

Part	X	Y	Angle	Package	Value	Manufacturer	Manufacturer Part No	Farnell Part No	McMaster Part No	Description
Dimensions	50.80	50.80								
Fiducials - for solder paste mask alignment:										
FD1	0.76	50.04	0							Fiducial 0.635mm
FD2	49.91	0.89	0							Fiducial 0.635mm
Surface Mount Components:										
C1	18.54	13.34	270	0603	0.1uF	Murata	GRM188R71H104JA93D	2688523		MultiLayer Ceramic Capacitor; 0.1uF; 50V; 0603; X7R
C2	34.67	29.85	270	0603	2.2uF	AVX	06036D225KAT2A	1327678		MultiLayer Ceramic Capacitor; 2.2uF; 6.3V; 0603; X5R
C3	27.43	30.48	270	0603	1.0uF	Walsin	0603X105K100CT	2496916		MultiLayer Ceramic Capacitor; 1uF; 10V; 0603; X5R
C4	36.32	29.85	270	0603	0.22uF	Multicomp	MC0603F224Z160CT	1759019		MultiLayer Ceramic Capacitor; 0.22uF; 16V; 0603
C7	11.43	25.40	270	0603	10uF	AVX	06036D106MAT2A	1833804		MultiLayer Ceramic Capacitor; 10uF; 6.3V; 0603; X5R
C8	38.48	24.38	180	0603	1.0uF	Walsin	0603X105K100CT	2496916		MultiLayer Ceramic Capacitor; 1uF; 10V; 0603; X5R
D1	48.26	13.97	0	0603		Kingbright	KPT-1608SURCK	2099224		Red LED 0603
D2	48.26	16.51	0	0603		Kingbright	KP-1608SYCK	2290330		Yellow LED 0603
D3	48.26	19.05	0	0603		Kingbright	KP-1608CGCK	2290328		Green LED 0603
J1	22.70	34.49	0		SS4-10-3.50	Samtec	SS4-10-3.50-L-D-K-TR	2085336		Samtec SS4-10-3.50-L-D-K-TR
J2	3.24	25.40	270		SM04B-SRSS-TB	JST	SM04B-SRSS-TB	1830839		4-way 1mm Qwiic connector SparkFun PRT-14417
J4	47.56	25.40	90		SM04B-SRSS-TB	JST	SM04B-SRSS-TB	1830839		4-way 1mm Qwiic connector SparkFun PRT-14417
J7	38.10	34.61	90	uFL	uFL	Hirose	U.FL-R-SMT(01)	3908021		HIROSE U.FL-R-SMT(01); U.FL Coaxial; Straight Jack; 50 ohm
Q1	29.59	34.67	90	SOT23	DMG3415U-7	Diodes Inc.	DMG3415U-7	1843688		MOSFET; P Channel; SOT23-WIDE
Q2	37.21	17.78	0	SOT23	2N2222	Fairchild	MMBT2222A	9846700		Bipolar (BJT) Single Transistor, NPN, 40 V, 350 mW, 1 A
R1	43.18	13.97	180	0603	1k	Multicomp	MCWR06X1001FTL	2447272		Chip Resistor; Thick Film; 1k; 50V; 0603; 100mW
R2	6.35	33.02	90	0603	2.2k	Multicomp	MCWR06X2201FTL	2447320		Chip Resistor; Thick Film; 2.2k; 50V; 0603; 100mW
R3	3.81	33.02	90	0603	2.2k	Multicomp	MCWR06X2201FTL	2447320		Chip Resistor; Thick Film; 2.2k; 50V; 0603; 100mW
R4	17.65	16.26	0	0603	4.7k	Multicomp	MCWR06X4701FTL	2447385		Chip Resistor; Thick Film; 4.7k; 50V; 0603; 100mW
R5	22.23	13.34	90	0603	10k	Multicomp	MCWR06X1002FTL	2447230		Chip Resistor; Thick Film; 10k; 50V; 0603; 100mW
R6	47.24	31.75	90	0603	12k	Multicomp	MCWR06X1202FTL	2447243		Chip Resistor; Thick Film; 12k; 50V; 0603; 100mW
R7	44.2	31.75	270	0603	30.1k	Multicomp	MCWR06X3012FTL	2447334		Chip Resistor; Thick Film; 30.1k; 50V; 0603; 100mW
R8	39.12	29.85	270	0603	100k	Multicomp	MCWR06X1003FTL	2447226		Chip Resistor; Thick Film; 100k; 50V; 0603; 100mW
R9	32.51	34.67	270	0603	10k	Multicomp	MCWR06X1002FTL	2447230		Chip Resistor; Thick Film; 10k; 50V; 0603; 100mW
R10	33.53	17.4	270	0603	1k	Multicomp	MCWR06X1001FTL	2447272		Chip Resistor; Thick Film; 1k; 50V; 0603; 100mW
R11	31.5	17.4	270	0603	10k	Multicomp	MCWR06X1002FTL	2447230		Chip Resistor; Thick Film; 10k; 50V; 0603; 100mW
R12	43.18	16.51	180	0603	1k	Multicomp	MCWR06X1001FTL	2447272		Chip Resistor; Thick Film; 1k; 50V; 0603; 100mW
R13	43.05	19.05	180	0603	2.2k	Multicomp	MCWR06X2201FTL	2447320		Chip Resistor; Thick Film; 2.2k; 50V; 0603; 100mW
U1	24.77	19.05	0	SO14		Microchip	ATTINY841-SSU	2396716		Microchip AVR ATtiny84 16MHz SOIC
U2	30.61	29.72	0	DFN-10	LTC3225EDDB	Linear Technology	LTC3225EDDB#TRMPBF	1715231		Supercapacitor Charger

Press-In Nuts for Iridium 9603N (press into the BOTTOM of the PCB):

HOLE1	3.81	3.81			Press-In Nut	McMaster-Carr	95117A411		95117A411	Press-In Nut; 2-56
HOLE2	28.81	3.81			Press-In Nut	McMaster-Carr	95117A411		95117A411	Press-In Nut; 2-56

Non-surface mount components:

C5 & C6					1F 2.7V	Bussmann	HV0810-2R7105-R	2148482		Supercapacitor; 1F; 2.7V; +30%, -10%; 3.5mm Pitch
SC1 & SC2	See notes below				10F 2.7V	Bussmann	HV1030-2R7106-R	2148486		Supercapacitor; 10F; 2.7V; +30%, -10%; 5.0mm Pitch
ANTENNA					SMA Jack	Johnson	142-0711-821	1019328		SMA End Launch Jack 50 Ohm
		Alternate			SMA Jack	Samtec	SMA-J-P-H-ST-EM1	2856818		SMA End Launch Jack 50 Ohm

Iridium 9603N:										
9603N						Iridium	9603N			<a href="https://www.rock7.com/shop-product-detail?productId=50">https://www.rock7.com/shop-product-detail?productId=50</a>

Mounting hardware for Iridium 9603N:

SPACERS_x2									94669A100	4.5mm OD x 6mm Spacers for Iridium Module
SCREWS_x2									92185A081	2-56 x 7/16 Screws for Iridium Module

Cable for Iridium 9603N:

CABLE						Amphenol	A-1PA-132-025B2	2664624		Amphenol AMC cable (u.FL compatible) 50ohm 25mm
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SMA Antenna:

Iridium						Maxtena	M1621HCT-SMA	2281619		Iridium Passive Antenna with SMA connector
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Notes:

SC1 and SC2 are optional - they are only required if you select 60mA charge current. Install them flat against the underside of the PCB, carefully bending the legs first. Glue them in place if required.