



Kelly Designs

Explorer Board HAT
PN: 1287
Rev B1

As of: 6/2/2018
Patrick Kelly, Jack Kelly
© Copyright 2018

Item	Qty	Location (<u>bottom</u>)	Mfg Part #	Description	Rating	Footprint	Mfg	Mouser	DigiKey	Notes	\$ each	Total
1	1	<u>A1</u>	1909763-1	Conn UMCC Jack Str 50 Ohm SMD		SMD	TE	571-1909763-1	A118077CT-ND		0.322	0.322
2	2	<u>C6, C7</u>	GRM1555C1H180JA01D	Cap Cer 18pF 50V COG 5% 0402	COG	0402	Murata	81-GRM1555C1H180JA1D	490-5858-1-ND		0.006	0.012
3	8	<u>C1, C2, C5, C9, C21, C22, C24, C30</u>	CC0603KRX7R7BB104	Cap Cer 0.1uF 16V X7R 10% 0603	X7R	0603	Yageo	603-CC603KRX7R7BB104	311-1088-1-ND		0.005	0.040
3	0	<u>C1, C2, C5, C9, C21, C22, C24, C30</u>	C0603C104K4RACTU	Cap Cer 0.1uF 16V X7R 10% 0603	X7R	0603	Kemet	80-C0603C104K4R	399-1096-1-ND		0.011	0.000
3	0	<u>C1, C2, C5, C9, C21, C22, C24, C30</u>	GRM188R71C104KA01D	Cap Cer 0.1uF 16V X7R 10% 0603	X7R	0603	Murata	81-GRM39X104K16	490-1532-1-ND		0.031	0.000
3	0	<u>C1, C2, C5, C9, C21, C22, C24, C30</u>	GCM188R71C104KA37D	Cap Cer 0.1uF 16V X7R 10% 0603	X7R	0603	Murata	81-GCM188R71C104KA7D	490-4774-1-ND		0.034	0.000
4	7	<u>C12, C13, C14, C15, C16, C17, C23</u>	GRM155R71C104KA88J	Cap Cer 0.1uF 16V X7R 10% 0402	X7R	0402	Murata	81-GRM155R71C104KA8J	490-6328-1-ND		0.006	0.042
5	3	<u>C3, C4, C27</u>	CC0603KRX5R7BB475	Cap Cer 4.7uF 16V X5R 10% 0603	X5R	0603	Yageo	603-CC603KRX5R7BB475	311-1785-1-ND		0.072	0.216
6	3	<u>C8, C28, C29</u>	GRT188R61C106KE13D	Cap Cer 10uF 6.3V X5R 10% 0603	X5R	0603	Murata	81-GRT188R61C106KE3D	490-12317-1-ND		0.154	0.462
7	1	<u>C10</u>	CC1206KKX7R6BB225	Cap Cer 2.2uF 10V X7R 10% 1206	X7R	1206	Yageo	603-CC126KKX7R6BB225	311-1953-1-ND		0.037	0.037
7	0	<u>C10</u>	GRM31MR71A225KA01L	Cap Cer 2.2uF 10V X7R 10% 1206	X7R	1206	Murata	81-GRM426X225K010L	490-1803-1-ND		0.118	0.000
7	0	<u>C10</u>	C1206C225K8RACTU	Cap Cer 2.2uF 10V X7R 10% 1206	X7R	1206	Kemet	80-C1206C225K8R	399-8182-1-ND		0.470	0.000
7	0	<u>C10</u>	LMK316B7225KL-T	Cap Cer 2.2uF 10V X7R 10% 1206	X7R	1206	Taiyo Yuden	963-LMK316B7225KL-T	587-2232-1-ND		0.074	0.000
8	1	<u>C11</u>	GRM31CR60J107KE39L	Cap Cer 100uF 6.3V X5R 10% 1206	X5R	1206	Murata	81-GRM31CR60J107KE9L	490-13982-1-ND		0.290	0.290
8	0	<u>C11</u>	CL31A107MQHNNNE	Cap Cer 100uF 6.3V X5R 20% 1206	X5R	1206	Samsung	NA	1276-1782-1-ND		0.261	0.000
8	0	<u>C11</u>	JMK316BJ107ML-T	Cap Cer 100uF 6.3V X5R 20% 1206	X5R	1206	Taiyo Yuden	963-JMK316BJ107ML-T	587-1963-6-ND		0.472	0.000
9	3	<u>C18, C25, C26</u>	CC0603KRX5R5BB475	Cap Cer 4.7uF 6.3V X5R 10% 0603	X5R	0603	Yageo	603-CC603KRX5R5BB475	311-1521-1-ND		0.025	0.075
10	1	<u>C19</u>	LMK105BJ105KV-F	Cap Cer 1uF 10V X5R 10% 0402	X5R	0402	Taiyo Yuden	963-LMK105BJ105KV-F	587-1454-1-ND		0.023	0.023
10	0	<u>C19</u>	EMK105BJ105KV-F	Cap Cer 1uF 16V X5R 10% 0402	X5R	0402	Taiyo Yuden	963-EMK105BJ105KV-F	587-2477-1-ND		0.034	0.000
10	0	<u>C19</u>	CL05A105K05NNNC	Cap Cer 1uF 16V X5R 10% 0402	X5R	0402	Samsung	NA	1276-1067-1-ND		0.024	0.000
10	0	<u>C19</u>	C1005X5R1E105K050BC	Cap Cer 1uF 25V X5R 10% 0402	X5R	0402	TDK	810-C1005X5R1E105K	445-9066-1-ND		0.068	0.000
11	1	<u>C20</u>	CC0603KRX7R9BB331	Cap Cer 330pF 50V X7R 10% 0603	X7R	0603	Yageo	603-CC603KRX7R9BB331	311-1186-1-ND		0.024	0.024
12	2	<u>D1, D4</u>	LTST-C190KRKT	LED Red Clear 0603		0603	Lite-On	859-LTST-C190KRKT	160-1436-1-ND		0.068	0.136
13	1	<u>D2</u>	LTST-C191KFKT	LED Orange Clear 0603		0603	Lite-On	859-LTST-C191KFKT	160-1445-1-ND		0.068	0.068
14	1	<u>D3</u>	LTST-C190KGKT	LED Green Clear 0603		0603	Lite-On	859-LTST-C190KGKT	160-1435-1-ND		0.068	0.068
15	1	<u>F1</u>	OZCK0100FF2E	Fuse PTC Resttable 1.0A 6V Chip 0805		0805	Bel Fuse	530-OZCK0100FF2E	507-1815-1-ND		0.185	0.185
16	1	<u>J1</u>	CS25582-40G-M36-0A	Conn Socket 2x20 0.100 inch SMD		0.100	Kaweel Tech	(Buy from Adafruit #2187)	NA		1.950	1.950
17	1	<u>J2</u>	S2B-PH-SM4-TB(LF)(SN)	Conn Header PH Side 2 Pos 2mm SMD		SMD	JST	NA	455-1749-1-ND		0.419	0.419
18	0	<u>J3</u>	20021121-00010C4LF	Conn Header 10 Pos DL 0.050 in SMD		SMD	Amphenol	649-202112100010C4LF	609-3695-1-ND		0.606	0.000
19	0	<u>J5</u>	M22-2510246	Header 2 Pos 2mm		2mm	Harwin	855-M22-2510246	952-2280-ND	5,6	0.082	0.000
20	0	<u>J5 Shunt</u>	M22-1900005	Shunt Jumper 2mm		2mm	Harwin	855-M22-1900005	952-1305-ND		0.215	0.000
21	1	<u>L1</u>	PA4341.682NLT	Inductor 6.8uH 4.5A 60 Mohm SMD			Pulse	673-PA4341.682NLT	553-3420-1-ND		0.702	0.702
21	0	<u>L1</u>	PA4341.682NLT	Inductor 6.8uH 4.5A 60 Mohm SMD			Pulse	buy from Arrow			0.663	0.000
22	2	<u>Q1, Q4</u>	FDN340P	MOSFET P-Chan 20V 2A SSOT-3		SSOT-3	On Semi	512-FDN340P	FDN340PCT-ND		0.157	0.314
23	1	<u>Q2</u>	MMUN2133LT1G	Trans Prebias PNP 246mW SOT23-3		SOT23-3	On Semi	863-MMUN2133LT1G	MMUN2133LT1GOSCT-ND		0.039	0.039
24	1	<u>Q3</u>	BSS138-7-F	MOSFET N-Chan 50V 200mA SOT-23		SOT-23	Diodes Inc	621-BSS138-7-F	BSS138-FDICT-ND		0.099	0.099
24	0	<u>Q3</u>	BSS138LT1G	MOSFET N-Chan 50V 200mA SOT-23		SOT-23	On Semi	863-BSS138LT1G	BSS138LT1GOSCT-ND		0.070	0.000
25	3	<u>R14, R15, R17</u>	RC0603FR-071KL	Res 1.0K Ohm 1% Thick Film 0603	1%	0603	Yageo	603-RC0603FR-071KL	311-1.00KHRCCT-ND		0.006	0.018
26	1	<u>R1</u>	RT0805BRD07732KL	Res 732K Ohm 0.1% Thin Film 0805	0.1%	0805	Yageo	603-RT0805BRD07732KL	YAG4938CT-ND		0.114	0.114
27	1	<u>R22</u>	ERA-6AE86653V	Res 665K Ohm 0.1% Thin Film 0805	0.1%	0805	Panasonic	667-ERA-6AE86653V	P665KDACT-ND		0.118	0.118
28	1	<u>R7</u>	RT0603BRD07200KL	Res 200K Ohm 0.1% Thin Film 0603	0.1%	0603	Yageo	603-RT0603BRD07200KL	YAG1578CT-ND		0.127	0.127
29	2	<u>R3, R21</u>	RT0603BRD074K99L	Res 4.99K Ohm 0.1% Thin Film 0603	0.1%	0603	Yageo	603-RT0603BRD074K99L	YAG1678CT-ND		0.127	0.254
30	1	<u>R2</u>	ERA-3AEB2433V	Res 243K Ohm 0.1% Thin Film 0603	0.1%	0603	Panasonic	667-ERA-3AEB2433V	P243KDBCT-ND		0.117	0.117
31	1	<u>R23</u>	RN73C1J402KBTDF	Res 402K Ohm 0.1% Thin Film 0603	0.1%	0603	TE	279-RN73C1J402KBTDF	A124747CT-ND		0.437	0.437
32	1	<u>R6</u>	CPF0603B1M0E1	Res 1M Ohm 0.1% Thin Film 0603	0.1%	0603	TE	279-CPF0603B1M0E1	A102234CT-ND		0.157	0.157
33	1	<u>R38</u>	ERJ-3EKF1004V	Res 1M Ohm 1% Thick Film 0603	1.0%	0603	Panasonic	667-ERJ-3EKF1004V	P1.00MHCT-ND		0.018	0.018

