

| DA9070 FUEL GAUGE EVALUATION BOARD | | | | | | | | |
|------------------------------------|---|-----|--------------|---------------|----------|---------------------|--------------|-----------------------------|
| BILL OF MATERIALS | | | | | | DATE : 07-31-2018 | REV : 3 | |
| Item | Reference | Qty | Part | PCB Footprint | Comments | PART_NUMBER | Manufacturer | Description |
| 1 | B1 | 4 | RUBBER STAND | SJ61A3 | - | SJ61A3 | 3M | BUMPER CYLIN 0.375" DIA BLK |
| 2 | C1,C30,C50,C66 | 4 | 1uF | C0402 | - | GRM155R61A105KE15D | Murata | CAP CER 1UF 10V X5R 0402 |
| 3 | C2,C73 | 2 | 4.7nF | C0402 | DNL | GRM155R71E472KA01D | Murata | CAP CER 4700PF 25V X7R 0402 |
| 4 | C3 | 1 | 0.1uF | C0402 | DNL | GRM155R61H104KE14D | Murata | CAP CER 0.1UF 50V X5R 0402 |
| 5 | C4,C5,C6,C7,C8,C10,C48,C104 | 8 | 1uF | C0402 | - | GRM155R61E105KA12D | Murata | CAP CER 1UF 25V X5R 0402 |
| 6 | C9,C14,C17,C18,C19,C20,C21,C22,C23,C24,C26,C27,C28,C29,C38,C39,C40,C41,C42,C43,C44,C45,C46,C47,C106 | 25 | 100nF | C0402 | - | GRM155R71C104KA88D | Murata | CAP CER 0.1UF 16V X7R 0402 |
| 7 | C11 | 1 | 10uF | C0603 | - | GRM188R61E106MA73D | Murata | CAP CER 10UF 25V X5R 0603 |
| 8 | C12 | 1 | 1uF | C0402 | DNL | GRM155R61E105KA12D | Murata | CAP CER 1UF 25V X5R 0402 |
| 9 | C13 | 1 | 22uF | CAP_EEV226M | - | EEV226M035A9DAA | KEMET | CAP ALUM 22UF 20% 35V SMD |
| 10 | C15,C54,C55,C56,C57 | 5 | 4.7uF | C0402 | - | GRM155R61A475MEAAD | Murata | CAP CER 4.7UF 10V X5R 0402 |
| 11 | C16 | 1 | 4.7uF | C0402 | DNL | GRM155R61A475MEAAD | Murata | CAP CER 4.7UF 10V X5R 0402 |
| 12 | C25,C31,C36 | 3 | 100nF | C0402 | - | GRM155R71C104KA88D | Murata | CAP CER 0.1UF 16V X7R 0402 |
| 13 | C32,C33 | 2 | 4.7uF | C0603 | - | C1608X5R1E475K080AC | TDK | CAP CER 4.7UF 25V X5R 0603 |
| 14 | C34 | 1 | 2.2uF | C0402 | - | GRM155R61E225KE11D | Murata | CAP CER 2.2UF 25V X5R 0402 |
| 15 | C35 | 1 | 2.2uF | C0402 | DNL | GRM155R61E225KE11D | Murata | CAP CER 2.2UF 25V X5R 0402 |
| 16 | C37 | 1 | 1nF | C0402 | DNL | GRM155R71H102KA01D | Murata | CAP CER 1000PF 50V X7R 0402 |
| 17 | C49 | 1 | 4.7uF | C0402 | - | GRM155R61A475MEAAD | Murata | CAP CER 4.7UF 10V X5R 0402 |
| 18 | C51,C52,C53,C101,C102 | 5 | 4.7uF | C0402 | - | GRM155R61A475MEAAD | Murata | CAP CER 4.7UF 10V X5R 0402 |
| 19 | C58,C61,C93 | 3 | 10uF | C0402 | - | GRJ155R60J106ME11D | Murata | CAP CER 10UF 6.3V X5R 0402 |
| 21 | C59,C60,C62,C63 | 4 | 10uF | C0402 | DNL | 0402ZD106MAT2A | AVX | CAP CER 10UF 10V X5R 0402 |
| 20 | C64,C65,C91,C100 | 4 | 10uF | C0603 | - | GRM188R61C106KAALD | Murata | CAP CER 10UF 16V X5R 0603 |
| 22 | C67,C68,C69 | 3 | 1uF | C0402 | - | GRM155R61A105KE15D | Murata | CAP CER 1UF 10V X5R 0402 |
| 23 | C70,C71,C72 | 3 | 10uF | C0603 | DNL | GRM188R61E106MA73D | Murata | CAP CER 10UF 25V X5R 0603 |
| 24 | C74 | 1 | 4700pF | C0402 | - | GRM155R71E472KA01D | Murata | CAP CER 4700PF 25V X7R 0402 |
| 25 | C75 | 1 | 4700pF | C0402 | DNL | GRM155R71E472KA01D | Murata | CAP CER 4700PF 25V X7R 0402 |
| 26 | C76,C77,C78,C79,C81,C92,C94 | 7 | 2.2uF | C0402 | - | C1005X5R1C225K050BC | TDK | CAP CER 2.2UF 16V X5R 0402 |
| 27 | C80 | 1 | 2.2uF | C0402 | - | C1005X5R1C225K050BC | TDK | CAP CER 2.2UF 16V X5R 0402 |

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| 28 | C82,C83 | 2 | 18pF | C0402 | - | GRM1555C1H180JA01D | Murata | CAP CER 18PF 50V C0G/NP0 0402 |
| 29 | C84,C85 | 2 | 18pF | C0402 | - | GRM1555C1H180JA01D | Murata | CAP CER 18PF 50V C0G/NP0 0402 |
| 30 | C86 | 1 | 3.3uF | C0402 | - | C1005X5R0J335K050BC | TDK | CAP CER 3.3UF 6.3V X5R 0402 |
| 31 | C87,C88,C89,C90 | 4 | 100nF | C0402 | - | GRM155R71A104KA01D | Murata | CAP CER 0.1UF 10V X7R 0402 |
| 32 | C95,C96 | 2 | 6pF | C0402 | - | GRM1555C1H6R0BA01D | Murata | CAP CER 6PF 50V C0G/NP0 0402 |
| 33 | C97 | 1 | 100nF | C0402 | - | GRM155R61A104KA01D | Murata | CAP CER 0.1UF 10V X5R 0402 |
| 34 | C98,C99 | 2 | 2700pF | C0402 | - | GRM155R71H272KA01D | Murata | CAP CER 2700PF 50V X7R 0402 |
| 35 | C103,C105 | 2 | 2.2uF | C0402 | - | C1005X5R1C225K050BC | TDK | CAP CER 2.2UF 16V X5R 0402 |
| 36 | C107 | 1 | 0.01uF | C0402 | - | C0402C103J3RACTU | Kemet | CAP CER 10000PF 25V X7R 0402 |
| 37 | D1 | 1 | YELLOW | LED0603 | - | APG1608SYKC/T | Kingbright | LED YELLOW CLEAR CHIP SMD |
| 38 | D2 | 1 | RED | LED0603 | - | KPG-1608SURKC-T | Kingbright | LED RED 0603 SMD |
| 39 | FB1,FB2 | 2 | 600 Ohm | FB0402 | - | BLM15HG601SN1D | Murata | FERRITE BEAD 600 OHM 0402 1LN |
| 40 | FB3 | 1 | 220 OHM | FB0603 | - | MPZ1608S221ATA00 | TDK | FERRITE BEAD 220 OHM 0603 1LN |
| 41 | J1,J3,J4,J5,J21 | 5 | TSW-104-07-G-S | CONN_100MIL_1X4 | - | TSW-104-07-G-S | Samtec | CONN HEADER 4POS .100" SGL GOLD |
| 42 | J2 | 1 | TSW-102-07-G-S | CONN_100MIL_1X2 | Fit to J2:1-2 | TSW-102-07-G-S | Samtec | CONN HEADER 2POS .100" SGL GOLD |
| 43 | J6 | 1 | TSW-103-07-G-S | CONN_100MIL_1X3 | Fit to J6:1-2 | TSW-103-07-G-S | Samtec | CONN HEADER 3POS .100" SGL GOLD |
| 44 | J7,J16 | 2 | TSW-102-07-G-S | CONN_100MIL_1X2 | - | TSW-102-07-G-S | Samtec | CONN HEADER 2POS .100" SGL GOLD |
| 45 | J8 | 1 | USB - mini B | USB2_MINI_B_173 | - | 1734035-2 | TE Connectivity | CONN MINI USB RCPT RA TYPE B SMD |
| 46 | J9 | 1 | TSW-102-07-G-S | CONN_100MIL_1X2 | Fit to J9:1-2 | TSW-102-07-G-S | Samtec | CONN HEADER 2POS .100" SGL GOLD |
| 47 | J10 | 1 | TSW-102-07-G-S | CONN_100MIL_1X2 | Fit to J10:1-2 | TSW-102-07-G-S | Samtec | CONN HEADER 2POS .100" SGL GOLD |
| 48 | J11 | 1 | TSW-102-07-G-S | CONN_100MIL_1X2 | Fit to J11:1-2 | TSW-102-07-G-S | Samtec | CONN HEADER 2POS .100" SGL GOLD |
| 49 | J12 | 1 | TSW-105-07-G-S | CONN_100MIL_1X5 | Fit to J12:1-2 | TSW-105-07-G-S | Samtec | CONN HEADER 5POS .100" SGL GOLD |
| 50 | J13 | 1 | TSW-105-07-G-S | CONN_100MIL_1X5 | - | TSW-105-07-G-S | Samtec | CONN HEADER 5POS .100" SGL GOLD |
| 51 | J14 | 1 | TSW-106-07-G-S | CONN_100MIL_1X6 | Fit to J14:1-2 | TSW-106-07-G-S | Samtec | CONN HEADER 6POS .100" SGL GOLD |
| 52 | J15 | 1 | TSW-106-07-G-S | CONN_100MIL_1X6 | Fit to J15:1-2 | TSW-106-07-G-S | Samtec | CONN HEADER 6POS .100" SGL GOLD |
| 53 | J17 | 1 | TSW-106-09-G-D | CONN_100MIL_2X6 | - | TSW-106-09-G-D | Samtec | CONN HEADER 12POS .100" SGL GOLD |
| 54 | J18 | 1 | TSW-103-07-G-S | CONN_100MIL_1X3 | Fit to J18:1-2 | TSW-103-07-G-S | Samtec | CONN HEADER 3POS .100" SGL GOLD |
| 55 | J19 | 1 | TSW-103-07-G-S | CONN_100MIL_1X3 | Fit to J19:1-2 | TSW-103-07-G-S | Samtec | CONN HEADER 3POS .100" SGL GOLD |
| 56 | J20 | 1 | TSW-103-07-G-S | CONN_100MIL_1X3 | Fit to J20:1-2 | TSW-103-07-G-S | Samtec | CONN HEADER 3POS .100" SGL GOLD |
| 57 | J22 | 1 | TSW-103-07-G-S | CONN_100MIL_1X3 | Fit to J22:1-2 | TSW-103-07-G-S | Samtec | CONN HEADER 3POS .100" SGL GOLD |
| 58 | J23 | 1 | TSW-103-07-G-S | CONN_100MIL_1X3 | Fit to J23:2-3 | TSW-103-07-G-S | Samtec | CONN HEADER 3POS .100" SGL GOLD |
| 59 | J24 | 1 | TSW-103-07-G-S | CONN_100MIL_1X3 | Fit to J24:1-2 | TSW-103-07-G-S | Samtec | CONN HEADER 3POS .100" SGL GOLD |
| 60 | J25 | 1 | TSW-104-15-G-D | CONN_100MIL_2X8 | Fit to J25:3-4 | TSW-104-15-G-D | Samtec | CONN HEADER 8POS .100" SGL GOLD |
| 61 | J26 | 1 | 5103308-5 | LOPRO_20POS | - | 5103308-5 | TE Connectivity | CONN HEADER LOPRO STR 20POS GOLD |
| 62 | J27 | 1 | HDR_TH_3X1 | HDR_TH2P5_3X1 | - | B03B-WASK-1(LF)(SN) | JST | Wire-To-Board Connector, XA Series, 2.5 mm |
| 63 | LNK_J2,LNK_J6,LNK_J9,LNK_J10,LNK_J11 | 5 | SHUNT | SHUNT | - | 22-0692 | Truconnect | Black Shunt for 2.54mm jumper |

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| 64 | LNK_J12, LNK_J18, LNK_J19, LNK_J20, LNK_J22, LNK_J23, LNK_J25 | 7 | SHUNT | SHUNT | - | 22-3555 | Truconnect | Blue Shunt for 2.54mm jumper |
| 65 | LNK_J14, LNK_J15, LNK_J24 | 3 | SHUNT | SHUNT | - | 22-3565 | Truconnect | RED Shunt for 2.54mm jumper |
| 66 | L1, L3 | 2 | 1uH | L0603 | DNL | LQM18PZ1R0MCHD | Murata | FIXED IND 1UH 950MA 290 MOHM |
| 67 | L2 | 1 | 4.7uH | L1008 | - | 1239AS-H-4R7M=P2 | Murata | FIXED IND 4.7UH 1.5A 240 MOHM |
| 68 | L4, L20 | 2 | 2.2uH | L0806 | - | DFE201610E-2R2M=P2 | Murata | FIXED IND 2.2UH 1.7A 140 MOHM |
| 69 | L30 | 1 | 4.7uH | HTET2019FE | DNL | HTET2019FE-4R7MSR | Cyntec | HTET2019FE Series SMD Inductor |
| 70 | Q1, Q2 | 2 | SSM6N43FU | SSM6N43FU_US6 | - | SSM6N43FU, LF | TOSHIBA | MOSFET 2N-CH 20V 0.5A US6 |
| 71 | RT1 | 1 | 10K | R0402 | - | NCP15XH103F03RC | Murata | NTC THERMISTOR 10K OHM 1% 0402 |
| 72 | R1 | 1 | 14K | R0402 | DNL | RC0402FR-0714KL | Yageo | RES SMD 14K OHM 1% 1/16W 0402 |
| 73 | R2, R3 | 2 | 10 | R0402 | - | RC0402FR-0710RL | Yageo | RES SMD 10 OHM 1% 1/16W 0402 |
| 74 | R4, R5 | 2 | 10 | R0402 | - | RC0402FR-0710RL | Yageo | RES SMD 10 OHM 1% 1/16W 0402 |
| 75 | R6, R7 | 2 | 0 | R0603 | - | CRCW0603000020EAC | Vishay Dale | RES 0 OHM JUMPER 1/10W 0603 |
| 76 | R8 | 1 | 3.3K | R0805 | - | RC0805FR-073K3L | Yageo | RES SMD 3.3K OHM 1% 1/8W 0805 |
| 77 | R9 | 1 | 62 | R0603 | - | RC0603JR-0762RL | Yageo | RES SMD 62 OHM 5% 1/10W 0603 |
| 78 | R10 | 1 | 1M | R0402 | - | RC0402FR-071ML | Yageo | RES SMD 1M OHM 1% 1/16W 0402 |
| 79 | R11 | 1 | 154 | R0805 | - | RC0805FR-07154RL | Yageo | RES SMD 154 OHM 1% 1/8W 0805 |
| 80 | R12 | 1 | 1k | R0402 | - | RC0402FR-071KL | Yageo | RES SMD 1K OHM 1% 1/16W 0402 |
| 81 | R13, R74 | 2 | 14K | R0402 | - | RC0402FR-0714KL | Yageo | RES SMD 14K OHM 1% 1/16W 0402 |
| 82 | R14, R52, R56 | 3 | 100k | R0402 | - | RC0402FR-07100KL | Yageo | RES SMD 100K OHM 1% 1/16W 0402 |
| 83 | R15, R22, R23, R24, R25, R26, R31, R67, R68, R69, R70, R71 | 12 | SHORT | R0603_SHORT | DNL, pcb short | - | - | - |
| 84 | R16 | 1 | 5.1k | R0402 | - | RC0402FR-075K1L | Yageo | RES SMD 5.1K OHM 1% 1/16W 0402 |
| 85 | R17 | 1 | 10K | R0402 | - | ERA-2AEB103X | Panasonic | RES SMD 10K OHM 0.1% 1/16W 0402 |
| 86 | R27 | 1 | 1 | R0805 | DNL | CRT0805-CY-1R00ELF | Bourns Inc. | RES SMD 1 OHM 0.25% 1/8W 0805 |
| 87 | R28, R29, R50, R51 | 4 | 2.2k | R0402 | - | RC0402FR-072K2L | Yageo | RES SMD 2.2K OHM 1% 1/16W 0402 |
| 88 | R32, R33 | 2 | 2.2k | R0402 | DNL | RC0402FR-072K2L | Yageo | RES SMD 2.2K OHM 1% 1/16W 0402 |
| 89 | R34, R35, R36, R37, R38, R39, R41, R42, R66 | 9 | 10k | R0402 | - | RC0402FR-0710KL | Yageo | RES SMD 10K OHM 1% 1/16W 0402 |
| 90 | R40 | 1 | 10k | R0402 | DNL | RC0402FR-0710KL | Yageo | RES SMD 10K OHM 1% 1/16W 0402 |
| 91 | R46, R47, R54, R58 | 4 | 0R | R0402 | - | RC0402JR-070RL | Yageo | RES SMD 0 OHM JUMPER 1/16W 0402 |
| 92 | R53 | 1 | 1.8K | R0402 | - | RC0402FR-071K8L | Yageo | RES SMD 1.8K OHM 1% 1/16W 0402 |
| 93 | R55 | 1 | 68k | R0402 | - | RC0402FR-0768KL | Yageo | RES SMD 68K OHM 1% 1/16W 0402 |
| 94 | R57 | 1 | 75 | R0402 | - | RC0402FR-0775RL | Yageo | RES SMD 75 OHM 1% 1/16W 0402 |
| 95 | R59 | 1 | 12K | R0402 | - | RC0402FR-0712KL | Yageo | RES SMD 12K OHM 1% 1/16W 0402 |
| 96 | R60, R61, R62, R63 | 4 | 33 | R0402 | - | RC0402FR-0733RL | Yageo | RES SMD 33 OHM 1% 1/16W 0402 |
| 97 | R64 | 1 | 100m | R1206 | - | CRM1206-FX-R100ELF | Bourns Inc. | RES 0.1 OHM 1% 1/2W 1206 |

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| 98 | R65 | 1 | 300 | R0603 | - | TRR03EZPF3000 | Rohm | RES SMD 300 OHM 1% 1/10W 0603 |
| 99 | R72 | 1 | 30.9 | R1210 | - | ERJ-14NF30R9U | Panasonic | RES SMD 30.9 OHM 1% 1/2W 1210 |
| 100 | R73 | 1 | 0 | R0402 | - | ERJ-2GE0R00X | Panasonic | RES SMD 0 OHM JUMPER 1/10W 0402 |
| 101 | R75 | 1 | 3.6K | R0402 | - | ERA-2AEB362X | Panasonic | RES SMD 3.6k OHM 0.1% 1/16W 0402 |
| 103 | S1,S50 | 2 | SPST-NO | SW_SPST_EVP | - | EVP-AA202K | Panasonic | SWITCH TACTILE SPST-NO 0.02A 15V |
| 104 | TP1,TP6,TP10 | 3 | AGND | TP_BLUE | - | 5127 | Keystone Electronics | TEST POINT PC MULTI PURPOSE BLUE |
| 107 | TP4,TP21 | 2 | PGND | TP_BLUE | - | 5127 | Keystone Electronics | TEST POINT PC MULTI PURPOSE BLUE |
| 108 | TP12 | 1 | 5V_EXT | TERMINAL_1573 | - | 1573-2 | Keystone | TERM TURRET SINGLE L=4.72MM TIN |
| 109 | TP13 | 1 | PGND | TERMINAL_1573 | - | 1573-2 | Keystone | TERM TURRET SINGLE L=4.72MM TIN |
| 121 | TP26 | 1 | VBATP_SNS | TP_RED | - | 5010 | Keystone Electronics | TEST POINT PC MULTI PURPOSE RED |
| 122 | TP27 | 1 | VBATN_SNS | TP_BLACK | - | 5011 | Keystone Electronics | TEST POINT PC MULTI PURPOSE BLK |
| 132 | U1 | 1 | SIP32102DB | SIP32102DB | - | SIP32102DB-T1-GE1 | Vishay | IC BI-DIR BATT SWITCH WCSP12 |
| 133 | U2 | 1 | DA9070 | DA9070_42WLCSP | - | DA9070 | Dialog Semiconductor | DA9070 WLCSP42 |
| 134 | U3 | 1 | AD7685 | AD7685_10MSOP | - | AD7685CRMZ | Analog Devices | IC ADC 16BIT PSEUDO-DIFF 10-MSOP |
| 135 | U4 | 1 | AD7687 | AD7687_10MSOP | - | AD7687BRMZ | Analog Devices | IC ADC 16BIT 250KSPS 10-MSOP |
| 136 | U5 | 1 | LTC2941 | LTC2941_6DFN | - | LTC2941IDCB#TRMPBF | Linear Technology | IC BATTERY MONITOR LI-ION 6DFN |
| 137 | U6 | 1 | DA9231 | DA9231_WLCSP12 | - | DA9231AB-0TP0B | Dialog Semiconductor | DA9231 WLCSP12 |
| 138 | U7 | 1 | FT4232HQ-R | FT4232H_64QFN | - | FT4232HQ-REEL | FTDI | IC USB HS QUAD UART/SYNC 64-QFN |
| 139 | U8 | 1 | STM32L151 | STM32L1_64WLCSP | - | STM32L151RDY6TR | STMicroelectronics | IC MCU 32BIT 384KB FLASH 64WLCSP |
| 140 | U9 | 1 | INA225 | INA225_8MSOP | - | INA225AIDGKT | Texas instruments | IC MONITOR PWR/CUR BIDIR 8MSOP |
| 141 | U10 | 1 | AP7312-1833W6-7 | AP7312_SOT26 | - | AP7312-1833W6-7 | Diodes Incorporated | IC REG LINEAR 1.8V/3.3V SOT26 |
| 142 | U11 | 1 | TC1240A | TC1240A_SOT23 | - | TC1240AECCTR | Microchip Technology | IC REG SWITCHD CAP 2VIN SOT23A |
| 143 | U12 | 1 | LP2985AIM5 | LP2985AIM5_SOT23 | - | LP2985AIM5-2.5/NOPB | TI | IC REG LINEAR 2.5V 150MA SOT23-5 |
| 144 | U13 | 1 | LP2980AIM5 | LP2980AIM5_5SOT23 | - | LP2980AIM5-5.0/NOPB | Texas Instruments | IC REG LINEAR 5V 50MA SOT23-5 |
| 145 | U14 | 1 | TPD3E001 | TPD3E001_5SOT23 | - | TPD3E001DRLR | TI | TVS DIODE 5.5V SOT5 |
| 146 | Y1,Y2 | 2 | 12MHZ | FA-238V_4SMD | - | FA-238V 12.0000MB-W3 | EPSON | CRYSTAL 12.0000MHZ 12PF SMD |
| 147 | Y3 | 1 | 32.768KHZ | CM8V-T1A_2SMD | - | CM8V-T1A-32.768kHz-6pF | Micro Crystal | Crystals 32.768 kHz 6.0 pF +/-20 PPM -40/+85C |