



Bill of Materials for the STR-FAN65004B-GEVB Evaluation Board

| Designator | Quantity | Description | Value | Tolerance | Footprint | Manufacturer | Manufacturer Part Number | Substitution Allowed | Lead Free |
|--|----------|-------------------------------------|----------------|-----------|-----------------------|------------------|--------------------------|----------------------|-----------|
| C1 C47 C48 C50 C51 C52 C54 C56 C59 C62 C67 | 11 | CAP CER 1uF 25V X6S 0402 | 1uF | 25V | 0402 | Murata | GRM155C81E105KE11 | Yes | Yes |
| C2 | 1 | CAP CER 4.7uF 16V X7S 0603 | 4.7uF | 16V | 0603 | Murata | GRM188C71C475KE21 | Yes | Yes |
| C3 C4 C25 C26 | 4 | CAP CER 1UF 100V X7S 0805 | 1uF | 100V | 0805 | Murata | GRM21BC72A105KE01 | Yes | Yes |
| C5 C44 C45 C69 C71 C74 C77 C79 C81 | 9 | CAP CER 1UF 16V X5R 0402 | 1uF | 16V | 0402 | Murata | GRM155R61C105KA12 | Yes | Yes |
| C6 C8 | 2 | CAP CER 10000PF 16V X7R 0402 | 10nF | 16V | 0402 | Murata | GRM155R71C103KA01D | Yes | Yes |
| C7 | 1 | CAP CER 0.033UF 100V X8R 0603 | 33nF | 100V | 0603 | Murata | GCM188R92A333KA01D | Yes | Yes |
| C9 C11 C12 C13 C14 C34 C35 C36 C37 C38 | 10 | CAP CER 10UF 50V X7R 1210 | 10uF | 50V | 1210 | Murata | GRM32ER71H106MA12 | Yes | Yes |
| C10 | 1 | CAP CER 6.8nF 100V X7R 0603 | 6.8nF | 100V | 0603 | Murata | GCM188R72A682KA37D | Yes | Yes |
| C15 | 0 | DNI | DNI | DNI | DNI | DNI | DNI | Yes | Yes |
| C16 | 1 | CAP CER 470PF 100V C0G/NP0 0603 | 470pF | 100V | 0603 | Murata | GCM1885C2A471JA16D | Yes | Yes |
| C17 | 1 | CAP CER 0.1UF 100V X7R 0603 | 0.1uF | 100V | 0603 | Murata | GRM188R72A104KA35D | Yes | Yes |
| C18 C19 C20 C27 C31 C32 C33 C39 | 8 | CAP CER 10UF 100V X7S 1210 | 10uF | 100V | 1210 | Murata | GRM32EC72A106KE05L | Yes | Yes |
| C21 C22 C23 | 0 | DNI | DNI | DNI | DNI | DNI | DNI | Yes | Yes |
| C24 | 0 | DNI | DNI | DNI | DNI | DNI | DNI | Yes | Yes |
| C28 C40 C41 C42 C43 C49 C68 | 7 | CAP CER 1UF 10V X7S 0402 | 1uF | 10V | 0402 | Murata | GCM155C71A105KE38 | Yes | Yes |
| C29 C30 | 2 | CAP Aluminum Poly 20% 220uF 35V | 220uF | 35V | Radial 10.3x10.3mm | Wurth | 875075661008 | Yes | Yes |
| C46 | 0 | DNI | DNI | DNI | DNI | | | Yes | Yes |
| C53 C58 C65 C73 C75 C76 | 6 | CAP CER 4.7UF 6.3V X5R 0402 | 4.7uF | 6.3V | 0402 | Murata | GRM155R60J475ME47D | Yes | Yes |
| C55 C57 | 2 | CAP CER 12PF 50V C0G/NP0 0402 | 12pF | 50V | 0402 | Murata | GJM1555C1H120JB01D | Yes | Yes |
| C60 C78 | 2 | CAP CER 0.1UF 50V X7R 0402 | 0.1uF | 50V | 0402 | Murata | GCM155R71H104KE02 | Yes | Yes |
| C61 C64 C80 | 3 | CAP CER 10UF 25V X5R 0603 | 10uF | 25V | 0603 | Murata | GRM188R61E106MA73 | Yes | Yes |
| C63 C66 | 2 | CAP CER 7.5PF 50V C0G/NP0 0402 | 7.5pF | 50V | 0402 | Murata | GJM1555C1H7R5CB01D | Yes | Yes |
| C70 C72 | 2 | CAP CER 10000PF 100V X7R 0603 | 10nF | 100V | 0603 | Murata | GCM188R72A103KA37D | Yes | Yes |
| D1 | 1 | 30 V Schottky Diode | NSR05F30NX | 30V | DSN2 0402 | ON Semiconductor | NSR05F30NXT5G | No | Yes |
| D2 | 1 | Blue LED | 150060BS75000 | 3.2V | 0603 | Wurth Elektronik | 150060BS75000 | Yes | Yes |
| D3 | 1 | Red LED | 150060RS75000 | 2V | 0603 | Wurth Elektronik | 150060RS75000 | Yes | Yes |
| D4 | 1 | Green LED | 150060GS75000 | 3.2V | 0603 | Wurth Elektronik | 150060GS75000 | Yes | Yes |
| D5 | 1 | Yellow LED | 150060YS75000 | 2V | 0603 | Wurth Elektronik | 150060YS75000 | Yes | Yes |
| D6 D7 | 2 | Schottky Barrier Diode, 2.0 A, 20 V | NSR20F20NX | 20V | DSN2 0603 | ON Semiconductor | NSR20F20NX | No | Yes |
| D8 | 1 | ESD Protection Diodes | SZESD7205 | 6V | SOT-723 | ON Semiconductor | SZESD7205DT5G | No | Yes |
| FB1 | 1 | Ferrite bead 220 Ohm 0805 1LN | 220@100M | | 0805 | Wurth Elektronik | 782853221 | Yes | Yes |
| J1 | 1 | Standard 1x4pin 100mil Pitch Header | 613 004 111 21 | | 1x4pin 100mil | Wurth Elektronik | 613 004 111 21 | Yes | Yes |

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|---|----|---|--------------------|-----|---------------------------|-----------------------|--------------------|-----|-----|
| J2 J3 J4 J7 J9 J10 J11 J12 J13 | 9 | Standard 1x2pin 100mil Pitch Header | 613 002 111 21 | | 1x2pin 100mil | Würth Elektronik | 613 002 111 21 | Yes | Yes |
| J5 J6 J15 J16 | 4 | PLASTIC HEXAGON NUT M3 | 709940300 | | M3 Nut | Würth | 709940300 | Yes | Yes |
| J8 | 1 | DLT 8 pin connector | IPBS-104-01-T-D-GP | | 2x4pin 165mil | Samtec | IPBS-104-01-T-D-GP | Yes | Yes |
| J14 | 1 | Standard 1x3pin 100mil Pitch Header (I2C Specific) | 613 003 111 21 | | 1x3pin 100mil | Würth Elektronik | 613 003 111 21 | Yes | Yes |
| J17 J18 J25 J26 | 4 | PLASTIC SPACER STUD METRIC THREAD M3 15MM F-M | 971150365 | | M3 15MM Standoff | Würth | 971150365 | Yes | Yes |
| J19 J20 | 2 | Red Insulated 4mm socket for banana plugs | 571-0500 | | Red Banana Rec | Deltron | 571-0500 | Yes | Yes |
| J21 J22 | 2 | Black Insulated 4mm socket for banana plugs | 571-0100 | | Black Banana Rec | Deltron | 571-0100 | Yes | Yes |
| J23 | 1 | Standard Arm Cortex Debug Connector | FTSH-105-01-F-DV-K | | 2x5pin 50mil Cortex Debug | Samtec | FTSH-105-01-F-DV-K | Yes | Yes |
| J24 | 1 | Mini USB1/2 Type-B Connector | 65100516121 | | Mini USB1/2 B | Würth Elektronik | 65100516121 | Yes | Yes |
| JP1 | 1 | Surface Mount High Current Jumper Chip Resistor | 31.6A | | 0805 | Stackpole Electronics | HCJ0805ZT0R00 | Yes | Yes |
| JP2 JP3 | 0 | DNI | DNI | | DNI | DNI | DNI | Yes | Yes |
| JP4 | 1 | Surface Mount High Current Jumper Chip Resistor | 6.5A | | 0402 | Stackpole Electronics | HCJ0402ZT0R00 | Yes | Yes |
| L1 | 1 | FIXED IND 22UH 11A 14.6 MOHM SMD | 22uH | | 18.3x18.3mm | Würth Elektronik | 74435572200 | Yes | Yes |
| L2 | 0 | DNI | DNI | | DNI | | | Yes | Yes |
| NT1 NT2 NT3 NT4 NT5 | 0 | DNI | DNI | | DNI | | | Yes | Yes |
| Q1 | 1 | Automotive Small Signal MOSFET 60V 340mA 2.5 Ohm Single N-Channel SOT-323 | 2V7002W | 60V | SOT-323 | ON Semiconductor | 2V7002WT1G | No | Yes |
| Q2 | 1 | Small Signal MOSFET 60V 380mA 1.6 Ohm Single N-Channel SOT-23 | 2N7002K | 60V | SOT-23 | ON Semiconductor | 2N7002K | No | Yes |
| Q3 Q4 Q5 | 3 | Small Signal MOSFET 60V 340mA 2.5 Ohm Single N-Channel SOT-323 | 2N7002W | 60V | SOT-323 | ON Semiconductor | 2N7002WT1G | No | Yes |
| R1 | 1 | RES SMD 10 OHM 1% 1/16W 0402 | 10 | | 0402 | Vishay Dale | CRCW040210R0FKED | Yes | Yes |
| R2 R14 R37 | 3 | RES SMD 0 OHM JUMPER 1/16W 0402 | 0 | | 0402 | Vishay Dale | CRCW04020000Z0ED | Yes | Yes |
| R3 R6 | 2 | RES SMD 1 OHM 1% 1/16W 0402 | 1 | | 0402 | Vishay Dale | CRCW04021R00FKED | Yes | Yes |
| R4 | 1 | RES SMD 6.81K OHM 1% 1/10W 0603 | 6.81K | | 0603 | Vishay Dale | CRCW06036K81FKEA | Yes | Yes |
| R5 | 0 | DNI | DNI | | DNI | DNI | DNI | Yes | Yes |
| R7 | 1 | RES SMD 324 OHM 1% 1/10W 0603 | 324 | | 0603 | Vishay Dale | CRCW0603324RFKEA | Yes | Yes |
| R8 | 1 | RES SMD 2 OHM 1% 1/16W 0402 | 2 | | 0402 | Vishay Dale | CRCW04022R00FKED | Yes | Yes |
| R9 | 1 | RES SMD 20K OHM 1% 1/10W 0603 | 20K | | 0603 | Vishay Dale | CRCW060320K0FKEA | Yes | Yes |
| R10 | 0 | DNI | DNI | | DNI | DNI | DNI | Yes | Yes |
| R11 R21 R24 | 3 | RES SMD 255K OHM 0.1% 1/10W 0603 | 255K | | 0603 | Panasonic | ERA-3AEB2553V | Yes | Yes |
| R12 R20 | 2 | RES SMD 11.5K OHM 0.1% 1/10W 0603 | 11.5K | | 0603 | Panasonic | ERA-3AEB1152V | Yes | Yes |
| R13 | 0 | DNI | DNI | | DNI | DNI | DNI | Yes | Yes |
| R15 R17 | 2 | RES SMD 6.81K OHM 0.1% 1/16W 0402 | 6.81K | | 0402 | Panasonic | ERA-2AEB6811X | Yes | Yes |
| R16 R18 | 2 | RES SMD 5.76K OHM 0.1% 1/16W 0402 | 5.76K | | 0402 | Panasonic | ERA-2AEB5761X | Yes | Yes |
| R19 | 1 | RES SMD 29.4K OHM 1% 1/16W 0402 | 29.4K | | 0402 | Vishay Dale | CRCW040229K4FKED | Yes | Yes |
| R22 R23 | 2 | RES SMD 1K OHM 1% 1/10W 0603 | 1K | | 0603 | Vishay Dale | CRCW06031K00FKEA | Yes | Yes |
| R25 | 1 | RES SMD 10.7K OHM 0.1% 1/10W 0603 | 10.7K | | 0603 | Panasonic | ERA-3AEB1072V | Yes | Yes |
| R26 R27 | 2 | RES 0.002 OHM 1% 5W 2512 | 0.002 | | 2512 | Vishay Dale | WSLF25122L000FEA | Yes | Yes |
| R28 R30 R31 R33 | 4 | RES SMD 1M OHM 1% 1/16W 0402 | 1M | | 0402 | Vishay Dale | CRCW04021M00FKED | Yes | Yes |
| R29 | 1 | RES SMD 2.21K OHM 1% 1/10W 0603 | 2.21K | | 0603 | Vishay Dale | CRCW06032K21FKEA | Yes | Yes |
| R32 | 1 | RES SMD 523 OHM 1% 1/10W 0603 | 523 | | 0603 | Vishay Dale | CRCW0603523RFKEA | Yes | Yes |
| R34 | 1 | RES SMD 60.4K OHM 1% 1/10W 0603 | 60.4K | | 0603 | Vishay Dale | CRCW060360K4FKEA | Yes | Yes |
| R35 R38 R42 R44 R45 R46 R47 R48 R49 R50 R51 R56 R59 R62 | 14 | RES SMD 10K OHM 1% 1/16W 0402 | 10K | | 0402 | Vishay Dale | CRCW040210K0FKED | Yes | Yes |
| R36 | 1 | RES SMD 35.7K OHM 1% 1/10W 0603 | 35.7K | | 0603 | Vishay Dale | CRCW060335K7FKEA | Yes | Yes |
| R39 | 1 | RES SMD 332 OHM 1% 1/10W 0603 | 332 | | 0603 | Vishay Dale | CRCW0603332RFKEA | Yes | Yes |
| R40 | 1 | RES SMD 3.09K OHM 1% 1/16W 0402 | 3.09K | | 0402 | Vishay Dale | CRCW04023K09FKED | Yes | Yes |
| R41 | 1 | RES SMD 100K OHM 1% 1/16W 0402 | 100K | | 0402 | Vishay Dale | CRCW0402100KFKED | Yes | Yes |
| R43 | 1 | RES SMD 499 OHM 1% 1/4W 1206 | 499 | | 1206 | Vishay Dale | CRCW1206499RFKEA | Yes | Yes |
| R52 R53 R54 R55 | 4 | RES SMD 4.75 OHM 1% 1/10W 0603 | 4.75 | | 0603 | Vishay Dale | CRCW06034R75FKEA | Yes | Yes |
| R57 | 1 | RES SMD 4.99K OHM 1% 1/16W 0402 | 4.99K | | 0402 | Vishay Dale | CRCW04024K99FKED | Yes | Yes |

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| R58 | 1 | ES SMD 9.31K OHM 1% 1/16W 040 | 9.31K | | 0402 | Vishay Dale | CRCW04029K31FKED | Yes | Yes |
| R60 | 1 | RES SMD 681 OHM 1% 1/16W 040 | 681 | | 0402 | Vishay Dale | CRCW0402681RFKED | Yes | Yes |
| R61 R64 | 2 | RES SMD 100 OHM 1% 1/16W 040 | 100 | | 0402 | Vishay Dale | CRCW0402100RFKED | Yes | Yes |
| R63 | 1 | ES SMD 2.32K OHM 1% 1/16W 040 | 2.32K | | 0402 | Vishay Dale | CRCW04022K32FKED | Yes | Yes |
| R65 | 1 | RES SMD 100 OHM 1% 1/10W 060 | 100 | | 0603 | Vishay Dale | CRCW0603100RFKEA | Yes | Yes |
| SW1 | 1 | WITCH TACTILE SPST-NO 0.05A 1 | 434153017835 | 12V | MOM1 SMD | Würth Elektronik | 434153017835 | Yes | Yes |
| TP10 TP12 TP13 TP15 TP16 TP17 TP19 TP21 TP22 TP23 TP25 TP2 | 0 | DNI | DNI | | DNI | | | Yes | Yes |
| TP11 TP14 TP18 | 0 | DNI | DNI | | DNI | | | Yes | Yes |
| TP20 TP24 TP29 TP30 TP31 TP32 | 6 | PC TEST POINT COMPACT | 5016 | | Test Loop | Keystone | 5016 | Yes | Yes |
| TP34 TP36 TP38 TP40 TP42 | 0 | DNI | DNI | | DNI | | | Yes | Yes |
| U1 U9 U10 | 3 | SPDT 10hm Ron Digital Switch | NLAS4157 | | SOT-363 | ON Semiconductor | NLAS4157 | No | Yes |
| U2 | 1 | e 65V, 6A Voltage Mode Sync PWM | FAN65004B | | PQFN35 6x6 | ON Semiconductor | FAN65004B | No | Yes |
| U3 | 1 | Temperature Sensor with 2-wire In | NCT375 | | DFN8 2x2mm | ON Semiconductor | NCT375MNR2G | No | Yes |
| U4 | 1 | Power, Zero-Drift Operational Amp | NCS333A | | SOT23-5 | ON Semiconductor | NCS333ASN2T1G | No | Yes |
| U5 | 1 | ntiometer (POT), 256-Tap, I2C Com | CAT5171 | | SOT23-8 | ON Semiconductor | CAT5171TBI-00GT3 | No | Yes |
| U6 | 1 | eter (POT), Dual 256-Tap, with I2C | MAX5419L | | TDFN8 | Maxim | MAX5419LETA+ | Yes | Yes |
| U7 | 1 | it 20Mb/s Dual-Supply Level Transl | NLSX4401 | | UDFN6 | ON Semiconductor | NLSX4401MU1TCG | No | Yes |
| U8 | 1 | it 20Mb/s Dual-Supply Level Transl | NLSX4402 | | UDFN8 | ON Semiconductor | NLSX4402FMUTCG | No | Yes |
| U11 | 1 | M32 Giant Gecko 32-bit Microcontr | EFM32GG380F1024 | | QFP100 14x14 | Silicon Labs | FM32GG380F1024G-E-QFP100 | Yes | Yes |
| U12 | 1 | Charge Pump Regulated 1Mhz DC | FAN5602 | 5V | MLP-8 3x3 | ON Semiconductor | FAN5602MP5X | No | Yes |
| U13 U14 | 2 | , Voltage Output, Bi-Directional Zer | NCS214R | | SC-70-6 | ON Semiconductor | NCS214RSQT2G | No | Yes |
| U15 | 1 | gulator, LDO, Ultra Low Noise, Ultra | NCP705 | 3.3V | WDFN6 | ON Semiconductor | NCP705MT33TCG | No | Yes |
| U16 | 1 | USB to BASIC UART IC | FT230X | | QFN16 4x4 | FTDI | FT230XQ-R | Yes | Yes |
| Y1 | 1 | s 32.768 kHz 12.5 pF +/-20 PPM -4 | 32.768 kHz | | 2 pin w/ shell | Micro Crystal | 1R-32.768kHz-12.5pF-20PPM-T/ | Yes | Yes |
| Y2 | 1 | CRYSTAL 48.0000MHZ 8PF SMD | 48MHZ | | 5x3.2mm | NDK | K5032GA-48.000000MHZ-LN-CE | Yes | Yes |