

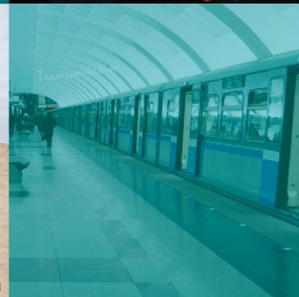
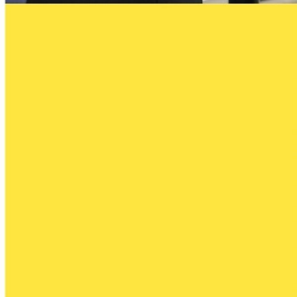
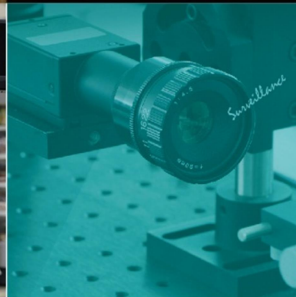


MTBF PREDICTION REPORT

PA Department



DFI



MTBF PREDICTION REPORT

Model: GHF51-BN-46R16

Revision: AA0

| | |
|-----------------------|---------------------|
| Completed Date | 2020/12/23 |
| Designed By | Gordon Kao |
| Reviewed By | Johnson Chan |
| Approval By | Jerry Fang |

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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 Relax Software Report:

| Temperature (Celsius) | MTBF (hours) |
|-----------------------|--------------|
| 25 | 872,484 |
| 45 | 635,789 |
| 60 | 460,442 |

File Name: GHF51-BN-46R16.rfp
System: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 872484
Failure Rate: 1,146.15
Temperature: 25
Environment: GB, GC - Ground Benign, Controlled

| Assembly Name | Part Number | Quantity | Failure Rate (Fit) | MTBF (Hrs) |
|----------------|-----------------|----------|--------------------|------------|
| GHF51-BN-46R16 | 774-GHF511-100G | 1 | 1146.15 | 872,484 |

File Name: GHF51-BN-46R16.rfp

Assembly: 774-GHF511-100G

Ref Des:

Calculation Model: Telcordia Issue 4



MTBF (hrs): 872484

Failure Rate: 1,146.1522

Temperature: 25

Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 113-500007-210S | IC TTL,Single Buffer/Driver With Open-Drain Output,SN74LVC1G07DCKR/SC70-5(TI) | 1.9772 | 3 | 7.6379 |
| 113-500008-210G | IC TTL,Single 2-Input Positive-AND Gate,SN74LVC1G08DCKR/SC70-5(TI)RoHS | 1.9772 | 1 | 2.9741 |
| 113-500017-210G | IC TTL,Single Schmitt-Trigger Buffer,SN74LVC1G17DCKR/SC70-5(TI)RoHS | 1.9772 | 2 | 5.3538 |
| 113-500126-300G | IC TTL,Single Bus Buffer Gate,SN74LVC1G126DCK/SC70-5(TI)RoHS | 1.9772 | 1 | 2.9741 |
| 113-906408-400G | IC LOW-VOLTAGE 8-BIT I2C AND SMBus I/O EXPANDER,UQFN16, TCA6408ARSVR(TI)RoHS | 1.9772 | 1 | 2.9741 |
| 121-002065-200G | IC Power-Distribution Switches,1A,TPS2065DDBV/SOT23-5(TI)RoHS | 1.9772 | 3 | 7.6379 |
| 121-022976-200G | IC Switch,5.7-V,6-A,14-mΩ On-Resistance Dual-Channel Load,TPS22976DPU/WSON-14(TI)RoHS | 1.9772 | 2 | 5.3538 |
| 121-229130-400G | IC Power Switch,TPS22913CYZV/DSBGA-4(TI)RoHS | 1.9474 | 2 | 6.5047 |
| 131-558192-520G | DDR4-2666 SDRAM 8Gb(512M*16)K4A8G165WC-BCTD/FBGA-96 (SAMSUNG)RoHS | 4.4178 | 4 | 22.4793 |
| 135-306400-209G | SPI SERIAL FLASH 64Mbit,W25Q64JWSSIQ/SOIC-8 (WINBOND)RoHS | 4.4178 | 1 | 6.8575 |
| 135-334050-200G | I2C Compatible SPD EEPROM 4KBit(512 x 8) AT34C04-X5M-T/ TSSOP-8(ATMEL)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 |
| 141-007802-200G | IC H/W Monitoring,NCT7802Y/QFN20(Nuvoton)HF | 1.9772 | 1 | 2.9741 |
| 141-035700-420G | IC PWM CTRL IR3570BMTRPBF/QFN-40(IR)RoHS | 1.9772 | 1 | 2.9741 |
| 141-568210-400G | IC Converter,4.5V~17V Input,8A Synchronous Step-Down SWIFT,TPS568215OARNN/VQFN-18(TI)RoHS | 1.9772 | 3 | 7.6379 |
| 141-620850-200G | IC Synchronous Buck Converter,2.5-6,3A,TLV62085RLT/VSON-7(TI)RoHS | 1.9772 | 1 | 2.9741 |
| 141-620950-400G | IC Converter,4-A High Efficiency Step Down with DCS-Control,TLV62095RGT/QFN-16(TI)RoHS | 1.9772 | 1 | 2.9741 |
| 147-002110-200G | IC CHIP,Giga LAN CTRL,WGI211AT SLJXZ/QFN-64 (INTEL)RoHS | 1.9772 | 1 | 2.9741 |
| 148-100464-400G | eMMC 5.1,64G,-25°C~+85°C,SMD,FBGA-153,SDINBDG4-64G-I1(SANDISK)RoHS | 4.4178 | 1 | 6.8575 |
| 171-205200-220G | DIODE SCHOTTKY,30V,200mA,RB520S-30H/SOD-523(SMARTENGRAND)RoHS | 0.2189 | 8 | 2.3221 |
| 171-224148-309G | DIODE Switching,1N4148WS-7-F/SOD323(DIODES) RoHS | 0.2189 | 1 | 0.4229 |
| 171-230502-200G | DIODE ESD Protection,VRWM=5.0V,IRM=100nA,VESD=10KV,SM T,SOT883,PESD5V0U2BM(NXP)RoHS | 0.2189 | 1 | 0.4229 |
| 171-364020-200G | DIODE TVS,3.6V,17W,Bidirectional,4-Channel,TPD4E02B04DQAR/USON-10(TI)RoHS | 0.2189 | 2 | 0.7270 |
| 171-364212-200G | DIODE TVS VRWM:-12V~12V,AZ4212-01G.R7G/SOD-123(AMAZING)RoHS | 0.2189 | 1 | 0.4229 |
| 171-404010-200S | DIODE 4-CHANNEL ESD PROTECTION,TPD4S010DQAR/SON-DQA10(TI) | 1.9772 | 6 | 14.2597 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 872484
Failure Rate: 1,146.1522
Temperature: 25
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 171-451715-200G | DIODE Zener,15V,Vz=14.34V~14.98V,UDZVTE-1715B/SOD-323FL(ROHM)RoHS | 0.2189 | 1 | 0.4229 |
| 171-505433-200G | DIODE SCHOTTKY BARRIER RECTIFIER,30V,200mA,BAT54AW/SOT323(NEXPERIA)RoHS | 0.2189 | 2 | 0.7270 |
| 172-207002-241G | MOSFET N-Ch,VDS:60V,ID:300mA,VGS:±20V,@10V,RDS:3Ω,2N7002K/SOT23-3(PANJIT)RoHS | 7.2970 | 1 | 10.7463 |
| 172-223904-400G | TRANSISTOR Dual NPN,MBT3904DW1T1G/SOT-363(ON)RoHS | 1.1741 | 1 | 2.0814 |
| 172-239060-200G | TRANSISTOR PNP,Ic≤-200mA,Vceo:--40V,NST3906F3T5G/SOT1123-3(ON)RoHS | 1.1741 | 1 | 2.0814 |
| 172-300612-200G | MOSFET Dual N-Ch,VDS:30V,VGS:±20V,ID:100mA,@4V,RDS:8Ω,EM6K1GT2R/SOT-563(ROHM)RoHS | 7.2970 | 6 | 52.0741 |
| 172-304435-200G | MOSFET P-Ch,VDS:-30V,ID:-11A,VGS:±25V,@-4.5V,RDS:36mΩ,AP4435GYT-HF/PMPAK3x3(APEC)HF | 7.2970 | 2 | 19.4351 |
| 172-888240-200G | DrMOS Power Stage,TDA88240/QFN-30(INFINEON)RoHS | 7.2970 | 2 | 19.4351 |
| 174-210110-330G | LED Brilliant Green SMD0603,H=0.4mm,19-217/GHC-YR1S2/3T(EVERLIGHT)RoHS | 0.0677 | 1 | 0.1329 |
| 213-151515-200C | MLCC 151P/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.0911 | 2 | 0.1987 |
| 213-151815-200C | MLCC 181P/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.0911 | 6 | 0.5752 |
| 213-152005-200C | MLCC 20pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.0911 | 2 | 0.1987 |
| 213-152205-200C | MLCC 22pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.0911 | 2 | 0.1987 |
| 213-152215-200C | MLCC 221P/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.0911 | 3 | 0.2935 |
| 213-152705-200C | MLCC 27pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.0911 | 2 | 0.1987 |
| 213-153309-200C | MLCC 33pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.0911 | 1 | 0.1028 |
| 213-158205-200C | MLCC 82pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.0911 | 1 | 0.1028 |
| 213-251029-110C | MLCC 102P/25V,X7R,K(10%)SMD,0201(None JP)RoHS | 0.0911 | 1 | 0.1028 |
| 213-251038-250C | MLCC 103P/50V,X7R,K(10%),SMD,0402,(None JP)RoHS | 0.0911 | 7 | 0.6685 |
| 213-251048-230J | MLCC 104P/50V,X7R,K(10%),SMD,0402,(JP)RoHS | 0.0911 | 3 | 0.2935 |
| 213-251049-130J | MLCC 104P/10V,X5R,K(10%),SMD,0201,(JP)RoHS | 0.0911 | 79 | 7.3002 |
| 213-251049-200J | MLCC 104P/16V,X7R,K(10%),SMD,0402,(JP)RoHS | 0.0911 | 17 | 1.5967 |
| 213-251049-270J | MLCC 104P/25V,X5R,K(10%),SMD,0402,(JP)RoHS | 0.0911 | 12 | 1.1336 |
| 213-251059-109G | MLCC 105P/6.3V,X5R,K(10%),SMD,0201,CC0201KRX5R5BB105(YAGEO)RoHS | 0.0911 | 45 | 4.1775 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 872484
Failure Rate: 1,146.1522
Temperature: 25
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 213-251059-200C | MLCC 105P/6.3V,X5R,K(10%),SMD,0402,(None JP) RoHS | 0.0911 | 1 | 0.1028 |
| 213-251059-230J | MLCC 105P/16V,X5R,K(10%),SMD,0402,(JP)RoHS | 0.0911 | 10 | 0.9479 |
| 213-251068-200J | MLCC 106P/6.3V,X5R,M(20%),SMD,0402,(JP)RoHS | 0.0911 | 11 | 1.0407 |
| 213-251068-300J | MLCC 106P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS | 0.0911 | 3 | 0.2935 |
| 213-251069-320J | MLCC 106P/10V,X5R,K(10%),SMD,0603,(JP)RoHS | 0.0911 | 8 | 0.7618 |
| 213-251069-540J | MLCC 106P/16V,X5R,K(10%),SMD,0805,(JP)RoHS | 0.0911 | 12 | 1.1336 |
| 213-252229-200C | MLCC 222P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS | 0.0911 | 2 | 0.1987 |
| 213-252249-140C | MLCC 224P/6.3V,X5R,K(10%),SMD,0201,(None JP) RoHS | 0.0911 | 20 | 1.8741 |
| 213-252249-210C | MLCC 224P/10V,X5R,K(10%),SMD,0402,(None JP) RoHS | 0.0911 | 5 | 0.4816 |
| 213-252249-330C | MLCC 224P/25V,X7R,K(10%),SMD,0603,(None JP) RoHS | 0.0911 | 3 | 0.2935 |
| 213-252268-310J | MLCC 226P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS | 0.0911 | 55 | 5.0967 |
| 213-252269-510J | MLCC 226P/6.3V,X5R,M(20%),SMD,0805,(JP)RoHS | 0.0911 | 4 | 0.3877 |
| 213-253329-200C | MLCC 332P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS | 0.0911 | 2 | 0.1987 |
| 213-253349-209G | MLCC 334P/10V,X5R,K(10%),SMD,0402,CC0402KRX5R6BB334(YAGEO) RoHS | 0.0911 | 4 | 0.3877 |
| 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 | 4 | 0.3877 |
| 213-254739-210C | MLCC 473P/16V,X7R,K(10%),SMD,0402,(None JP) RoHS | 0.0911 | 3 | 0.2935 |
| 213-254758-210J | MLCC 475P/6.3V,X5R,M(20%),SMD,0402,(JP)RoHS | 0.0911 | 3 | 0.2935 |
| 213-254759-320C | MLCC 475P/10V,X5R,K(10%),SMD,0603,(None JP) RoHS | 0.0911 | 3 | 0.2935 |
| 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 | 4 | 3.3261 |
| 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 | 1 | 0.9480 |
| 223-010221-730G | CHOKE 1uH,M (20%),RDC ≤ 27mΩ,Idc=4.5A,Isat=7A,SMD,(4.5x4x2),PCMB042T-1R0MS(CYNTEC)RoHS | 0.0831 | 1 | 0.1030 |
| 223-015221-710G | CHOKE 1.5uH,M (20%),RDC ≤ 38mΩ,Idc=4A,Isat=6A,SMD,(4.15x4x1.8),PCMB042T-1R5MS(CYNTEC)RoHS | 0.0831 | 2 | 0.1942 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 872484
Failure Rate: 1,146.1522
Temperature: 25
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 223-036122-500G | CHOKE 0.36uH,M(20%),Rdc=1.4±7% mΩ,Idc=24A,Isat=24A,SMD, (6.95x6.6x3.8mm),PCME064T-R36MS1R407 (CYNTEC)RoHS | 0.0831 | 2 | 0.1942 |
| 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 | 2 | 0.1942 |
| 223-068122-500G | CHOKE 0.68uH,M (20%),RDC ≤ 5.5mΩ,Idc=15.5A,Isat=25A,SMD, (6.95x6.6x2.8),PCMC063T-R68MN(CYNTEC)RoHS | 0.0831 | 1 | 0.1030 |
| 223-410040-501S | COMMON CHOKE 90Ω,M (20%),Idc ≤ 330mA,RDC ≤ 350mΩ,SMD (2.05*1.25*1.4mm),After D/C 1936 is the bottom convex,CMM21T-900M-N(CHILISIN) | 0.0831 | 2 | 0.1942 |
| 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 | 1 | 0.1030 |
| 231-171330-200G | REGULATOR GS7133TD-R,3A,TDFN10(GSTEK)RoHS | 1.9474 | 2 | 6.5047 |
| 231-178001-200G | LDO REGULATOR,150mA,TPS78001DDCR/SOT-5(TI) RoHS | 1.9474 | 1 | 3.7871 |
| 241-225006-701G | X'TAL 25MHz,18pf,±30ppm,ESR ≤ 25Ω,TOPR=-40°C ~+85°C,SMD3225(4PAD),X32-25.000-18-30/30I (MEC)RoHS | 1.4698 | 1 | 2.4229 |
| 241-248006-340G | X'TAL 48MHz,20pf,±10ppm,ESR:50Ω(Max),TOPR=- 40°C~+105°C,SMD3225(4PAD),X3S048000FK1H- DEZ(HELE)RoHS | 1.4698 | 1 | 2.4229 |
| 241-432773-312G | X'TAL 32.768kHz,12.5pf,20ppm,TOPR=-40°C ~+85°C,SMD3215(2PAD),CM315D 32.768KDZF (CITIZEN)RoHS | 1.4698 | 1 | 2.4229 |
| 253-100115-501S | POLYSWITCH 1.1A,6V,SMT0805,0805L100 (LITTELFUSE) | 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 | 48 | 3.0369 |
| 263-180005-200C | RES 0Ω,J(5%),SMD,0402,(None JP)RoHS | 0.0605 | 37 | 2.3553 |
| 263-180005-300C | RES 0Ω,J(5%),SMD,0603,(None JP)RoHS | 0.0605 | 5 | 0.3464 |
| 263-180010-210C | RES 1Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 2 | 0.1490 |
| 263-180100-110C | RES 10Ω,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 10 | 0.6660 |
| 263-180100-210C | RES 10Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 4 | 0.2814 |
| 263-180220-110C | RES 22Ω,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 2 | 0.1490 |
| 263-180390-110C | RES 39Ω,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 27 | 1.7334 |
| 263-180519-210C | RES 5.1Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-181000-110C | RES 100Ω,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 2 | 0.1490 |
| 263-181000-210C | RES 100Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 7 | 0.4746 |
| 263-181001-110C | RES 1KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 27 | 1.7334 |
| 263-181001-210C | RES 1KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 9 | 0.6024 |
| 263-181002-110C | RES 10KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 43 | 2.7274 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 872484
Failure Rate: 1,146.1522
Temperature: 25
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 263-181002-210C | RES 10KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 13 | 0.8560 |
| 263-181003-110C | RES 100KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 7 | 0.4746 |
| 263-181003-210C | RES 100KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 4 | 0.2814 |
| 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 | 3 | 0.2157 |
| 263-181022-210C | RES 10.2KΩ,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 | 2 | 0.1490 |
| 263-181271-210C | RES 1.27KΩ,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 | 2 | 0.1490 |
| 263-181500-210C | RES 150Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 3 | 0.2157 |
| 263-181502-210C | RES 15KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 2 | 0.1490 |
| 263-181503-210C | RES 150KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-181623-210C | RES 162KΩ,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 | 2 | 0.1490 |
| 263-181960-210C | RES 196Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-182001-210C | RES 2KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 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 |
| 263-182005-210C | RES 20MΩ,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 | 21 | 1.3587 |
| 263-182202-110C | RES 22KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 2 | 0.1490 |
| 263-182208-310C | RES 2.2Ω,F(1%),SMD,0603,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-182400-110C | RES 240Ω,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 4 | 0.2814 |
| 263-182433-210C | RES 243KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-182801-210C | RES 2.8KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-183000-110C | RES 300Ω,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 2 | 0.1490 |
| 263-183003-310C | RES 300KΩ,F(1%),SMD,0603,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-183010-210C | RES 301Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 4 | 0.2814 |
| 263-183242-210C | RES 32.4KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-183300-210C | RES 330Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 2 | 0.1490 |
| 263-183301-110C | RES 3.3KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 8 | 0.5386 |
| 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 |
| 263-183305-100C | RES 33Ω,J(5%),SMD,0201,(None JP)RoHS | 0.0605 | 7 | 0.4746 |
| 263-184532-210C | RES 45.3KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-184701-110C | RES 4.7KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 13 | 0.8560 |
| 263-184702-110C | RES 47KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 9 | 0.6024 |
| 263-184990-110C | RES 499Ω,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 16 | 1.0451 |
| 263-184990-210C | RES 499Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-184991-110C | RES 4.99KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-184991-210C | RES 4.99KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 3 | 0.2157 |
| 263-185101-210C | RES 5.1KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-185102-210C | RES 51KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 2 | 0.1490 |
| 263-185103-110C | RES 510KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-185602-210C | RES 56KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 3 | 0.2157 |
| 263-186981-210C | RES 6.98KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 1 | 0.0805 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 872484
Failure Rate: 1,146.1522
Temperature: 25
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 263-187501-210C | RES 7.5KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 3 | 0.2157 |
| 263-187502-210C | RES 75KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-188450-210C | RES 845Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 1 | 0.0805 |
| 263-188661-210C | RES 8.66KΩ,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 |
| 263-189099-210C | RES 90.9Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0605 | 2 | 0.1490 |
| 273-047300-201G | THERM RES 47KΩ 1%,0402(B:25/50=4050,1%) TSM0B473F4051RZ(TKS)RoHS | 0.9957 | 1 | 1.9457 |
| 273-100402-301S | THERM RES 10KΩ,J(5%),SMD,0603, (B25/85=3435,3%),TSM1A103J34D3RZ(TKS) | 0.9957 | 3 | 4.6342 |
| 314-GHF511-119G | PCB GHF51 R.A1(12L HDI 84x55x1.6mm, 2 panelization)OSP(CIRCUITECH)RoHS | 2.4655 | 1 | 4.6984 |
| 342-101907-221G | HDMI CONN(D TYPE), 19P, F, 15u", BLACK, 90D, SMT, 2HMDHM-8SEFSDBN19A01(MOST WELL)RoHS | 2.0862 | 2 | 6.3217 |
| 342-310022-110G | Screw CONN. Terminal Block,Green,2Pos,300V,16A,PIT:5.0mm,MB612- 50002(DECA) RoHS | 2.0862 | 1 | 3.6121 |
| 343-501402-200G | Giga LAN CONN RJ45,SMT,GF,W/Transformer,W/LED,MRJG-11S88RS (MATRIX),RoHS | 2.0862 | 1 | 3.6121 |
| 343-502400-220G | USB conn 24p Type C,90D,G/F,SMT,H=3.14mm,UT12111-1160E-7H (FOXCONN)HF | 2.0862 | 1 | 3.6121 |
| 346-110200-006G | PIN PLUG 1*2pin/2.54mm,180D,BLACK,3321X02SAGR(6T) (YIMTEK)RoHS | 14.6036 | 1 | 25.2847 |
| 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 | 1 | 25.2847 |
| 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 |
| 348-660522-200S | MINI PCI-EXPRESS 1*52,0.8mm,10u",F,H=9.9mm,90D,SMT,IVORY,GEN RAL TYPE,AS0B226-S99Q-7H(FOXCONN)HF | 1.1379 | 1 | 1.8544 |
| 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 |
| 143-302501-400G | CPU AMD Ryzen R1606G 2.6GHz YE1606C4T2OFG/BGA-1140(AMD)RoHS | 151.5152 | 1 | 151.5152 |
| 292-301000-500S | BUZZER 3V,100mA,12Ω,4Khz,85db,SMD (5*4.2mm),SMT-G5030A(KEPO) | 600.0000 | 1 | 600.0000 |

File Name: GHF51-BN-46R16.rfp
System: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 635789
Failure Rate: 1,572.85
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

| Assembly Name | Part Number | Quantity | Failure Rate (Fit) | MTBF (Hrs) |
|----------------|-----------------|----------|--------------------|------------|
| GHF51-BN-46R16 | 774-GHF511-100G | 1 | 1572.85 | 635,789 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 635789
Failure Rate: 1,572.8483
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 113-500007-210S | IC TTL,Single Buffer/Driver With Open-Drain Output,SN74LVC1G07DCKR/SC70-5(TI) | 4.6582 | 3 | 17.9944 |
| 113-500008-210G | IC TTL,Single 2-Input Positive-AND Gate,SN74LVC1G08DCKR/SC70-5(TI)RoHS | 4.6582 | 1 | 7.0069 |
| 113-500017-210G | IC TTL,Single Schmitt-Trigger Buffer,SN74LVC1G17DCKR/SC70-5(TI)RoHS | 4.6582 | 2 | 12.6132 |
| 113-500126-300G | IC TTL,Single Bus Buffer Gate,SN74LVC1G126DCK/SC70-5(TI)RoHS | 4.6582 | 1 | 7.0069 |
| 113-906408-400G | IC LOW-VOLTAGE 8-BIT I2C AND SMBus I/O EXPANDER,UQFN16, TCA6408ARSVR(TI)RoHS | 4.6582 | 1 | 7.0069 |
| 121-002065-200G | IC Power-Distribution Switches,1A,TPS2065DDBV/SOT23-5(TI)RoHS | 4.6582 | 3 | 17.9944 |
| 121-022976-200G | IC Switch,5.7-V,6-A,14-mΩ On-Resistance Dual-Channel Load,TPS22976DPU/WSON-14(TI)RoHS | 4.6582 | 2 | 12.6132 |
| 121-229130-400G | IC Power Switch,TPS22913CYZV/DSBGA-4(TI)RoHS | 7.6721 | 2 | 25.6262 |
| 131-558192-520G | DDR4-2666 SDRAM 8Gb(512M*16)K4A8G165WC-BCTD/FBGA-96 (SAMSUNG)RoHS | 10.4080 | 4 | 52.9596 |
| 135-306400-209G | SPI SERIAL FLASH 64Mbit,W25Q64JWSSIQ/SOIC-8 (WINBOND)RoHS | 10.4080 | 1 | 16.1558 |
| 135-334050-200G | I2C Compatible SPD EEPROM 4KBit(512 x 8) AT34C04-X5M-T/ TSSOP-8(ATMEL)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 |
| 141-007802-200G | IC H/W Monitoring,NCT7802Y/QFN20(Nuvoton)HF | 4.6582 | 1 | 7.0069 |
| 141-035700-420G | IC PWM CTRL IR3570BMTRPBF/QFN-40(IR)RoHS | 4.6582 | 1 | 7.0069 |
| 141-568210-400G | IC Converter,4.5V~17V Input,8A Synchronous Step-Down SWIFT,TPS568215OARNN/VQFN-18(TI)RoHS | 4.6582 | 3 | 17.9944 |
| 141-620850-200G | IC Synchronous Buck Converter,2.5-6,3A,TLV62085RLT/VSON-7(TI)RoHS | 4.6582 | 1 | 7.0069 |
| 141-620950-400G | IC Converter,4-A High Efficiency Step Down with DCS-Control,TLV62095RGT/QFN-16(TI)RoHS | 4.6582 | 1 | 7.0069 |
| 147-002110-200G | IC CHIP,Giga LAN CTRL,WGI211AT SLJXZ/QFN-64 (INTEL)RoHS | 4.6582 | 1 | 7.0069 |
| 148-100464-400G | eMMC 5.1,64G,-25°C~+85°C,SMD,FBGA-153,SDINBDG4-64G-I1(SANDISK)RoHS | 10.4080 | 1 | 16.1558 |
| 171-205200-220G | DIODE SCHOTTKY,30V,200mA,RB520S-30H/SOD-523(SMARTENGRAND)RoHS | 0.3751 | 8 | 3.9793 |
| 171-224148-309G | DIODE Switching,1N4148WS-7-F/SOD323(DIODES) RoHS | 0.3751 | 1 | 0.7247 |
| 171-230502-200G | DIODE ESD Protection,VRWM=5.0V,IRM=100nA,VESD=10KV,SM T,SOT883,PESD5V0U2BM(NXP)RoHS | 0.3751 | 1 | 0.7247 |
| 171-364020-200G | DIODE TVS,3.6V,17W,Bidirectional,4-Channel,TPD4E02B04DQAR/USON-10(TI)RoHS | 0.3751 | 2 | 1.2458 |
| 171-364212-200G | DIODE TVS VRWM:-12V~12V,AZ4212-01G.R7G/SOD-123(AMAZING)RoHS | 0.3751 | 1 | 0.7247 |
| 171-404010-200S | DIODE 4-CHANNEL ESD PROTECTION,TPD4S010DQAR/SON-DQA10(TI) | 4.6582 | 6 | 33.5948 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 635789
Failure Rate: 1,572.8483
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 171-451715-200G | DIODE Zener,15V,Vz=14.34V~14.98V,UDZVTE-1715B/SOD-323FL(ROHM)RoHS | 0.3751 | 1 | 0.7247 |
| 171-505433-200G | DIODE SCHOTTKY BARRIER RECTIFIER,30V,200mA,BAT54AW/SOT323(NEXPERIA)RoHS | 0.3751 | 2 | 1.2458 |
| 172-207002-241G | MOSFET N-Ch,VDS:60V,ID:300mA,VGS:±20V,@10V,RDS:3Ω,2N7002K/SOT23-3(PANJIT)RoHS | 12.5047 | 1 | 18.4158 |
| 172-223904-400G | TRANSISTOR Dual NPN,MBT3904DW1T1G/SOT-363(ON)RoHS | 2.0121 | 1 | 3.5668 |
| 172-239060-200G | TRANSISTOR PNP,Ic≤-200mA,Vceo:--40V,NST3906F3T5G/SOT1123-3(ON)RoHS | 2.0121 | 1 | 3.5668 |
| 172-300612-200G | MOSFET Dual N-Ch,VDS:30V,VGS:±20V,ID:100mA,@4V,RDS:8Ω,EM6K1GT2R/SOT-563(ROHM)RoHS | 12.5047 | 6 | 89.2385 |
| 172-304435-200G | MOSFET P-Ch,VDS:-30V,ID:-11A,VGS:±25V,@-4.5V,RDS:36mΩ,AP4435GYT-HF/PMPAK3x3(APEC)HF | 12.5047 | 2 | 33.3055 |
| 172-888240-200G | DrMOS Power Stage,TDA88240/QFN-30(INFINEON)RoHS | 12.5047 | 2 | 33.3055 |
| 174-210110-330G | LED Brilliant Green SMD0603,H=0.4mm,19-217/GHC-YR1S2/3T(EVERLIGHT)RoHS | 0.3759 | 1 | 0.7374 |
| 213-151515-200C | MLCC 151P/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1030 | 2 | 0.2246 |
| 213-151815-200C | MLCC 181P/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1030 | 6 | 0.6501 |
| 213-152005-200C | MLCC 20pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1030 | 2 | 0.2246 |
| 213-152205-200C | MLCC 22pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1030 | 2 | 0.2246 |
| 213-152215-200C | MLCC 221P/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1030 | 3 | 0.3317 |
| 213-152705-200C | MLCC 27pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1030 | 2 | 0.2246 |
| 213-153309-200C | MLCC 33pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1030 | 1 | 0.1162 |
| 213-158205-200C | MLCC 82pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1030 | 1 | 0.1162 |
| 213-251029-110C | MLCC 102P/25V,X7R,K(10%)SMD,0201(None JP)RoHS | 0.1030 | 1 | 0.1162 |
| 213-251038-250C | MLCC 103P/50V,X7R,K(10%),SMD,0402,(None JP)RoHS | 0.1030 | 7 | 0.7556 |
| 213-251048-230J | MLCC 104P/50V,X7R,K(10%),SMD,0402,(JP)RoHS | 0.1030 | 3 | 0.3317 |
| 213-251049-130J | MLCC 104P/10V,X5R,K(10%),SMD,0201,(JP)RoHS | 0.1030 | 79 | 8.2509 |
| 213-251049-200J | MLCC 104P/16V,X7R,K(10%),SMD,0402,(JP)RoHS | 0.1030 | 17 | 1.8047 |
| 213-251049-270J | MLCC 104P/25V,X5R,K(10%),SMD,0402,(JP)RoHS | 0.1030 | 12 | 1.2812 |
| 213-251059-109G | MLCC 105P/6.3V,X5R,K(10%),SMD,0201,CC0201KRX5R5BB105(YAGEO)RoHS | 0.1030 | 45 | 4.7216 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 635789
Failure Rate: 1,572.8483
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 213-251059-200C | MLCC 105P/6.3V,X5R,K(10%),SMD,0402,(None JP) RoHS | 0.1030 | 1 | 0.1162 |
| 213-251059-230J | MLCC 105P/16V,X5R,K(10%),SMD,0402,(JP)RoHS | 0.1030 | 10 | 1.0713 |
| 213-251068-200J | MLCC 106P/6.3V,X5R,M(20%),SMD,0402,(JP)RoHS | 0.1030 | 11 | 1.1763 |
| 213-251068-300J | MLCC 106P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS | 0.1030 | 3 | 0.3317 |
| 213-251069-320J | MLCC 106P/10V,X5R,K(10%),SMD,0603,(JP)RoHS | 0.1030 | 8 | 0.8610 |
| 213-251069-540J | MLCC 106P/16V,X5R,K(10%),SMD,0805,(JP)RoHS | 0.1030 | 12 | 1.2812 |
| 213-252229-200C | MLCC 222P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS | 0.1030 | 2 | 0.2246 |
| 213-252249-140C | MLCC 224P/6.3V,X5R,K(10%),SMD,0201,(None JP) RoHS | 0.1030 | 20 | 2.1181 |
| 213-252249-210C | MLCC 224P/10V,X5R,K(10%),SMD,0402,(None JP) RoHS | 0.1030 | 5 | 0.5443 |
| 213-252249-330C | MLCC 224P/25V,X7R,K(10%),SMD,0603,(None JP) RoHS | 0.1030 | 3 | 0.3317 |
| 213-252268-310J | MLCC 226P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS | 0.1030 | 55 | 5.7605 |
| 213-252269-510J | MLCC 226P/6.3V,X5R,M(20%),SMD,0805,(JP)RoHS | 0.1030 | 4 | 0.4382 |
| 213-253329-200C | MLCC 332P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS | 0.1030 | 2 | 0.2246 |
| 213-253349-209G | MLCC 334P/10V,X5R,K(10%),SMD,0402,CC0402KRX5R6BB334(YAGEO) RoHS | 0.1030 | 4 | 0.4382 |
| 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 | 4 | 0.4382 |
| 213-254739-210C | MLCC 473P/16V,X7R,K(10%),SMD,0402,(None JP) RoHS | 0.1030 | 3 | 0.3317 |
| 213-254758-210J | MLCC 475P/6.3V,X5R,M(20%),SMD,0402,(JP)RoHS | 0.1030 | 3 | 0.3317 |
| 213-254759-320C | MLCC 475P/10V,X5R,K(10%),SMD,0603,(None JP) RoHS | 0.1030 | 3 | 0.3317 |
| 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 | 4 | 4.8021 |
| 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 | 1 | 1.3687 |
| 223-010221-730G | CHOKE 1uH,M (20%),RDC ≤ 27mΩ,Idc=4.5A,Isat=7A,SMD,(4.5x4x2),PCMB042T-1R0MS(CYNTEC)RoHS | 0.1200 | 1 | 0.1487 |
| 223-015221-710G | CHOKE 1.5uH,M (20%),RDC ≤ 38mΩ,Idc=4A,Isat=6A,SMD,(4.15x4x1.8),PCMB042T-1R5MS(CYNTEC)RoHS | 0.1200 | 2 | 0.2804 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 635789
Failure Rate: 1,572.8483
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 223-036122-500G | CHOKE 0.36uH,M(20%),Rdc=1.4±7% mΩ,Idc=24A,Isat=24A,SMD, (6.95x6.6x3.8mm),PCME064T-R36MS1R407 (CYNTEC)RoHS | 0.1200 | 2 | 0.2804 |
| 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 | 2 | 0.2804 |
| 223-068122-500G | CHOKE 0.68uH,M (20%),RDC ≤ 5.5mΩ,Idc=15.5A,Isat=25A,SMD, (6.95x6.6x2.8),PCMC063T-R68MN(CYNTEC)RoHS | 0.1200 | 1 | 0.1487 |
| 223-410040-501S | COMMON CHOKE 90Ω,M (20%),Idc ≤ 330mA,RDC ≤ 350mΩ,SMD (2.05*1.25*1.4mm),After D/C 1936 is the bottom convex,CMM21T-900M-N(CHILISIN) | 0.1200 | 2 | 0.2804 |
| 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 | 1 | 0.1487 |
| 231-171330-200G | REGULATOR GS7133TD-R,3A,TDFN10(GSTEK)RoHS | 7.6721 | 2 | 25.6262 |
| 231-178001-200G | LDO REGULATOR,150mA,TPS78001DDCR/SOT-5(TI) RoHS | 7.6721 | 1 | 14.9200 |
| 241-225006-701G | X'TAL 25MHz,18pf,±30ppm,ESR ≤ 25Ω,TOPR=-40°C ~+85°C,SMD3225(4PAD),X32-25.000-18-30/30I (MEC)RoHS | 3.9138 | 1 | 6.4515 |
| 241-248006-340G | X'TAL 48MHz,20pf,±10ppm,ESR:50Ω(Max),TOPR=- 40°C~+105°C,SMD3225(4PAD),X3S048000FK1H- DEZ(HELE)RoHS | 3.9138 | 1 | 6.4515 |
| 241-432773-312G | X'TAL 32.768kHz,12.5pf,20ppm,TOPR=-40°C ~+85°C,SMD3215(2PAD),CM315D 32.768KDZF (CITIZEN)RoHS | 3.9138 | 1 | 6.4515 |
| 253-100115-501S | POLYSWITCH 1.1A,6V,SMT0805,0805L100 (LITTELFUSE) | 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 | 48 | 4.3846 |
| 263-180005-200C | RES 0Ω,J(5%),SMD,0402,(None JP)RoHS | 0.0873 | 37 | 3.4005 |
| 263-180005-300C | RES 0Ω,J(5%),SMD,0603,(None JP)RoHS | 0.0873 | 5 | 0.5001 |
| 263-180010-210C | RES 1Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 2 | 0.2152 |
| 263-180100-110C | RES 10Ω,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 10 | 0.9615 |
| 263-180100-210C | RES 10Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 4 | 0.4062 |
| 263-180220-110C | RES 22Ω,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 2 | 0.2152 |
| 263-180390-110C | RES 39Ω,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 27 | 2.5027 |
| 263-180519-210C | RES 5.1Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-181000-110C | RES 100Ω,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 2 | 0.2152 |
| 263-181000-210C | RES 100Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 7 | 0.6852 |
| 263-181001-110C | RES 1KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 27 | 2.5027 |
| 263-181001-210C | RES 1KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 9 | 0.8697 |
| 263-181002-110C | RES 10KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 43 | 3.9377 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 635789
Failure Rate: 1,572.8483
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 263-181002-210C | RES 10KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 13 | 1.2359 |
| 263-181003-110C | RES 100KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 7 | 0.6852 |
| 263-181003-210C | RES 100KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 4 | 0.4062 |
| 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 | 3 | 0.3114 |
| 263-181022-210C | RES 10.2KΩ,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 | 2 | 0.2152 |
| 263-181271-210C | RES 1.27KΩ,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 | 2 | 0.2152 |
| 263-181500-210C | RES 150Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 3 | 0.3114 |
| 263-181502-210C | RES 15KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 2 | 0.2152 |
| 263-181503-210C | RES 150KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-181623-210C | RES 162KΩ,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 | 2 | 0.2152 |
| 263-181960-210C | RES 196Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-182001-210C | RES 2KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 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 |
| 263-182005-210C | RES 20MΩ,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 | 21 | 1.9617 |
| 263-182202-110C | RES 22KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 2 | 0.2152 |
| 263-182208-310C | RES 2.2Ω,F(1%),SMD,0603,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-182400-110C | RES 240Ω,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 4 | 0.4062 |
| 263-182433-210C | RES 243KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-182801-210C | RES 2.8KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-183000-110C | RES 300Ω,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 2 | 0.2152 |
| 263-183003-310C | RES 300KΩ,F(1%),SMD,0603,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-183010-210C | RES 301Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 4 | 0.4062 |
| 263-183242-210C | RES 32.4KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-183300-210C | RES 330Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 2 | 0.2152 |
| 263-183301-110C | RES 3.3KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 8 | 0.7776 |
| 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 |
| 263-183305-100C | RES 33Ω,J(5%),SMD,0201,(None JP)RoHS | 0.0873 | 7 | 0.6852 |
| 263-184532-210C | RES 45.3KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-184701-110C | RES 4.7KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 13 | 1.2359 |
| 263-184702-110C | RES 47KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 9 | 0.8697 |
| 263-184990-110C | RES 499Ω,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 16 | 1.5088 |
| 263-184990-210C | RES 499Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-184991-110C | RES 4.99KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-184991-210C | RES 4.99KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 3 | 0.3114 |
| 263-185101-210C | RES 5.1KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-185102-210C | RES 51KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 2 | 0.2152 |
| 263-185103-110C | RES 510KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-185602-210C | RES 56KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 3 | 0.3114 |
| 263-186981-210C | RES 6.98KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 1 | 0.1162 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 635789
Failure Rate: 1,572.8483
Temperature: 45
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 263-187501-210C | RES 7.5KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 3 | 0.3114 |
| 263-187502-210C | RES 75KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-188450-210C | RES 845Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 1 | 0.1162 |
| 263-188661-210C | RES 8.66KΩ,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 |
| 263-189099-210C | RES 90.9Ω,F(1%),SMD,0402,(None JP)RoHS | 0.0873 | 2 | 0.2152 |
| 273-047300-201G | THERM RES 47KΩ 1%,0402(B:25/50=4050,1%) TSM0B473F4051RZ(TKS)RoHS | 2.6513 | 1 | 5.1810 |
| 273-100402-301S | THERM RES 10KΩ,J(5%),SMD,0603, (B25/85=3435,3%),TSM1A103J34D3RZ(TKS) | 2.6513 | 3 | 12.3397 |
| 314-GHF511-119G | PCB GHF51 R.A1(12L HDI 84x55x1.6mm, 2 panelization)OSP(CIRCUITECH)RoHS | 6.5651 | 1 | 12.5107 |
| 342-101907-221G | HDMI CONN(D TYPE), 19P, F, 15u", BLACK, 90D, SMT, 2HMDHM-8SEFSDBN19A01(MOST WELL)RoHS | 5.5551 | 2 | 16.8329 |
| 342-310022-110G | Screw CONN. Terminal Block,Green,2Pos,300V,16A,PIT:5.0mm,MB612- 50002(DECA) RoHS | 5.5551 | 1 | 9.6181 |
| 343-501402-200G | Giga LAN CONN RJ45,SMT,GF,W/Transformer,W/LED,MRJG-11S88RS (MATRIX),RoHS | 5.5551 | 1 | 9.6181 |
| 343-502400-220G | USB conn 24p Type C,90D,G/F,SMT,H=3.14mm,UT12111-1160E-7H (FOXCONN)HF | 5.5551 | 1 | 9.6181 |
| 346-110200-006G | PIN PLUG 1*2pin/2.54mm,180D,BLACK,3321X02SAGR(6T) (YIMTEK)RoHS | 38.8854 | 1 | 67.3264 |
| 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 | 1 | 67.3264 |
| 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 |
| 348-660522-200S | MINI PCI-EXPRESS 1*52,0.8mm,10u",F,H=9.9mm,90D,SMT,IVORY,GEN RAL TYPE,AS0B226-S99Q-7H(FOXCONN)HF | 3.0300 | 1 | 4.9378 |
| 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 |
| 143-302501-400G | CPU AMD Ryzen R1606G 2.6GHz YE1606C4T2OFG/BGA-1140(AMD)RoHS | 151.5152 | 1 | 151.5152 |
| 292-301000-500S | BUZZER 3V,100mA,12Ω,4Khz,85db,SMD (5*4.2mm),SMT-G5030A(KEPO) | 600.0000 | 1 | 600.0000 |

File Name: GHF51-BN-46R16.rfp
System: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 460442
Failure Rate: 2,171.83
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

| Assembly Name | Part Number | Quantity | Failure Rate (Fit) | MTBF (Hrs) |
|----------------|-----------------|----------|--------------------|------------|
| GHF51-BN-46R16 | 774-GHF511-100G | 1 | 2171.83 | 460,442 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 460442
Failure Rate: 2,171.8260
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 113-500007-210S | IC TTL,Single Buffer/Driver With Open-Drain Output,SN74LVC1G07DCKR/SC70-5(TI) | 8.2795 | 3 | 31.9831 |
| 113-500008-210G | IC TTL,Single 2-Input Positive-AND Gate,SN74LVC1G08DCKR/SC70-5(TI)RoHS | 8.2795 | 1 | 12.4540 |
| 113-500017-210G | IC TTL,Single Schmitt-Trigger Buffer,SN74LVC1G17DCKR/SC70-5(TI)RoHS | 8.2795 | 2 | 22.4187 |
| 113-500126-300G | IC TTL,Single Bus Buffer Gate,SN74LVC1G126DCK/SC70-5(TI)RoHS | 8.2795 | 1 | 12.4540 |
| 113-906408-400G | IC LOW-VOLTAGE 8-BIT I2C AND SMBus I/O EXPANDER,UQFN16, TCA6408ARSVR(TI)RoHS | 8.2795 | 1 | 12.4540 |
| 121-002065-200G | IC Power-Distribution Switches,1A,TPS2065DDBV/SOT23-5(TI)RoHS | 8.2795 | 3 | 31.9831 |
| 121-022976-200G | IC Switch,5.7-V,6-A,14-mΩ On-Resistance Dual-Channel Load,TPS22976DPU/WSON-14(TI)RoHS | 8.2795 | 2 | 22.4187 |
| 121-229130-400G | IC Power Switch,TPS22913CYZV/DSBGA-4(TI)RoHS | 19.2561 | 2 | 64.3188 |
| 131-558192-520G | DDR4-2666 SDRAM 8Gb(512M*16)K4A8G165WC-BCTD/FBGA-96 (SAMSUNG)RoHS | 18.4992 | 4 | 94.1302 |
| 135-306400-209G | SPI SERIAL FLASH 64Mbit,W25Q64JWSSIQ/SOIC-8 (WINBOND)RoHS | 18.4992 | 1 | 28.7152 |
| 135-334050-200G | I2C Compatible SPD EEPROM 4KBit(512 x 8) AT34C04-X5M-T/ TSSOP-8(ATMEL)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 |
| 141-007802-200G | IC H/W Monitoring,NCT7802Y/QFN20(Nuvoton)HF | 8.2795 | 1 | 12.4540 |
| 141-035700-420G | IC PWM CTRL IR3570BMTRPBF/QFN-40(IR)RoHS | 8.2795 | 1 | 12.4540 |
| 141-568210-400G | IC Converter,4.5V~17V Input,8A Synchronous Step-Down SWIFT,TPS568215OARNN/VQFN-18(TI)RoHS | 8.2795 | 3 | 31.9831 |
| 141-620850-200G | IC Synchronous Buck Converter,2.5-6,3A,TLV62085RLT/VSON-7(TI)RoHS | 8.2795 | 1 | 12.4540 |
| 141-620950-400G | IC Converter,4-A High Efficiency Step Down with DCS-Control,TLV62095RGT/QFN-16(TI)RoHS | 8.2795 | 1 | 12.4540 |
| 147-002110-200G | IC CHIP,Giga LAN CTRL,WGI211AT SLJXZ/QFN-64 (INTEL)RoHS | 8.2795 | 1 | 12.4540 |
| 148-100464-400G | eMMC 5.1,64G,-25°C~+85°C,SMD,FBGA-153,SDINBDG4-64G-I1(SANDISK)RoHS | 18.4992 | 1 | 28.7152 |
| 171-205200-220G | DIODE SCHOTTKY,30V,200mA,RB520S-30H/SOD-523(SMARTENGRAND)RoHS | 0.5385 | 8 | 5.7123 |
| 171-224148-309G | DIODE Switching,1N4148WS-7-F/SOD323(DIODES) RoHS | 0.5385 | 1 | 1.0403 |
| 171-230502-200G | DIODE ESD Protection,VRWM=5.0V,IRM=100nA,VESD=10KV,SM T,SOT883,PESD5V0U2BM(NXP)RoHS | 0.5385 | 1 | 1.0403 |
| 171-364020-200G | DIODE TVS,3.6V,17W,Bidirectional,4-Channel,TPD4E02B04DQAR/USON-10(TI)RoHS | 0.5385 | 2 | 1.7884 |
| 171-364212-200G | DIODE TVS VRWM:-12V~12V,AZ4212-01G.R7G/SOD-123(AMAZING)RoHS | 0.5385 | 1 | 1.0403 |
| 171-404010-200S | DIODE 4-CHANNEL ESD PROTECTION,TPD4S010DQAR/SON-DQA10(TI) | 8.2795 | 6 | 59.7113 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 460442
Failure Rate: 2,171.8260
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 171-451715-200G | DIODE Zener,15V,Vz=14.34V~14.98V,UDZVTE-1715B/SOD-323FL(ROHM)RoHS | 0.5385 | 1 | 1.0403 |
| 171-505433-200G | DIODE SCHOTTKY BARRIER RECTIFIER,30V,200mA,BAT54AW/SOT323(NEXPERIA)RoHS | 0.5385 | 2 | 1.7884 |
| 172-207002-241G | MOSFET N-Ch,VDS:60V,ID:300mA,VGS:±20V,@10V,RDS:3Ω,2N7002K/SOT23-3(PANJIT)RoHS | 17.9506 | 1 | 26.4362 |
| 172-223904-400G | TRANSISTOR Dual NPN,MBT3904DW1T1G/SOT-363(ON)RoHS | 2.8884 | 1 | 5.1202 |
| 172-239060-200G | TRANSISTOR PNP,Ic≤-200mA,Vceo:--40V,NST3906F3T5G/SOT1123-3(ON)RoHS | 2.8884 | 1 | 5.1202 |
| 172-300612-200G | MOSFET Dual N-Ch,VDS:30V,VGS:±20V,ID:100mA,@4V,RDS:8Ω,EM6K1GT2R/SOT-563(ROHM)RoHS | 17.9506 | 6 | 128.1030 |
| 172-304435-200G | MOSFET P-Ch,VDS:-30V,ID:-11A,VGS:±25V,@-4.5V,RDS:36mΩ,AP4435GYT-HF/PMPAK3x3(APEC)HF | 17.9506 | 2 | 47.8105 |
| 172-888240-200G | DrMOS Power Stage,TDA88240/QFN-30(INFINEON)RoHS | 17.9506 | 2 | 47.8105 |
| 174-210110-330G | LED Brilliant Green SMD0603,H=0.4mm,19-217/GHC-YR1S2/3T(EVERLIGHT)RoHS | 1.1876 | 1 | 2.3295 |
| 213-151515-200C | MLCC 151P/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1118 | 2 | 0.2438 |
| 213-151815-200C | MLCC 181P/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1118 | 6 | 0.7057 |
| 213-152005-200C | MLCC 20pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1118 | 2 | 0.2438 |
| 213-152205-200C | MLCC 22pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1118 | 2 | 0.2438 |
| 213-152215-200C | MLCC 221P/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1118 | 3 | 0.3601 |
| 213-152705-200C | MLCC 27pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1118 | 2 | 0.2438 |
| 213-153309-200C | MLCC 33pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1118 | 1 | 0.1261 |
| 213-158205-200C | MLCC 82pF/50V,NPO,J(5%),SMD,0402,(None JP)RoHS | 0.1118 | 1 | 0.1261 |
| 213-251029-110C | MLCC 102P/25V,X7R,K(10%)SMD,0201(None JP)RoHS | 0.1118 | 1 | 0.1261 |
| 213-251038-250C | MLCC 103P/50V,X7R,K(10%),SMD,0402,(None JP)RoHS | 0.1118 | 7 | 0.8203 |
| 213-251048-230J | MLCC 104P/50V,X7R,K(10%),SMD,0402,(JP)RoHS | 0.1118 | 3 | 0.3601 |
| 213-251049-130J | MLCC 104P/10V,X5R,K(10%),SMD,0201,(JP)RoHS | 0.1118 | 79 | 8.9574 |
| 213-251049-200J | MLCC 104P/16V,X7R,K(10%),SMD,0402,(JP)RoHS | 0.1118 | 17 | 1.9592 |
| 213-251049-270J | MLCC 104P/25V,X5R,K(10%),SMD,0402,(JP)RoHS | 0.1118 | 12 | 1.3909 |
| 213-251059-109G | MLCC 105P/6.3V,X5R,K(10%),SMD,0201,CC0201KRX5R5BB105(YAGEO)RoHS | 0.1118 | 45 | 5.1259 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 460442
Failure Rate: 2,171.8260
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 213-251059-200C | MLCC 105P/6.3V,X5R,K(10%),SMD,0402,(None JP) RoHS | 0.1118 | 1 | 0.1261 |
| 213-251059-230J | MLCC 105P/16V,X5R,K(10%),SMD,0402,(JP)RoHS | 0.1118 | 10 | 1.1630 |
| 213-251068-200J | MLCC 106P/6.3V,X5R,M(20%),SMD,0402,(JP)RoHS | 0.1118 | 11 | 1.2770 |
| 213-251068-300J | MLCC 106P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS | 0.1118 | 3 | 0.3601 |
| 213-251069-320J | MLCC 106P/10V,X5R,K(10%),SMD,0603,(JP)RoHS | 0.1118 | 8 | 0.9347 |
| 213-251069-540J | MLCC 106P/16V,X5R,K(10%),SMD,0805,(JP)RoHS | 0.1118 | 12 | 1.3909 |
| 213-252229-200C | MLCC 222P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS | 0.1118 | 2 | 0.2438 |
| 213-252249-140C | MLCC 224P/6.3V,X5R,K(10%),SMD,0201,(None JP) RoHS | 0.1118 | 20 | 2.2995 |
| 213-252249-210C | MLCC 224P/10V,X5R,K(10%),SMD,0402,(None JP) RoHS | 0.1118 | 5 | 0.5909 |
| 213-252249-330C | MLCC 224P/25V,X7R,K(10%),SMD,0603,(None JP) RoHS | 0.1118 | 3 | 0.3601 |
| 213-252268-310J | MLCC 226P/6.3V,X5R,M(20%),SMD,0603,(JP)RoHS | 0.1118 | 55 | 6.2538 |
| 213-252269-510J | MLCC 226P/6.3V,X5R,M(20%),SMD,0805,(JP)RoHS | 0.1118 | 4 | 0.4757 |
| 213-253329-200C | MLCC 332P/50V,X7R,K(10%),SMD,0402,(None JP) RoHS | 0.1118 | 2 | 0.2438 |
| 213-253349-209G | MLCC 334P/10V,X5R,K(10%),SMD,0402,CC0402KRX5R6BB334(YAGEO) RoHS | 0.1118 | 4 | 0.4757 |
| 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 | 4 | 0.4757 |
| 213-254739-210C | MLCC 473P/16V,X7R,K(10%),SMD,0402,(None JP) RoHS | 0.1118 | 3 | 0.3601 |
| 213-254758-210J | MLCC 475P/6.3V,X5R,M(20%),SMD,0402,(JP)RoHS | 0.1118 | 3 | 0.3601 |
| 213-254759-320C | MLCC 475P/10V,X5R,K(10%),SMD,0603,(None JP) RoHS | 0.1118 | 3 | 0.3601 |
| 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 | 4 | 6.1444 |
| 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 | 1 | 1.7512 |
| 223-010221-730G | CHOKE 1uH,M (20%),RDC ≤ 27mΩ,Idc=4.5A,Isat=7A,SMD,(4.5x4x2),PCMB042T-1R0MS(CYNTEC)RoHS | 0.1536 | 1 | 0.1903 |
| 223-015221-710G | CHOKE 1.5uH,M (20%),RDC ≤ 38mΩ,Idc=4A,Isat=6A,SMD,(4.15x4x1.8),PCMB042T-1R5MS(CYNTEC)RoHS | 0.1536 | 2 | 0.3588 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 460442
Failure Rate: 2,171.8260
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 223-036122-500G | CHOKE 0.36uH,M(20%),Rdc=1.4±7% mΩ,Idc=24A,Isat=24A,SMD, (6.95x6.6x3.8mm),PCME064T-R36MS1R407 (CYNTEC)RoHS | 0.1536 | 2 | 0.3588 |
| 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 | 2 | 0.3588 |
| 223-068122-500G | CHOKE 0.68uH,M (20%),RDC ≤ 5.5mΩ,Idc=15.5A,Isat=25A,SMD, (6.95x6.6x2.8),PCMC063T-R68MN(CYNTEC)RoHS | 0.1536 | 1 | 0.1903 |
| 223-410040-501S | COMMON CHOKE 90Ω,M (20%),Idc ≤ 330mA,RDC ≤ 350mΩ,SMD (2.05*1.25*1.4mm),After D/C 1936 is the bottom convex,CMM21T-900M-N(CHILISIN) | 0.1536 | 2 | 0.3588 |
| 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 | 1 | 0.1903 |
| 231-171330-200G | REGULATOR GS7133TD-R,3A,TDFN10(GSTEK)RoHS | 19.2561 | 2 | 64.3188 |
| 231-178001-200G | LDO REGULATOR,150mA,TPS78001DDCR/SOT-5(TI) RoHS | 19.2561 | 1 | 37.4477 |
| 241-225006-701G | X'TAL 25MHz,18pf,±30ppm,ESR ≤ 25Ω,TOPR=-40°C ~+85°C,SMD3225(4PAD),X32-25.000-18-30/30I (MEC)RoHS | 7.5521 | 1 | 12.4488 |
| 241-248006-340G | X'TAL 48MHz,20pf,±10ppm,ESR:50Ω(Max),TOPR=- 40°C~+105°C,SMD3225(4PAD),X3S048000FK1H- DEZ(HELE)RoHS | 7.5521 | 1 | 12.4488 |
| 241-432773-312G | X'TAL 32.768kHz,12.5pf,20ppm,TOPR=-40°C ~+85°C,SMD3215(2PAD),CM315D 32.768KDZF (CITIZEN)RoHS | 7.5521 | 1 | 12.4488 |
| 253-100115-501S | POLYSWITCH 1.1A,6V,SMT0805,0805L100 (LITTELFUSE) | 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 | 48 | 5.6102 |
| 263-180005-200C | RES 0Ω,J(5%),SMD,0402,(None JP)RoHS | 0.1117 | 37 | 4.3511 |
| 263-180005-300C | RES 0Ω,J(5%),SMD,0603,(None JP)RoHS | 0.1117 | 5 | 0.6399 |
| 263-180010-210C | RES 1Ω,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 2 | 0.2753 |
| 263-180100-110C | RES 10Ω,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 10 | 1.2303 |
| 263-180100-210C | RES 10Ω,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 4 | 0.5198 |
| 263-180220-110C | RES 22Ω,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 2 | 0.2753 |
| 263-180390-110C | RES 39Ω,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 27 | 3.2022 |
| 263-180519-210C | RES 5.1Ω,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-181000-110C | RES 100Ω,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 2 | 0.2753 |
| 263-181000-210C | RES 100Ω,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 7 | 0.8767 |
| 263-181001-110C | RES 1KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 27 | 3.2022 |
| 263-181001-210C | RES 1KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 9 | 1.1128 |
| 263-181002-110C | RES 10KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 43 | 5.0384 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 460442
Failure Rate: 2,171.8260
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 263-181002-210C | RES 10KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 13 | 1.5813 |
| 263-181003-110C | RES 100KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 7 | 0.8767 |
| 263-181003-210C | RES 100KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 4 | 0.5198 |
| 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 | 3 | 0.3984 |
| 263-181022-210C | RES 10.2KΩ,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 | 2 | 0.2753 |
| 263-181271-210C | RES 1.27KΩ,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 | 2 | 0.2753 |
| 263-181500-210C | RES 150Ω,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 3 | 0.3984 |
| 263-181502-210C | RES 15KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 2 | 0.2753 |
| 263-181503-210C | RES 150KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-181623-210C | RES 162KΩ,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 | 2 | 0.2753 |
| 263-181960-210C | RES 196Ω,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-182001-210C | RES 2KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 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 |
| 263-182005-210C | RES 20MΩ,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 | 21 | 2.5100 |
| 263-182202-110C | RES 22KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 2 | 0.2753 |
| 263-182208-310C | RES 2.2Ω,F(1%),SMD,0603,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-182400-110C | RES 240Ω,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 4 | 0.5198 |
| 263-182433-210C | RES 243KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-182801-210C | RES 2.8KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-183000-110C | RES 300Ω,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 2 | 0.2753 |
| 263-183003-310C | RES 300KΩ,F(1%),SMD,0603,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-183010-210C | RES 301Ω,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 4 | 0.5198 |
| 263-183242-210C | RES 32.4KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-183300-210C | RES 330Ω,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 2 | 0.2753 |
| 263-183301-110C | RES 3.3KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 8 | 0.9949 |
| 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 |
| 263-183305-100C | RES 33Ω,J(5%),SMD,0201,(None JP)RoHS | 0.1117 | 7 | 0.8767 |
| 263-184532-210C | RES 45.3KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-184701-110C | RES 4.7KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 13 | 1.5813 |
| 263-184702-110C | RES 47KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 9 | 1.1128 |
| 263-184990-110C | RES 499Ω,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 16 | 1.9306 |
| 263-184990-210C | RES 499Ω,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-184991-110C | RES 4.99KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-184991-210C | RES 4.99KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 3 | 0.3984 |
| 263-185101-210C | RES 5.1KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-185102-210C | RES 51KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 2 | 0.2753 |
| 263-185103-110C | RES 510KΩ,F(1%),SMD,0201,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-185602-210C | RES 56KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 3 | 0.3984 |
| 263-186981-210C | RES 6.98KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 1 | 0.1487 |

File Name: GHF51-BN-46R16.rfp
Assembly: 774-GHF511-100G
Ref Des:
Calculation Model: Telcordia Issue 4



MTBF (hrs): 460442
Failure Rate: 2,171.8260
Temperature: 60
Environment: GB, GC - Ground Benign, Controlled

| Part Number | Description | Unit Failure Rate | Quantity | Total Failure Rate |
|-----------------|---|-------------------|----------|--------------------|
| 263-187501-210C | RES 7.5KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 3 | 0.3984 |
| 263-187502-210C | RES 75KΩ,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-188450-210C | RES 845Ω,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 1 | 0.1487 |
| 263-188661-210C | RES 8.66KΩ,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 |
| 263-189099-210C | RES 90.9Ω,F(1%),SMD,0402,(None JP)RoHS | 0.1117 | 2 | 0.2753 |
| 273-047300-201G | THERM RES 47KΩ 1%,0402(B:25/50=4050,1%) TSM0B473F4051RZ(TKS)RoHS | 5.1159 | 1 | 9.9972 |
| 273-100402-301S | THERM RES 10KΩ,J(5%),SMD,0603, (B25/85=3435,3%),TSM1A103J34D3RZ(TKS) | 5.1159 | 3 | 23.8107 |
| 314-GHF511-119G | PCB GHF51 R.A1(12L HDI 84x55x1.6mm, 2 panelization)OSP(CIRCUITECH)RoHS | 12.6680 | 1 | 24.1406 |
| 342-101907-221G | HDMI CONN(D TYPE), 19P, F, 15u", BLACK, 90D, SMT, 2HMDHM-8SEFSDBN19A01(MOST WELL)RoHS | 10.7191 | 2 | 32.4809 |
| 342-310022-110G | Screw CONN. Terminal Block,Green,2Pos,300V,16A,PIT:5.0mm,MB612- 50002(DECA) RoHS | 10.7191 | 1 | 18.5590 |
| 343-501402-200G | Giga LAN CONN RJ45,SMT,GF,W/Transformer,W/LED,MRJG-11S88RS (MATRIX),RoHS | 10.7191 | 1 | 18.5590 |
| 343-502400-220G | USB conn 24p Type C,90D,G/F,SMT,H=3.14mm,UT12111-1160E-7H (FOXCONN)HF | 10.7191 | 1 | 18.5590 |
| 346-110200-006G | PIN PLUG 1*2pin/2.54mm,180D,BLACK,3321X02SAGR(6T) (YIMTEK)RoHS | 75.0334 | 1 | 129.9132 |
| 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 | 1 | 129.9132 |
| 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 |
| 348-660522-200S | MINI PCI-EXPRESS 1*52,0.8mm,10u",F,H=9.9mm,90D,SMT,IVORY,GEN RAL TYPE,AS0B226-S99Q-7H(FOXCONN)HF | 5.8468 | 1 | 9.5280 |
| 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 |
| 143-302501-400G | CPU AMD Ryzen R1606G 2.6GHz YE1606C4T2OFG/BGA-1140(AMD)RoHS | 151.5152 | 1 | 151.5152 |
| 292-301000-500S | BUZZER 3V,100mA,12Ω,4Khz,85db,SMD (5*4.2mm),SMT-G5030A(KEPO) | 600.0000 | 1 | 600.0000 |