

QTY	VALUE	PARTS	DESCRIPTION	MANUFACTURER PART NUMBER	VENDOR PART NUMBER	UNIT PRICE (IN 100+)	EXT PRICE	MEASUREMENT	SOURCE
RESISTORS (TH)									
1	5.1kΩ	R1	12W resistor, metal film 700V	MF12CC5010F	SS1KCACT-ND	0.3011	0.3011	0.139" Dia x 0.354" L (3.50mm x 9.00mm)	https://www.digikey.com/en/products/detail/bourns-electronics-inc/NE1-2CC5010F/2180398
3	10kΩ	R2, R6, R9	14W resistor, carbon film	CF14JT10K0	CF14JT10K0CT-ND	0.0215	0.0645	0.091" Dia x 0.236" L (2.30mm x 6.00mm)	https://www.digikey.com/en/products/detail/cfc-14/JT10K0CT-ND/1830324
1	1kΩ	R3	14W resistor, carbon film	CF14JT1K00	CF14JT1K00CT-ND	0.0215	0.0215	0.091" Dia x 0.236" L (2.30mm x 6.00mm)	https://www.digikey.com/en/products/detail/cfc-14/JT1K00CT-ND/1830350
1	750Ω	R4	14W resistor, carbon film	CF14JT75R0	CF14JT75R0CT-ND	0.0215	0.0215	0.091" Dia x 0.236" L (2.30mm x 6.00mm)	https://www.digikey.com/en/products/detail/cfc-14/JT75R0CT-ND/1830324
1	6.2kΩ	R5	14W resistor, carbon film	CF14JT6K20	CF14JT6K20CT-ND	0.0215	0.0215	0.091" Dia x 0.236" L (2.30mm x 6.00mm)	https://www.digikey.com/en/products/detail/cfc-14/JT6K20CT-ND/1830368
1	4.7kΩ	R7	14W resistor, metal film, 1% (not 5%)	RNV14FAL4M70CT	CF14FAL4M70CT-ND	0.063	0.063	0.091" Dia x 0.236" L (2.40mm x 6.00mm)	https://www.digikey.com/en/products/detail/blackpole-electronics-inc/RNV14FAL4M70CT/2665263
1	6.8kΩ	R8	0.6W resistor, carbon film, 1% (not 5%)	MB80207C6804FCT00	BC380CT-ND	0.076	0.076	0.091" Dia x 0.236" L (2.30mm x 6.00mm)	https://www.digikey.com/en/products/detail/vishay-beyschlag-daloric-bc-components/MB80207C6804FCT00/5063554
2	4.7kΩ	R10, R14	14W resistor, carbon film	CF14JT47K0	CF14JT47K0CT-ND	0.0215	0.043	0.091" Dia x 0.236" L (2.30mm x 6.00mm)	https://www.digikey.com/en/products/detail/blackpole-electronics-inc/CF14JT47K0/1714128
1	10MΩ	R11	14W resistor, metal film 700V	VR2500001005JR500	56-VR2500001005JR500CT-ND	0.1181	0.1181	0.098" Dia x 0.256" L (2.50mm x 6.50mm)	https://www.digikey.com/en/products/detail/vishay-beyschlag-daloric-bc-components/VR2500001005JR500/7350778
1	22kΩ	R12	14W resistor, carbon film	CF14JT22K0	CF14JT22K0CT-ND	0.0215	0.0215	0.091" Dia x 0.236" L (2.30mm x 6.00mm)	https://www.digikey.com/en/products/detail/cfc-14/JT22K0CT-ND/1830383
1	5.1MΩ	R13	14W resistor, metal film 700V	VR25000005104JA100	BC4800CT-ND	0.0978	0.0978	0.098" Dia x 0.256" L (2.50mm x 6.50mm)	https://www.digikey.com/en/products/detail/vishay-beyschlag-daloric-bc-components/VR25000005104JA100/7350796
1	20kΩ	RV1	Potentiometer, 12W 1.0 Turn	3362P-1-203LF	3362P-203LF-ND	0.7575	0.7575	0.275" x 0.260" Face (6.99mm x 6.60mm)	https://www.digikey.com/en/products/detail/bourns-inc/3362P-1-203LF/1088417
CAPACITORS (TH)									
2	10µF	C1, C3	MLCC in radial package with 0.1" lead spacing required	FG18XR5E106MRT06	445-FG18XR5E106MRT06CT-ND	0.2043	0.2043	0.086" 0.157" L x 0.098" W (4.00mm x 2.50mm)	https://www.digikey.com/en/products/detail/hbk-corporation/FG18XR5E106MRT06/7384735
1	47pF	C2	MLCC in radial package with 0.1" lead spacing required	SR152A470KAR	478-3164-ND	0.1315	0.1315	0.150" L x 0.100" W (3.81mm x 2.54mm)	https://www.digikey.com/en/products/detail/sr152A470KAR/478-3164-ND/9368068
1	100µF = 10000pF	C4	Ceramic in radial package 100V 0.2" lead spacing required	D103M26Z5UH6UJR	BC5213CT-ND	0.062	0.062	0.295" Dia (7.50mm)	https://www.digikey.com/en/products/detail/vishay-beyschlag-daloric-bc-components/D103M26Z5UH6UJR/2830090
1	220n = 0.22µF	C5	Ceramic in radial package with 0.2" lead spacing required	K22AK20X7R5UH5	BC267CT-ND	0.124	0.124	0.187" L x 0.126" W (5.00mm x 3.20mm)	https://www.digikey.com/en/products/detail/vishay-beyschlag-daloric-bc-components/K22AK20X7R5UH5/2356787
1	1µF	C6	Ceramic in radial package with 0.2" lead spacing required	FG28X7R1E105KRT00	445-18178-ND	0.0899	0.0899	0.157" L x 0.098" W (4.00mm x 2.50mm)	https://www.digikey.com/en/products/detail/hbk-corporation/FG28X7R1E105KRT00/7387183
1	15µF	C7	Ceramic in radial package with 0.1" lead spacing required	K153K10X7R5UH5	BC267CT-ND	0.0775	0.0775	0.142" L x 0.091" W (3.60mm x 2.30mm)	https://www.digikey.com/en/products/detail/vishay-beyschlag-daloric-bc-components/K153K10X7R5UH5/2356780
1	4.7nF	C8	Ceramic in radial package with 0.2" lead spacing required (CHV)	S472M36Z5UN6J3R	1288PH-ND	0.1444	0.1444	0.384" Dia (10.00mm)	https://www.digikey.com/en/products/detail/s472M36Z5UN6J3R/1288PH-ND/2356824
INDUCTORS									
1	1mH	L1	Inductor, radial package	RLB0914-102KL	RLB0914-102KL-ND	0.26875	0.26875	0.343" Dia (8.70mm)	https://www.digikey.com/en/products/detail/bourns-inc/RLB0914-102KL/2352773?WT.z_header=search_gd&w=N4qTCBdEaF8BCAGAAaRqCwFwMAGfEASAERAF0801a
DIODES									
1	LED	D1	Blue LED 3mmx3.3V	WP710A10QBCTD	754-1596-ND	0.151	0.151	2.90mm Dia	https://www.digikey.com/en/products/detail/wp710A10QBCTD/754-1596-ND/2769812
1	BA159	D2	Fast switching diode, DO-41 package required	BA159-E354	BA159-E354GCT-ND	0.1171	0.1171	DO-204AL (DO-41)	https://www.digikey.com/en/products/detail/BA159-E354/BA159-E354GCT-ND/3711780
IC									
1	NJM78M05FA	U1	Linear Voltage Regulator 5V at 500mA	NJM78M05FA	2129-NJM78M05FA-ND	0.7862	0.7862	TO-220F	https://www.digikey.com/en/products/detail/texas-instruments-inc/NJM78M05FA/805732
1	LMC555	U2	LMC555 CMOS-based 555 timer	LMC555CNKCPB	LMC555CNKCPB-ND	1.10575	1.10575	5.40mm (0.300", 7.62mm)	https://www.digikey.com/en/products/detail/texas-instruments-inc/LMC555CNKCPB/32624
2	5T0	U3	N Channel MOSFET 60V 400MA TO92-3	5T01HN60SR-AP	497-15648-1-ND	0.3879	0.7758	TO-92-3	https://www.digikey.com/en/products/detail/texas-instruments-inc/5T01HN60SR-AP/3945986
1	TL5001	U5	Power converter control chip	TL5001AP	296-10033-5-ND	2.9365	2.9365	8-DIP (0.300", 7.62mm)	https://www.digikey.com/en/products/detail/texas-instruments-inc/TL5001AP/390445
1	2N3904	Q1	NPN Transistor, TO-92 package	2N3904BU	2N3904F5-ND	0.1169	0.1169	TO-226-3, TO-92-3 (TO-226AA)	https://www.digikey.com/en/products/detail/2N3904BU/2N3904F5-ND/11413
MISC									
1	SBM-20		Geiger Tube	SBM-20	SBM-20	13	13	Max Len = 108 / 101 Eff Length = 91.0 / 83.5 (mm)	https://www.youtube.com/watch?v=J41sbm-20.html
2	DIP6		DIP 600NET 6 pos	ED080T	ED080A-5-ND	0.16283	0.32566	DIP 10 0.17" (4.29mm) Row Spacing	https://www.digikey.com/en/products/detail/ED080T/ED080A-5-ND/147584
2	CLIPS		Fuse clips to hold SBM-20		3530 35-3530-ND	0.2635	0.527	Fuse Size, 0.25" Dia (6.35mm)	https://www.digikey.com/en/products/detail/keystone-electronics/3530/316921
1	BOARD		MIT-NSE Geiger Counter Board	REV9		1.1677	1.1677	<BOARD DIMENSIONS>	https://kqch.com/
1	CASE		Serpac enclosure, black, clear top	052C.BK	052C.BK	7.29	7.29	5.62 x 3.25 x 1.4 in	https://www.serpac.com/v5x-enclosure.html#93c-250816c-116-078-008170-2188177-958182-253
1	SWITCH		SPST Circular switch	SW-R2-1A-F-1-5	2057-SW-R2-1A-F-1-5-ND	0.4232	0.4232	Circular - 20.00mm Dia	https://www.digikey.com/en/products/detail/adam-tech/5W-R2-1A-F-1-5/15284451
1	HOLD		9V Battery holder	BA9VPC	BA9VPC-ND	1.7801	1.7801	Height Above Board 0.843" (21.41mm)	https://www.digikey.com/en/products/detail/lmod-memory-protection-devices/BA9VPC/2439228
1	BATT		Eveready Industrial 9V	EN22	EN22	1.431	1.431	49x46x5mm	https://a.co/d2ASX5G
2	SPADE		Spade Connectors	197084013	WM14275CT-ND	0.0836	0.1672	Length 0.510" (12.95mm), Width 0.187" (4.75mm)	https://www.digikey.com/en/products/detail/index?i=197084013/13183362
4	SCREW 1		Screws included with and for the Serpac Case		SR6005-ND			#4 x 3/8"	https://www.digikey.com/en/products/detail/serpac/6005/307598
4	SCREW 2		#4-40x3/16" pan head thread-cutting screw (for mounting board)	90087A105	90087A105	0.1018	0.4072	#4-40x3/16"	https://www.mcmaster.com/90087A105/
2	CONN		Female To Female spade connection wires (4.8mm)	N/A	N/A	0.467	0.934	4.8mm spade, 11.82" Length	https://a.co/d3k3a3n
1	AUDIO	J2	Audio Connection Jack (female) 3.5mm	54-00296	54-00296CT-ND	0.8888	0.8888	3.5mm (0.141", 1/8", Mini Plug) - Headphone	https://www.digikey.com/en/products/detail/tennyl-international-corp/54-00296/16579528
OPTIONAL									
1	ESP32		ESP32-C3-DevKitC-02	ESP32-C3-DevKitC-02	356-ESP32C3DEVKITC02	8	8		https://www.mouser.com/ProductDetail/Espressif-Systems/ESP32-C3-DevKitC-02?qs=CMA%5D%3D8mghe%1Aralitde-AHnBQwOOZ2uGQo-p63KqXwHJBL7VzA0BjA1MY08_xXW5E2361tgc8
2	HEADER		15 POS Female pinheader	PPTCT15L1FBN-RC	ST013-ND	0.75075	1.5015	Pitch - Mating (0.125") (2.54mm)	https://www.digikey.com/en/products/detail/pptct15l1fbn-rc/ST013-ND/8010153
1	PWR	J1	9V Connection Power Jack (Female) 2.1X5.5mm	EJ508A	EJ508A-ND	1.0443	1.0443	2.1x5.5mm	https://www.digikey.com/en/products/detail/lmod-memory-protection-devices/EJ508A/2439547
1	M4011		Alternate usable geiger tube	M4011J321		\$5-20 (depending on size)		88mm x 10mm	Aleypress, Amazon, Ebay
PACKAGING									
1	BOX		8 x 8 x 2-Inch Literature Malters			0.8014	0.8014	8" x 8" x 2"	https://a.co/d54CDeMv
7	PINK BAG		Pink Anti-Static Seal Top Bag			0.083	0.581	2.5" x 3"	https://a.co/d5yDMm0nG
27	BAG		Zipper Lock Reclosable Clear Disposable Plastic Bags			0.01299	0.35073	2" x 3" - 2 MIL	https://a.co/d5H0E1NG
1	BUBBLE		Anti Static Bubble cushioning for SBM-20 and Board			0.17	0.17	11" x 18"	https://a.co/d5c4P3Bv
20	LABEL		Premium Label Supply White Sticker Square Labels - 1.5" x 1.5"			0.02	0.52	1.5" x 1.5"	https://a.co/d5H0E1NG
1	BIG BAG		GPI - 100 Count 8" X 8" Zip Bags, Heavy-Duty 4 Mil Thick			0.13	0.13	8" x 8"	https://a.co/d58680v
1	INSERT		Laser Cut Box Insert			0.17	0.17	11" x 11" x 8.5"	https://a.co/d58P4W6G
14	INSTRUCTIONS		14 pages color			0.15	2.1	11" x 8.5"	
2	CHIP FOAM		Foam Squares to protect small integrated circuits			0.02	0.04	1" x 1"	https://a.co/d5A7v6ng
7	TAPE PIECES		3 inch			0.03	0.21	3"	https://a.co/d586CLnJ
ALTERNATE SMD R and C									
RESISTORS (SMD)									
1	5.1kΩ	R1	5.1 kOhms ±1% 0.25W, 14W Chip Resistor 1206 (3216 Metric) Au CR0W1206SK10FKEA		541-5.10KCT-ND	0.0316		1206 (3216 Metric)	https://www.digikey.com/en/products/detail/vishay-dale/CR0W1206SK10FKEA/1178724
3	10kΩ	R2, R6, R9	10 kOhms ±1% 0.25W, 14W Chip Resistor 1206 (3216 Metric) Au	RMCF1206F10K0CT-ND		0.013		1206 (3216 Metric)	https://www.digikey.com/en/products/detail/blackpole-electronics-inc/RMCF1206F10K0CT-ND/1759868
1	1kΩ	R3	RES 1K OHM 5% 14W 1206	RMCF1206T1K00	RMCF1206T1K00CT-ND	0.01		1206 (3216 Metric)	https://www.digikey.com/en/products/detail/blackpole-electronics-inc/rmcf1206t1k00/1021375268
1	750Ω	R4	RES 75 OHM 5% 14W 1206	RMCF1206T75R0	RMCF1206T75R0CT-ND	0.01		1206 (3216 Metric)	https://www.digikey.com/en/products/detail/blackpole-electronics-inc/rmcf1206t75r0/1753980
1	6.2kΩ	R5	6.2 kOhms ±1% 0.25W, 14W Chip Resistor 1206 (3216 Metric) Au	RMCF1206F6K20	RMCF1206F6K20CT-ND	0.013		1206 (3216 Metric)	https://www.digikey.com/en/products/detail/blackpole-electronics-inc/RMCF1206F6K20/1759189
1	4.7MΩ	R7	4.7 MOhms ±1% 0.25W, 14W Chip Resistor 1206 (3216 Metric) Al	RMCF1206F4M70CT-ND		0.017		1206 (3216 Metric)	https://www.digikey.com/en/products/detail/blackpole-electronics-inc/RMCF1206F4M70/1759348?w=N4qTCBdEaF8BCAGAAaRqCwFwMAGfEASAERAF0801a
1	6.8MΩ	R8	RES 6.8M OHM 1% 14W 1206	RMCF1206F6M80	RMCF1206F6M80CT-ND	0.017		1206 (3216 Metric)	https://www.digikey.com/en/products/detail/blackpole-electronics-inc/RMCF1206F6M80/1754117?w=N4qTCBdEaF8BCAGAAaRqCwFwMAGfEASAERAF0801a
2	4.7kΩ	R10, R14	RES 4.7K OHM 5% 14W 1206	RMCF1206T47K0CT-ND		0.01		1206 (3216 Metric)	