=5mm, 180D, SMD, SHY- JCL180810P(V-STAR)RoHS	112.6407	4	613.4623
346-510223-102G	WAFER 1*2,2.0mm,M,H=6.1mm,180D,DIP,WHITE,721-81- 02TW00(PINREX)RoHS	112.6407	1	195.0267
348-220800-200S	SOCKET SPI 8Pin,GF,H=5.65mm,180D,SMT,ACA-SPI -004-K01(LOTES)	8.7772	1	14.3034
348-370750-230G	NGFF CONN 67P/0.5mm,E Key,R/A,SMD,AS0BC21- S40BE-7H,(FOXCONN)HF	16.0915	1	27.8610
348-370750-240G	NGFF CONN 67P/0.5mm,H=8.5mm,B key,90D,BLACK,SMD,APCI0161-P002H(LOTES)HF	16.0915	2	48.7605
348-652600-200G	DDR4 SO DIMM 1*260P,10u",H=8.0mm 1.2V,RVS,90D,SMD,ASAA826-E8RB0-7H(FOXCONN) HF	16.0915	1	27.8610
622-010140-000G	BATTERY CR2032(MURATA) 3V 220mAh,-30°C ~+70°C,W/CABLE(L=150mm&TAPE),BIN-CR2032-I- CT-SL-PV-01(RE-ENERGY)RoHS Belong to UN3090	25.0000	1	34.9638
686-110322-100G	PIN PLUG 1*3,2.0mm,M,H=5.9mm,180D,DIP,W/BLACK JUMPER,22S-96-03GB01(PINREX)RoHS	16.0915	1	27.8610
143-10200A-401G	CPU Intel Celeron 4305UE 2.0GHz C/2M,V0,CL8068404210005 SRFDZ/FCBGA-1528 (INTEL)RoHS	422.0000	1	422.0000
292-301000-500S	BUZZER 3V,100mA,12Ω,4Khz,85db,SMD (5*4.2mm),SMT-G5030A(KEPO)	600.0000	1	600.0000

File Name: WL051-ECC-4305UE.rfp

System: 774-WL0511-700G

Ref Des:

Calculation Model: Telcordia Issue 4

MTBF (hrs): 182929

Failure Rate: 5,466.59

Temperature: 80

Environment: GB, GC - Ground Benign, Controlled



Assembly Name	Part Number	Quantity	Failure Rate (Fit)	MTBF (Hrs)
WL051-ECC-4305UE	774-WL0511-700G	1	5466.59	182,929

File Name: WL051-ECC-4305UE.rfp
Assembly: 774-WL0511-700G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 182929
Failure Rate: 5,466.5893
Temperature: 80
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
112-900032-300G	IC TTL,Two-Input OR Gate,NC7SZ32P5X/SC70-5 (ON)RoHS	16.5208	6	119.1463
113-500004-300G	IC TTL,Single Inverter Gate,SN74LVC1G04DCK/SC70-5(TI)RoHS	16.5208	1	24.8503
113-500007-210S	IC TTL,Single Buffer/Driver With Open-Drain Output,SN74LVC1G07DCKR/SC70-5(TI)	16.5208	2	44.7337
113-500008-210G	IC TTL,Single 2-Input Positive-AND Gate,SN74LVC1G08DCKR/SC70-5(TI)RoHS	16.5208	15	278.7808
113-833306-400G	IC TTL,Dual FET Bus Switch,SN74CB3Q3306ADCUR/VSSOP8(US8-DCU) (TI)RoHS	16.5208	2	44.7337
113-906408-400G	IC LOW-VOLTAGE 8-BIT I2C AND SMBus I/O EXPANDER,UQFN16, TCA6408ARSVR(TI)RoHS	16.5208	1	24.8503
121-000104-420G	IC 4-BIT BIDIRECTIONAL VOLTAGE-LEVEL TRANSLATOR,NTS0104GU12/XQFN12(NXP) RoHS	16.5208	1	24.8503
121-002069-200G	IC Power-Distribution Switches,1.5A,TPS2069DDBVT/SOT23-5(TI)RoHS	16.5208	1	24.8503
121-007111-400G	IC Power Switch RSET with Flag,JW7111DFNB#TRPBF/DFN-6(2x2)(JOULWATT) RoHS	16.5208	1	24.8503
121-022976-200G	IC Switch,5.7-V,6-A,14-mΩ On-Resistance Dual-Channel Load,TPS22976DPU/WSO-14(TI)RoHS	16.5208	3	63.8182
121-081439-401G	IC Single 3.3V or 5V RS232/RS422/RS485 Multiprotocol Transceiver,F81439AN/TQFN-40(5x5) (FINTEK)RoHS	16.5208	1	24.8503
121-302045-400G	IC Integrated Driver and MOSFET,NCP302045MNTWG/PQFN-33(5*5)(ON) RoHS	16.5208	4	82.4948
135-300403-200G	SPI SERIAL FLASH 4Mbit,MX25L4006EZUI-12G/USON-8(MXIC)RoHS	36.9128	1	57.2976
135-301004-201G	EEPROM 8K(1024*8)M24C08-WMN6TP/SO-8(ST) RoHS	36.9128	1	57.2976
135-301282-220G	SPI SERIAL FLASH 128Mbit,W25Q128JVSQ/SOIC-8 (WINBOND)RoHS	36.9128	1	57.2976
136-112180-200G	8-bit Flash Microcontroller PIC12F1822-I/SN/SOIC-8 (MICROCHIP)RoHS	36.9128	1	57.2976
141-006850-401G	IC Synchronous Buck Converter,4.5-26Vin,12A,NB685AGQ/QFN16(MPS)RoHS	16.5208	1	24.8503
141-262001-200G	AUDIO CODEC,ALC262-VC2-GR/LQFP-48(REALTEK) RoHS	16.5208	1	24.8503
141-562150-400G	IC Synchronous Step-down Converter,TPS56C215RNN/VQFN-18(TI)RoHS	16.5208	3	63.8182
141-568210-400G	IC Converter,4.5V~17V Input,8A Synchronous Step-Down SWIFT,TPS568215OARNN/VQFN-18(TI)RoHS	16.5208	1	24.8503
141-620850-200G	IC Synchronous Buck Converter,2.5-6,3A,TLV62085RLT/VSON-7(TI)RoHS	16.5208	1	24.8503
141-812450-400G	IC PWM CTRL, NCP81245MNTXG/QFN-52(ON)RoHS	16.5208	1	24.8503
147-002190-410G	IC CHIP,Giga LAN PHY,WGI219V SLKJ5/QFN-48 (INTEL)RoHS	16.5208	1	24.8503

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MTBF (hrs): 182929
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Temperature: 80
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
147-055250-200G	IC CHIP Super I/O, NCT5525D/LQFP-64(NUVOTON) RoHS	16.5208	1	24.8503
147-822100-410G	IC CHIP Giga LAN Ctrl,-40~105°C,WGI210IT SLJXT/QFN-64(INTEL)RoHS	16.5208	1	24.8503
171-204005-210G	DIODE SCHOTTKY BARRIER 40V,200mA,BAS40-05-7-F/SOT23-3(DIODES)RoHS	0.8314	7	7.8502
171-205200-220G	DIODE SCHOTTKY,30V,200mA,RB520S-30H/SOD523(SMARTENGRAND)RoHS	0.8314	3	3.8354
171-214148-503S	DIODE Switching,SMD,1N4148W-TG-WS/SOD-123 (WILLAS)	0.8314	1	1.6060
171-360120-500G	DIODE TVS,12V,600W,Bidirectional,SMBJ12CA/DO-214AA(LITTELFUSE)RoHS	0.8314	1	1.6060
171-404010-200S	DIODE 4-CHANNEL ESD PROTECTION,TPD4S010DQAR/SON-DQA10(TI)	16.5208	4	82.4948
171-451715-200G	DIODE Zener,15V,Vz=14.34V~14.98V,UDZVTE-1715B/SOD-323FL(ROHM)RoHS	0.8314	1	1.6060
171-451756-200G	DIODE Zener,5.6V,Vz=5.49V~5.73V,UDZVTE-175.6B/SOD-323F(ROHM)RoHS	0.8314	2	2.7610
171-841023-200G	DIODE TVS Array,3.3V,AZ1023-04F.R7G/DFN2510P10E(AMAZING)RoHS	0.8314	2	2.7610
172-006401-200S	MOSFET P-Ch,VDS:-30V,ID:-5A,VGS:±12V,@-10V,RDS:49mΩ,AO6401/TSOP6(AOS)	27.7119	1	40.8117
172-207002-241G	MOSFET N-Ch,VDS:60V,ID:300mA,VGS:±20V,@10V,RDS:3Ω,2N7002K/SOT23-3(PANJIT)RoHS	27.7119	3	105.5539
172-223904-206S	TRANSISTOR NPN,MMBT3904LT1G/SOT23(ON)	4.4591	4	24.6578
172-223904-400G	TRANSISTOR Dual NPN,MBT3904DW1T1G/SOT-363 (ON)RoHS	4.4591	4	24.6578
172-223906-207S	TRANSISTOR PNP,PMBS3906/SOT23(NXP)	4.4591	1	7.9045
172-239040-210G	TRANSISTOR DUAL NPN,Ic≤200mA,Vcbo:60V,Vceo:40V,MMBT3904DT H/SOT563-6(SMARTENGRAND)RoHS	4.4591	2	13.7763
172-301380-220G	MOSFET Dual N-Ch,VDS:50V,ID:350mA,VGS:±20V,@10V,RDS:1.6Ω,BSS138KDT/H/SOT563-6(SMARTENGRAND)RoHS	27.7119	29	871.4520
172-302003-210G	MOSFET N-Ch,VDS:30V,ID:7A,VGS:±20V,@10V,RDS:20mΩ,EMB20N03VA/EDFN-8(2x2)(EXCELLIANCE)RoHS	27.7119	2	73.8091
172-330140-200G	MOSFET N-Ch,VDS:30V,ID:9.5A,VGS:±20V,@10V,RDS:12mΩ,FKBB3014/PRPAK-8(3x3)(FETEK)RoHS	27.7119	1	40.8117
172-331030-200G	MOSFET P-Ch,VDS:-30V,ID:-7.7A,VGS:±25V,@-10V,RDS:20mΩ,FKBB3103/PRPAK-8(3x3)(FETEK) RoHS	27.7119	5	167.3549
213-151015-200C	MLCC 101P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1234	1	0.1392
213-151203-109G	MLCC 12pF/50V,NPO,F(1%),SMD,0201,CC0201FRNPO9BN120(YAGEO) RoHS	0.1234	4	0.5251

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Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
213-151505-200C	MLCC 15pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1234	1	0.1392
213-151805-200C	MLCC 18pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1234	4	0.5251
213-152205-200C	MLCC 22pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1234	1	0.1392
213-152215-200C	MLCC 221P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1234	6	0.7789
213-152705-200C	MLCC 27pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1234	4	0.5251
213-153319-200C	MLCC 331P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1234	10	1.2837
213-154705-200C	MLCC 47pF/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1234	2	0.2691
213-251028-200C	MLCC 102P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1234	11	1.4095
213-251028-300C	MLCC 102P/50V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.1234	4	0.5251
213-251029-110C	MLCC 102P/25V,X7R,K(10%)SMD,0201(None JP) RoHS	0.1234	2	0.2691
213-251038-250C	MLCC 103P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1234	4	0.5251
213-251049-130C	MLCC 104P/10V,X5R,K(10%),SMD,0201,(None JP) RoHS	0.1234	83	10.3835
213-251049-200C	MLCC 104P/16V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1234	76	9.5137
213-251049-270J	MLCC 104P/25V,X5R,K(10%),SMD,0402,(JP)RoHS	0.1234	7	0.9054
213-251049-380C	MLCC 104P/100V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.1234	1	0.1392
213-251059-109G	MLCC 105P/6.3V,X5R,K(10%),SMD,0201,CC0201KRX5R5BB105(YAGEO) RoHS	0.1234	54	6.7780
213-251059-200C	MLCC 105P/6.3V,X5R,K(10%),SMD,0402,(None JP) RoHS	0.1234	1	0.1392
213-251059-220J	MLCC 105P/10V,X5R,K(10%),SMD,0402,(JP)RoHS	0.1234	4	0.5251
213-251059-230J	MLCC 105P/16V,X5R,K(10%),SMD,0402,(JP)RoHS	0.1234	36	4.5361
213-251059-270C	MLCC 105P/6.3V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1234	1	0.1392
213-251059-330J	MLCC 105P/25V,X5R,K(10%),SMD,0603,(JP)RoHS	0.1234	5	0.6522
213-251068-200J	MLCC 106P/6.3V,X5R,M(20%),SMD,0402,(JP)RoHS	0.1234	68	8.5193
213-251068-300J	MLCC 106P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS	0.1234	26	3.2882
213-251069-320J	MLCC 106P/10V,X5R,K(10%),SMD,0603,(JP)RoHS	0.1234	7	0.9054
213-251069-500C	MLCC 106P/6.3V,X5R,K(10%),SMD, 0805,(None JP) RoHS	0.1234	1	0.1392
213-251069-540J	MLCC 106P/16V,X5R,K(10%),SMD,0805,(JP)RoHS	0.1234	12	1.5352
213-251228-200C	MLCC 122P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1234	1	0.1392

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Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
213-251528-200C	MLCC 152P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1234	6	0.7789
213-252229-200C	MLCC 222P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1234	4	0.5251
213-252239-220J	MLCC 223P/50V,X7R,K(10%),SMD,0402,(JP)RoHS	0.1234	1	0.1392
213-252249-140C	MLCC 224P/6.3V,X5R,K(10%),SMD,0201,(None JP) RoHS	0.1234	16	2.0371
213-252249-210C	MLCC 224P/10V,X5R,K(10%),SMD,0402,(None JP) RoHS	0.1234	1	0.1392
213-252249-330C	MLCC 224P/25V,X7R,K(10%),SMD,0603,(None JP) RoHS	0.1234	5	0.6522
213-252259-330C	MLCC 225P/16V,X5R,K(10%)SMD,0603,(None JP) RoHS	0.1234	1	0.1392
213-252262-610J	MLCC 226P/6.3V,X5R,M(20%),SMD,1206,(JP)RoHS	0.1234	3	0.3975
213-252268-310J	MLCC 226P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS	0.1234	50	6.2801
213-252268-500C	MLCC 226P/25V,X5R,M(20%),SMD,0805,(None JP) RoHS	0.1234	12	1.5352
213-252269-510J	MLCC 226P/6.3V,X5R,M(20%),SMD,0805,(JP)RoHS	0.1234	4	0.5251
213-252269-620J	MLCC 226P/16V,X5R,K(10%),SMD,1206,(JP)RoHS	0.1234	2	0.2691
213-253939-240J	MLCC 393P/25V,X7R,K(10%),SMD,0402,(JP)RoHS	0.1234	1	0.1392
213-254715-200C	MLCC 471P/50V,NPO,J(5%),SMD,0402,(None JP) RoHS	0.1234	7	0.9054
213-254718-210C	MLCC 471P/25V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1234	8	1.0317
213-254739-210C	MLCC 473P/16V,X7R,K(10%),SMD,0402,(None JP) RoHS	0.1234	7	0.9054
213-254758-210C	MLCC 475P/6.3V,X5R,M(20%),SMD,0402,(None JP) RoHS	0.1234	2	0.2691
213-254759-300C	MLCC 475P/6.3V,X5R,K(10%),SMD,0603,(None JP) RoHS	0.1234	1	0.1392
213-254759-320C	MLCC 475P/10V,X5R,K(10%),SMD,0603,(None JP) RoHS	0.1234	14	1.7863
213-254768-306G	MLCC 476P/6.3V,X5R,M(20%),SMD,0603,GRM188R60J476M(MURATA)RoHS	0.1234	2	0.2691
213-254768-500J	MLCC 476P/6.3V,X5R,M(20%),SMD,0805,(JP)RoHS	0.1234	9	1.1577
217-104778-700G	POLYMER(ALM) CAP 470uF/2V,4.5mΩ,4000mA,SMD,V7343,105°C/2000H,M(20%),bottom of round shape,EEFSX0D471E4 (PANASONIC)RoHS	1.7837	3	6.3292
217-301078-325G	POLYMER(TAN) CAP 100uF/6.3V,40mΩ,1.8A,SMD,B3528,105°C/2000H,M(20%),T520B107M006ATE040(KEMET)RoHS	1.7837	3	6.3292
217-302278-326G	POLYMER(TAN)CAP 220uF/6.3V,45mΩ,1700mA,105°C/2000H,M(20%),B3528(1.9),T520B227M006ATE045(KEMET) RoHS	1.7837	4	8.2616

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Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
217-303378-720G	POLYMER(TAN) CAP 330uF/2.5V,9mΩ,3900mA,SMD,D7343-D2E,105°C/2000H,M(20%),2R5TPE330M9(SANYO)RoHS	1.7837	1	2.3546
217-373368-400G	POLYMER(TAN) CAP,33uF/16V,50mΩ,1400mA,SMD,T3528-12,105°C/2000H,M(20%),T521T336M016ATE050(KEMET)RoHS	1.7837	1	2.3546
223-015122-600G	CHOKE 0.15uH,M (20%),RDC≤0.66mΩ,Idc≤36A,Isat=45A,SMD,(7.6*6.6*3.8),PCME064T-R15MS0R667(CYNTEC)RoHS	0.2065	3	0.7043
223-015222-610G	CHOKE 1.5uH,M (20%),RDC≤15mΩ,Irms=9A,Isat=16A,SMD,(7.3*6.6*3.0),MCS0630-1R5MN2(PDC)RoHS	0.2065	1	0.2559
223-033121-700G	CHOKE 0.33uH,M(20%),RDC:7.8mΩ (typ),Irms:10A,Isat:18A,SMD (4.45*4.06*1.8mm),TMPC0402HP-R33MG-Z02(TAI TECH)RoHS	0.2065	1	0.2559
223-047120-830G	CHOKE 0.47uH,M(20%),DCR:23mΩ (Typ.),Irms:5.2A,Isat:6.6A,SMD (2.5*2*1mm),MCS25GC-R47MHC(PDC)RoHS	0.2065	1	0.2559
223-047121-700G	CHOKE 0.47uH,M (20%),RDC≤14mΩ,Irms=7A,Isat=9.5A,SMT (4.7*4.3),MCS0420-R47MN2(PDC)RoHS	0.2065	1	0.2559
223-047121-900G	CHOKE 0.47uH,M (20%),Rdc<8.5mΩ,Idc=13A,Isat=12A,SMD, (4.85x4.7x2.8),PCMB053T-R47MS(CYNTEC)RoHS	0.2065	2	0.4824
223-068121-900G	CHOKE 0.68uH,M (20%),RDC≤9.2mΩ,Idc=10A,Isat=15A,SMD (4.85x4.7x2.8),CMMB053T-R68MS(CYNTEC)RoHS	0.2065	1	0.2559
223-322220-300G	INDUCTOR 2.2uH,M(20%),RDC=0.25Ω +/- 30%,Idc≤130mA,SMD, (1.6*0.8*0.8),MLZ1608A2R2WT000(TDK)RoHS	0.2065	2	0.4824
223-347220-800G	INDUCTOR 4.7uH,M (20%),RDC≤0.24Ω,Irms≤2.1A,SMD(1008), (2.5*2.0*1.2mm)MHCD252012A-4R7M-A8S (CHILISIN)RoHS	0.2065	1	0.2559
223-490040-540G	COMMON CHOKE 90Ω,25%,Irated≤500mA,RDC≤300mΩ,USB3.1 Gen2,10GHz,SMD(0805) (2*1.2*1.5mm),GCMF2012PM-900T(GOTREND) RoHS	0.2065	6	1.3571
223-490090-500S	COMMON CHOKE 90Ω,60-100Ω,300mA (Max),RDC≤300mΩ,HDMI/USB3.0 6GHz,SMD0805 (2*1.2*1.2mm),GLECM2012B-900QT(GOTREND)	0.2065	4	0.9224
223-523000-410G	CM FILTER Cd=0.25pF,Rs=3Ω,SMD (1.57*1.17*0.57),PCMF2USB3S/WLCSP10(NXP) RoHS	0.2065	4	0.9224
231-171330-200G	REGULATOR GS7133TD-R,3A,TDFN10(GSTEK)RoHS	58.1575	1	113.1002

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Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
241-224006-310G	X'TAL 24MHz,16pF,±30ppm,ESR:50Ω(Max),TOPR=-40°C~+105°C,SMD3225(4PAD),7M24000082(TXC) RoHS	16.6322	1	27.4164
241-225006-350G	X'TAL 25MHz,18pF,±30ppm,ESR:50Ω(Max),TOPR=-40°C~+105°C,SMD3225(4PAD),7M25000175(TXC) RoHS	16.6322	2	48.4279
241-432773-300G	X'TAL 32.768kHz,12.5pf,*/-20ppm,TOPR=-40°C~+125°C,SMD3215(2PAD),FC-13A,X1A000091000100(Seiko Epson)RoHS	16.6322	1	27.4164
251-160808-083S	BEAD CORE 160808 80Ω,300mA,25%,SMT0603,SBK160808T-800Y-N (CHILISIN)	1.1265	2	3.7478
251-160808-615S	BEAD CORE 160808 600Ω,1A,25%,SMT0603,PBY160808T-601Y-N (CHILISIN)	1.1265	1	2.1806
253-100110-500G	POLY SWITCH,PTC,1.1A/6V,SMD0805,0805L110ULY R(LITTELFUSE)RoHS	0.4000	1	0.6546
253-100115-604S	POLY SWITCH,PTC,1.1A/8V,SMD1206,1206L110THY R(LITTELFUSE)RoHS	0.4000	2	1.1579
253-100155-604S	POLY SWITCH,PTC,1.5A/8V,SMD1206,1206L150THW R(LITTELFUSE)	0.4000	1	0.6546
253-100266-403S	POLY SWITCH 2.6A/13.2V,SMD1812,miniSMDC260F/13.2 (LITTELFUSE)RoHS	0.4000	1	0.6546
261-361515-200C	RES ARRAY 150Ω 8P4R J(5%),0402*4,(None JP) RoHS	0.1502	2	0.3702
263-180005-100C	RES 0Ω,J(5%),SMD,0201,(None JP)RoHS	0.1502	129	19.9231
263-180005-200C	RES 0Ω,J(5%),SMD,0402,(None JP)RoHS	0.1502	20	3.2193
263-180005-300C	RES 0Ω,J(5%),SMD,0603,(None JP)RoHS	0.1502	9	1.4962
263-180100-210C	RES 10Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	8	1.3378
263-180100-310C	RES 10Ω,F(1%),SMD,0603,(None JP)RoHS	0.1502	4	0.6989
263-180330-110C	RES 33Ω,F(1%),SMD,0201,(None JP)RoHS	0.1502	15	2.4395
263-180430-210C	RES 43Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-180510-110C	RES 51Ω,F(1%),SMD,0201,(None JP)RoHS	0.1502	5	0.8604
263-180519-210C	RES 5.1Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-180560-210C	RES 56Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-180750-110C	RES 75Ω,F(1%),SMD,0201,(None JP)RoHS	0.1502	5	0.8604
263-181000-110C	RES 100Ω,F(1%),SMD,0201,(None JP)RoHS	0.1502	11	1.8119
263-181000-210C	RES 100Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	6	1.0209
263-181001-110C	RES 1KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1502	29	4.6151
263-181001-210C	RES 1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	8	1.3378
263-181002-110C	RES 10KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1502	99	15.3492
263-181002-210C	RES 10KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	12	1.9692
263-181003-110C	RES 100KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1502	34	5.3876
263-181003-210C	RES 100KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	10	1.6542
263-181004-110C	RES 1MΩ,F(1%),SMD,0201,(None JP)RoHS	0.1502	2	0.3702
263-181004-210C	RES 1MΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	2	0.3702
263-181005-210C	RES 10MΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999

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MTBF (hrs): 182929
Failure Rate: 5,466.5893
Temperature: 80
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
263-181022-210C	RES 10.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-181101-210C	RES 1.1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-181130-210C	RES 113Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-181182-210C	RES 11.8KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-181201-210C	RES 1.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	3	0.5357
263-181202-110C	RES 12KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1502	1	0.1999
263-181202-210C	RES 12KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	3	0.5357
263-181203-210C	RES 120KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-181210-210C	RES 121Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-181213-210C	RES 121KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-181302-210C	RES 13KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-181402-210C	RES 14KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-181500-210C	RES 150Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	2	0.3702
263-181502-210C	RES 15KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-181503-210C	RES 150KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	2	0.3702
263-181505-100C	RES 15Ω,J(5%),SMD,0201,(None JP)RoHS	0.1502	4	0.6989
263-181602-210C	RES 16KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	2	0.3702
263-181623-210C	RES 162KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-181782-210C	RES 17.8KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-181803-210C	RES 180KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	3	0.5357
263-181962-210C	RES 19.6KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-182000-210C	RES 200Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	3	0.5357
263-182001-210C	RES 2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	5	0.8604
263-182002-110C	RES 20KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1502	8	1.3378
263-182002-210C	RES 20KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	6	1.0209
263-182003-210C	RES 200KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-182200-210C	RES 220Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-182201-110C	RES 2.2KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1502	7	1.1788
263-182201-210C	RES 2.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	2	0.3702
263-182202-110C	RES 22KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1502	4	0.6989
263-182208-210C	RES 2.2Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-182208-310C	RES 2.2Ω,F(1%),SMD,0603,(None JP)RoHS	0.1502	6	1.0209
263-182208-510C	RES 2.2Ω,F(1%),SMD,0805,(None JP)RoHS	0.1502	4	0.6989
263-182400-110C	RES 240Ω,F(1%),SMD,0201,(None JP)RoHS	0.1502	3	0.5357
263-182401-210C	RES 2.4KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-182492-210C	RES 24.9KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	2	0.3702
263-182499-210C	RES 24.9Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	2	0.3702
263-182612-210C	RES 26.1KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-182702-218G	RES 27KΩ,F(1%),SMD,0402,RTT022702FTH(RALEC) RoHS	0.1502	1	0.1999
263-183000-310C	RES 300Ω,F(1%),SMD,0603,(None JP)RoHS	0.1502	2	0.3702
263-183002-210C	RES 30KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-183011-210C	RES 3.01KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-183013-210C	RES 301KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	3	0.5357
263-183300-210C	RES 330Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	4	0.6989
263-183301-110C	RES 3.3KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1502	6	1.0209
263-183301-210C	RES 3.3KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	4	0.6989

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MTBF (hrs): 182929
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Temperature: 80
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
263-183302-110C	RES 33KΩ,F(1%),SMD,0201(None JP)RoHS	0.1502	1	0.1999
263-183303-210C	RES 330KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	2	0.3702
263-183483-210C	RES 348KΩ,F(1%),SMD,0402(None JP)RoHS	0.1502	1	0.1999
263-183652-210C	RES 36.5KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	2	0.3702
263-183922-110C	RES 39.2KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1502	1	0.1999
263-183922-210C	RES 39.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-184221-210C	RES 4.22KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-184321-210C	RES 4.32KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	2	0.3702
263-184532-210C	RES 45.3KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-184539-210C	RES 45.3Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-184700-110C	RES 470Ω,F(1%),SMD,0201(None JP)RoHS	0.1502	9	1.4962
263-184701-110C	RES 4.7KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1502	33	5.2332
263-184701-210C	RES 4.7KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	2	0.3702
263-184702-110C	RES 47KΩ,F(1%),SMD,0201,(None JP)RoHS	0.1502	11	1.8119
263-184871-210C	RES 4.87KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	3	0.5357
263-184990-110C	RES 499Ω,F(1%),SMD,0201,(None JP)RoHS	0.1502	1	0.1999
263-184990-210C	RES 499Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-184991-210C	RES 4.99KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-184999-110C	RES 49.9Ω,F(1%),SMD,0201,(None JP)RoHS	0.1502	4	0.6989
263-184999-210C	RES 49.9Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	9	1.4962
263-185102-210C	RES 51KΩ,F(1%),SMD,0402(None JP)RoHS	0.1502	3	0.5357
263-185602-210C	RES 56KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	4	0.6989
263-185622-210C	RES 56.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-186041-210C	RES 6.04KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-186049-210C	RES 60.4Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	2	0.3702
263-187501-210C	RES 7.5KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	2	0.3702
263-187502-210C	RES 75KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-188069-210C	RES 80.6Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-188201-210C	RES 8.2KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-188871-210C	RES 8.87KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-189100-210C	RES 910Ω,F(1%),SMD,0402,(None JP)RoHS	0.1502	1	0.1999
263-189762-210C	RES 97.6KΩ,F(1%),SMD,0402,(None JP)RoHS	0.1502	2	0.3702
273-010400-300G	THERM RES 100KΩ,0603(B:25/85=3950,3%)RoHS	11.2670	5	80.2752
273-100402-301S	THERM RES 10KΩ,J(5%),SMD,0603, (B25/85=3435,3%),TSM1A103J34D3RZ(TKS)	11.2670	2	37.7906
314-WL0511-029G	PCB WL051 R.2(12L 100x72x1.6mm, 2 panelization) OSP(CIRCUITECH)RoHS	27.8992	1	53.1658
342-122101-100G	DISPLAYPORT/HDMI CONN,21P,MALE,R/A,DIP,GF,845-002-217CRL (REGO)RoHS	23.6070	1	40.8733
342-310022-110G	Screw CONN. Terminal Block,Green,2Pos,300V,16A,PIT:5.0mm,MB612- 50002(DECA) RoHS	23.6070	1	40.8733
343-124000-210G	eDP conn, 40P, F, 90D, 0.5mm, G/F, SMT, BLACK, SSL00-40L3(KEL)RoHS	23.6070	1	40.8733

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MTBF (hrs): 182929
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Temperature: 80
Environment: GB, GC - Ground Benign, Controlled

Part Number	Description	Unit Failure Rate	Quantity	Total Failure Rate
343-501402-200G	Giga LAN CONN RJ45,SMT,GF,W/Transformer,W/LED,MRJG-11S88RS (MATRIX),RoHS	23.6070	2	71.5340
343-501820-110G	USB 3.1 GEN2 CONN*2, 18P, A Type, Green, F, G/F, 90D, DIP, U2131D-UADH-0401R(HDSY)RoHS	23.6070	1	40.8733
346-120310-201G	PIN PLUG 2*3, 1.27mm, H=5mm, 180D, SMD, SHY- JCL180806P(V-STAR)RoHS	165.2491	2	500.7379
346-120511-201G	PIN PLUG 2*5, 1.27mm, H=5mm, 180D, SMD, SHY- JCL180810P(V-STAR)RoHS	165.2491	4	899.9780
346-510223-102G	WAFER 1*2,2.0mm,M,H=6.1mm,180D,DIP,WHITE,721-81- 02TW00(PINREX)RoHS	165.2491	1	286.1133
348-220800-200S	SOCKET SPI 8Pin,GF,H=5.65mm,180D,SMT,ACA-SPI -004-K01(LOTES)	12.8766	1	20.9838
348-370750-230G	NGFF CONN 67P/0.5mm,E Key,R/A,SMD,AS0BC21- S40BE-7H,(FOXCONN)HF	23.6070	1	40.8733
348-370750-240G	NGFF CONN 67P/0.5mm,H=8.5mm,B key,90D,BLACK,SMD,APCI0161-P002H(LOTES)HF	23.6070	2	71.5340
348-652600-200G	DDR4 SO DIMM 1*260P,10u",H=8.0mm 1.2V,RVS,90D,SMD,ASAA826-E8RB0-7H(FOXCONN) HF	23.6070	1	40.8733
622-010140-000G	BATTERY CR2032(MURATA) 3V 220mAh,-30°C ~+70°C,W/CABLE(L=150mm&TAPE),BIN-CR2032-I- CT-SL-PV-01(RE-ENERGY)RoHS Belong to UN3090	25.0000	1	34.9638
686-110322-100G	PIN PLUG 1*3,2.0mm,M,H=5.9mm,180D,DIP,W/BLACK JUMPER,22S-96-03GB01(PINREX)RoHS	23.6070	1	40.8733
143-10200A-401G	CPU Intel Celeron 4305UE 2.0GHz C/2M,V0,CL8068404210005 SRFDZ/FCBGA-1528 (INTEL)RoHS	422.0000	1	422.0000
292-301000-500S	BUZZER 3V,100mA,12Ω,4Khz,85db,SMD (5*4.2mm),SMT-G5030A(KEPO)	600.0000	1	600.0000