



Bill of Materials for the STR-SMARTLIBGAUGE-GEVK Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1 C2 C17 C22	4	CAP CER 0.1UF 50V X7R 0402	0.1uF		0402	Murata	GCM155R71H104ME02	Yes	Yes
C3 C6 C8 C13 C15 C16	6	CAP CER 4.7UF 6.3V X5R 0402	4.7uF		0402	Murata	GRM155R60J475ME47D	Yes	Yes
C4 C5	2	CAP CER 12PF 50V C0G/NP0 0402	12pF		0402	Murata	GJM1555C1H120JB01D	Yes	Yes
C7 C9	2	CAP CER 7.5PF 50V C0G/NP0 0402	7.5pF		0402	Murata	GJM1555C1H7R5CB01D	Yes	Yes
C10	0	DNI	DNI		DNI	DNI	DNI	Yes	Yes
C11	1	CAP CER 2.2uF 16V X5R 0402	2.2uF		0402	Murata	GRM155R61C225KE11	Yes	Yes
C12 C14 C18 C19 C21 C23	6	CAP CER 1UF 16V X5R 0402	1uF		0402	Murata	GRM155R61C105KA12	Yes	Yes
C20	1	CAP CER 10UF 25V X5R 0603	10uF		0603	Murata	GRM188R61E106MA73	Yes	Yes
C24	0	DNI	DNI		DNI	DNI	DNI	Yes	Yes
D1	1	Red LED	150060RS75000		0603	Würth Elektronik	150060RS75000	Yes	Yes
D2	1	Green LED	150060GS75000		0603	Würth Elektronik	150060GS75000	Yes	Yes
D3	1	Blue LED	150060BS75000		0603	Würth Elektronik	150060BS75000	Yes	Yes
D4	1	Yellow LED	150060YS75000		0603	Würth Elektronik	150060YS75000	Yes	Yes
D5 D6	2	Schottky Barrier Diode, 2.0 A, 20 V	NSR20F20NX		DSN2 0603	ON Semiconductor	NSR20F20NX	No	Yes
D7	1	ESD Protection Diodes	ESD7L		SOT-723	ON Semiconductor	ESD7C5.0DT5G	No	Yes
D8	1	Zener Diode Voltage Regulator, Surface Mount, 300 mW	MM3Z5V6T1G		SOD-323	ON Semiconductor	MM3Z5V6T1G	No	Yes
FB1	1	Ferrite bead 220 Ohm 0805 1LN	220@100M		0805	Würth Elektronik	782853221	Yes	Yes
HS1	1	HEAT SINK 30mm x 30mm x 30mm TO-220	30PC030		30x30x30mm	Global Electronics	30PC030	Yes	Yes
J1 J2 J8 J9	4	PLASTIC HEXAGON NUT M3	709940300		M3 Nut	Würth	709940300	Yes	Yes
J3	1	2pin Locking Header, 2.54mm Pitch	IL-G-2P-S3T2-SA		2pin 2.54mm	JAE	IL-G-2P-S3T2-SA	Yes	Yes
J4	1	Standard Arm Cortex Debug Connector	FTSH-105-01-F-DV-K		2x5pin 50mil Cortex D	Samtec	FTSH-105-01-F-DV-K	Yes	Yes
J5	1	Mini USB1/2 Type-B Connector	65100516121		Mini USB1/2 B	Würth Elektronik	65100516121	Yes	Yes
J6	0	DNI	DNI		DNI	DNI	DNI	Yes	Yes
J7	0	DNI	DNI		DNI	DNI	DNI	Yes	Yes
J10 J11 J12 J13	4	PLASTIC SPACER STUD METRIC THREAD M3 15MM F-M	971150365		M3 15MM Standof	Würth	971150365	Yes	Yes
JP1	0	DNI	DNI		DNI	DNI	DNI	Yes	Yes
Q1	1	Bipolar Transistor 50V, 10A, NPN	2SC6144SG		TO-220	ON Semiconductor	2SC6144SG	No	Yes
Q2 Q3	2	N-Channel Power MOSFET, 25 V, 94 A, 3.3mOHM	NTTFS4H05N		u8-FL	ON Semiconductor	NTTFS4H05NTAG	No	Yes
Q4 Q5 Q6	3	Small Signal MOSFET 60V 340mA 2.5 Ohm Single N-Channel SOT-323	2N7002W		SOT-323	ON Semiconductor	2N7002W	No	Yes
R1 R3 R6 R8 R25	5	RES SMD 100K OHM 1% 1/16W 0402	100K		0402	Vishay Dale	CRCW0402100KFKED	Yes	Yes
R2	0	DNI	DNI		DNI	DNI	DNI	Yes	Yes
R4 R10 R22 R27	4	RES SMD 100 OHM 1% 1/16W 0402	100		0402	Vishay Dale	CRCW0402100RKFED	Yes	Yes
R5 R14 R15 R16 R21 R23	6	RES SMD 10K OHM 1% 1/16W 0402	10K		0402	Vishay Dale	CRCW040210K0FKED	Yes	Yes
R7	1	Aluminum Housed Wirewound Resistor 1OHM 1% 12.5W	1		RH010	Vishay Dale	RH0101R000FE02	Yes	Yes
R9	1	RES SMD 20 OHM 1% 1W 2512	20		2512	Panasonic	ERJ-1TNF20R0U	Yes	Yes
R11 R12	0	DNI	DNI		DNI	DNI	DNI	Yes	Yes
R13	1	RES SMD 1K OHM 1% 1/16W 0402	1K		0402	Vishay Dale	CRCW04021K00FKED	Yes	Yes
R17	1	RES SMD 5.11K OHM 1% 1/16W 0402	5.11K		0402	Vishay Dale	CRCW04025K11FKED	Yes	Yes
R18	1	RES SMD 8.87K OHM 1% 1/16W 0402	8.87K		0402	Vishay Dale	CRCW04028K87FKED	Yes	Yes

R19	1	RES SMD 9.76K OHM 1% 1/16W 0402	9.76K		0402	Vishay Dale	CRCW04029K76FKED	Yes	Yes
R20	1	RES SMD 665 OHM 1% 1/16W 0402	665		0402	Vishay Dale	CRCW0402665RFKED	Yes	Yes
R24	1	RES SMD 100 OHM 1% 1/10W 0603	100		0603	Vishay Dale	CRCW0603100RFKEA	Yes	Yes
R26	1	RES SMD 2.32K OHM 1% 1/16W 0402	2.32K		0402	Vishay Dale	CRCW04022K32FKED	Yes	Yes
RT1	1	NTC Thermistor, 10k 1%, 3380K 1%, 0603	10k		0603	muRata	NCP18XW682J03RB	Yes	Yes
SW1	1	SWITCH TACTILE SPST-NO 0.05A 12V	434153017835		MOM1 SMD	Würth Elektronik	434153017835	Yes	Yes
TP1 TP4 TP5 TP6 TP9 TP15 TP16 TP17 TP19 TP20 TP22 TP24 TP27 TP29 TP31	15	Passive Probe Tip Tektronix P5050 (Tan) Tip	DNI		0.75mm			Yes	Yes
TP2 TP7 TP11 TP14 TP23	5	35mil Hole 55mil Pad	DNI		35mil			Yes	Yes
TP3 TP8 TP10 TP12 TP13 TP18 TP26	7	63mil Hole 100mil Pad	DNI		63mil			Yes	Yes
TP21 TP25 TP28 TP30 TP32	5	Surface Mount 1mm Circle Test Point	DNI		1mm Circle			Yes	Yes
U1	1	Precision Operational Amplifier, 25uV Offset, Zero-Drift, 36 V Supply, 2 MHz	NCS21911		TSOP-5	ON Semiconductor	NCS21911SN2T1G	No	Yes
U2	1	EFM32 Giant Gecko 32-bit Microcontroller	EFM32GG380F1024		QFP100 14x14	Silicon Labs	EFM32GG380F1024G-E-QFP100R	Yes	Yes
U3	1	Voltage Reference, Programmable Precision, Shunt Regulator	TL431		Micro8	ON Semiconductor	TL431BVDMR2G	No	Yes
U4	1	Battery Fuel Gauge LSI for 1-Cell Lithium-ion/ Polymer (Li+)	LC709204F		WLCSP12	ON Semiconductor	LC709204FXE-01TBG	No	Yes
U5	1	3.3V Voltage Regulator, LDO, Ultra Low Noise, Ultra Low Iq, 500 mA	NCP705		WDFN6	ON Semiconductor	NCP705MT33TCG	No	Yes
U6	1	USB to BASIC UART IC	FT230X		QFN16 4x4	FTDI	FT230XQ-R	Yes	Yes
Y1	1	Crystals 32.768 kHz 12.5 pF +/-20 PPM -40/+85C	32.768 kHz		2 pin w/ shell	Micro Crystal	MS3V-T1R-32.768kHz-12.5pF-20PPM-TA-QC-Au	Yes	Yes
Y2	1	CRYSTAL 48.0000MHZ 8PF SMD	48MHz		5x3.2mm	NDK	NX5032GA-48.000000MHZ-LN-CD-1	Yes	Yes
FAN	1	DC FAN	DC5V		30mm x 30mm	YCCFAN	YDH3010C05	Yes	Yes
CN1	1	2pin Locking Connector Housing, 2.54mm Pitch	IL-G-2P-S3C2-SA		2pin 2.54mm	JAE	IL-G-2P-S3C2-SA	Yes	Yes
PIN1	2	Connector Pin	IL-G-C2-SA-10000			JAE	IL-G-C2-SA-10000	Yes	Yes
P1	2	PIN	ST-1-3		10mm	MACEIGHT	ST-1-3	Yes	Yes