Partlist exported from C:/Users/Garming/Documents/EAGLE/projects/FlipdotController/v08 Flipdot.sch at 8/14/2020 6:23 PM Part Value Device Package Description DESCRIPTION HEIGHT MANUFACTURER NAME MANUFACTURER PART NUMBER MF MOUSER PART NUMBER MOUSER PRICE-STOCK MPN OC FARNELL OC NEWARK POPULARITY SPICEPREFIX 10F C1 FG11X7S1H106KRT06 FG11X7S1H106KRT06 FG11X7R2A225KRT06 +/-10% 50V Ceramic Capacitor X7S Radial 10F +/-10% 50V Ceramic Capacitor X7S Radial $7 \, \text{mm}$ TDK FG11X7S1H106KRT06 810-FG11X7S1H106KRT6 https://www.mouser.co.uk/ProductDetail/TDK/FG11X7S1H106KRT06?qs=icAhCOE9Tbit09SXaxTVkq %3D%3D C2 FG11X7S1H106KRT06 FG11X7S1H106KRT06 FG11X7R2A225KRT06 10F +/-10% 50V Ceramic Capacitor X7S Radial 10F +/-10% 50V Ceramic Capacitor X7S Radial 7mm TDK FG11X7S1H106KRT06 810-FG11X7S1H106KRT6 https://www.mouser.co.uk/ProductDetail/TDK/FG11X7S1H106KRT06?qs=icAhCOE9Tbit09SXaxTVkg %3D%3D 0.1uF K104K15X7RF53H5 K104K15X7RF53H5 Capacitor; Ceramic; Cap 0.1 uF Vishay K 100nF Ceramic Multilayer Capacitor, 50 V dc, +125C, X7R Dielectric, +/-10% Capacitor Ceramic Cap 0.1 uF Vishay K 100nF Ceramic Multilayer Capacitor, 50 V dc, +125C, X7R Dielectric, +/-10% mm Vishay K104K15X7RF53H5 594-K104K15X7RF53H5 https://www.mouser.co.uk/ProductDetail/Vishay-BC-Components/K104K15X7RF53H5?qs=sYfpZ29 HcUSlgH5bSUHkYw%3D%3D K104K15X7RF53H5 K104K15X7RF53H5 0,1uF Capacitor; Ceramic; Cap 0.1 uF Vishay K 100nF Ceramic Multilayer Capacitor, 50 V dc, +125C, X7R Dielectric, +/-10%Capacitor Ceramic Cap 0.1 uF Vishay K 100nF Ceramic Multilayer Capacitor, 50 V dc, +125C, X7R Dielectric, +/-10% mm Vishay K104K15X7RF53H5 594-K104K15X7RF53H5 https://www.mouser.co.uk/ProductDetail/Vishay-BC-Components/K104K15X7RF53H5?qs=sYfpZ29 HcUSlqH5bSUHkYw%3D%3D K104K15X7RF53H5 K104K15X7RF53H5 Capacitor; Ceramic; Cap 0.1 uF Vishay K 100nF Ceramic Multilayer Capacitor, 50 V dc, +125C, X7R Dielectric, +/-10% Capacitor Ceramic Cap 0.1 uF Vishay K 100nF Ceramic Multilayer Capacitor, 50 V dc, +125C, X7R Dielectric, +/-10% mm Vishay K104K15X7RF53H5 594-K104K15X7RF53H5 https://www.mouser.co.uk/ProductDetail/Vishay-BC-Components/K104K15X7RE53H5?qs=sYfpZ29 HcUSlgH5bSUHkYw%3D%3D K104K15X7RF53H5 K104K15X7RF53H5 K104K15X7RF53H5 Capacitor; Ceramic; Cap 0.1 uF Vishay K 100nF Ceramic Multilayer Capacitor, 50 V dc, +125C, X7R Dielectric, +/-10% Capacitor Ceramic Cap 0.1 uF Vishay K 100nF Ceramic Multilayer Capacitor, 50 V dc, +125C, X7R Dielectric, +/-10% mm Vishay

594-K104K15X7RF53H5

 $\verb|https://www.mouser.co.uk/ProductDetail/Vishay-BC-Components/K104K15X7RF53H5?qs=sYfpZ29| | HcUSlqH5bSUHkYw%3D%3D| | Hc$

10 C7 K104K15X7RF53H5 K104K15X7RF53H5 K104K15X7RF53H5

Capacitor; Ceramic; Cap 0.1 uF Vishay K 100nF Ceramic Multilayer Capacitor, 50 V dc, \pm 125C, X7R Dielectric, \pm 10%

Capacitor

RECTIFIER

RECTIFIER

11

Ceramic Cap 0.1 uF Vishay K 100nF Ceramic Multilayer Capacitor, 50 V dc, +125C, X7R Dielectric, +/-10% mm Vishay K104K15X7RF53H5

594-K104K15X7RF53H5

https://www.mouser.co.uk/ProductDetail/Vishay-BC-Components/K104K15X7RF53H5?qs=sYfpZ29HcUSlqH5bSUHkYw%3D%3D

C8 860020473008 860020473008 CAPPRD250W52D630H1250
Wurth Elektronik 100uF 25V dc, Through Hole - 860020473008 WCAP-ATG5 Aluminum
Electrolytic Capacitors Wurth Elektronik 100uF 25V dc, Through Hole 860020473008 WCAP-ATG5 Aluminum Electrolytic Capacitors 12.5mm Wurth
Elektronik

860020473008 710-860020473008

https://www.mouser.co.uk/ProductDetail/Wurth-Elektronik/860020473008?qs=0KOYDY2FL29hXRmIX2%252BovO%3D%3D

12 D1 SB140 DIOAD1413W86L463D238

13 D2 1N5822 1N5817-B D041-7.6 1.0A SCHOTTKY BARRIER

0 14 D3 1N5822 1N5817-B D041-7.6 1.0A SCHOTTKY BARRIER

0 15 D4 SB140 DIOAD1413W86L463D238

16 D5 SB140

17 D6 SB140

DIOAD1413W86L463D238

DIOAD1413W86L463D238

18	D7 DIOAD1413W86L463D238	SB140
19	D8 DIOAD1413W86L463D238	SB140
20	D9 DIOAD1413W86L463D238	SB140
21	D10 DIOAD1413W86L463D238	SB140
22	D11 DIOAD1413W86L463D238	SB140
23	D12 DIOAD1413W86L463D238	SB140
24	D13 DIOAD1413W86L463D238	SB140
25	D14 DIOAD1413W86L463D238	SB140

DIOAD1413W86L463D238

26 D15 SB140 DIOAD1413W86L463D238 27 D16 SB140 DIOAD1413W86L463D238 28 D17 SB140 DIOAD1413W86L463D238 29 D18 SB140 DIOAD1413W86L463D238 30 D19 SB140 DIOAD1413W86L463D238 F3 04000025WR 04000025WR FUSC1508X58N 31 Surface Mount Fuses 0.5A 5V Surface Mount Fuses 0.5A 5V 0.582mm LITTELFUSE 04000025WR 576-04000025WR https://www.mouser.co.uk/ProductDetail/Littelfuse/04000025WR?qs=5aG0NVq1C4wtLwK55CRtPQ <u>%3D%3D</u> L78S09CV TO270P460X1020X2008-3P 32 IC1 L78S09CV

511-L78S09CV

https://www.mouser.co.uk/ProductDetail/STMicroelectronics/L78S09CV?qs=QRsLLuHQazCCdYrl

L78S09CV,

4.6mm

L78S09CV, Voltage Regulator, 2A 9 V, 3-Pin

Voltage Regulator, 2A 9 V, 3-Pin

L78S09CV

TO-220

TO-220

STMicroelectronics

%252BmPkLQ%3D%3D

33 IC7 74HC595N 74HC595N DIL16 8-bit SHIFT REGISTER, output latch IC10 74HC595N 74HC595N DIL16 8-bit SHIFT REGISTER, output latch IC12 74HC595N 74HC595N DIL16 35 8-bit SHIFT REGISTER, output latch 0 36 IC14 LM7805CT LM7805CT TO254P470X1016X2019-3P Linear Voltage Reg, 5V 1A, 3-Pin Linear Voltage Reg, 5V 1A, 3-Pin TO-220 4.7mm ON Semiconductor LM7805CT 512-LM7805CT https://www.mouser.co.uk/ProductDetail/ON-Semiconductor-Fairchild/LM7805CT?qs=cnIeywgm e7bzmZ37%2FiFT9w%3D%3D 37 IC15 ULN2803A ULN2803A DIL18 DRIVER ARRAY

5
38 IC16 ULN2803A ULN2803A DIL18
DRIVER

ARRAY

ARRAY

5
39 IC17 ULN2803A ULN2803A DIL18
DRIVER

5

40	J1 4_PIN_FLIPDOT	4_PIN_FLIPDOT		
41	J2 4_PIN_FLIPDOT	4_PIN_FLIPDOT		
42	head screw, PCB mount 5 poles, CUI Blue, Philip' Devices TB003-500-P05BE	ew type, 5.00 , horizor Fixed Terminal E s head screw, PCB mour 490-TB003-5	ntal, 5 poles, CUI Blue, Philip' Blocks screw type, 5.00 , horizont 10.7mm CUI	ontal,
43	Fixed Terminal Blocks screen head screw, PCB mount 2 poles, CUI Blue, Philip' Devices TB003-500-P02BE	ew type, 5.00 , horizor Fixed Terminal E s head screw, PCB mour 490-TB003-5		s ontal,
44	JP1 HEADER	PINHD-1X17	1X17	PIN
45	JP2 HEADER	PINHD-1x17	1x17	PIN

2X02

PIN

PINHD-2X2

34_PIN_CONNECTOR_NEW

46 JP3

HEADER

47 K4 Main_Connector 34_PIN_CONNECTOR_NEW

48 PS1 OKI-78SR-12 1.0-W36-C OKI-78SR-12 1.0-W36-C OKI-78SR V

Switching Regulator 15-36Vin 12Vo

Switching Regulator 15-36Vin 12Vo

1 A mm

Murata

Electronics

580-OKI78SR12/1W36C OKI-78SR-12/1.0-W36-C

https://www.mouser.co.uk/ProductDetail/Murata-Power-Solutions/OKI-78SR-12-10-W36-C?gs= AO1KX63v8Rv0GpKDSR38NA%3D%3D

49 O1 IRFZ44NPBF IRFZ44NPBF TO254P483X1016X1994-3P

MOSFET N-Channel 55V 49A TO220AB Infineon IRFZ44NPBF N-channel MOSFET Transistor, 49 A, 55 V, 3-Pin TO-220AB MOSFET N-Channel 55V 49A TO220AB Infineon IRFZ44NPBF N-channel MOSFET Transistor, 49 A, 55 V, 3-Pin TO-220AB 4.83mm Infineon

> IRFZ44NPBF 942-IRFZ44NPBF

https://www.mouser.co.uk/ProductDetail/Infineon-Technologies/IRFZ44NPBF?qs=9%252BKlkBg LFf24zghzPg2f9g%3D%3D

50 O2 IRFZ44NPBF IRFZ44NPBF TO254P483X1016X1994-3P MOSFET N-Channel 55V 49A TO220AB Infineon IRFZ44NPBF N-channel MOSFET Transistor, 49 A, 55 V, 3-Pin TO-220AB MOSFET N-Channel 55V 49A TO220AB Infineon IRFZ44NPBF N-channel MOSFET Transistor, 49 A, 55 V, 3-Pin TO-220AB 4.83mm Infineon

> IRFZ44NPBF 942-IRFZ44NPBF

https://www.mouser.co.uk/ProductDetail/Infineon-Technologies/IRFZ44NPBF?qs=9%252BKlkBg LFf24zghzPg2f9g%3D%3D

TO254P483X1016X1994-3P 51 IRFZ44NPBF IRFZ44NPBF Q.3 MOSFET N-Channel 55V 49A TO220AB Infineon IRFZ44NPBF N-channel MOSFET Transistor, 49 A, 55 V, 3-Pin TO-220AB MOSFET N-Channel 55V 49A TO220AB Infineon IRFZ44NPBF N-channel MOSFET Transistor, 49 A, 55 V, 3-Pin TO-220AB 4.83mm Infineon

> IRFZ44NPBF 942-IRFZ44NPBF

https://www.mouser.co.uk/ProductDetail/Infineon-Technologies/IRFZ44NPBF?qs=9%252BKlkBg LFf24zqhzPq2f9q%3D%3D

52 IRFZ44NPBF TO254P483X1016X1994-3P MOSFET N-Channel 55V 49A TO220AB Infineon IRFZ44NPBF N-channel MOSFET Transistor, 49 A, 55 V, 3-Pin TO-220AB MOSFET N-Channel 55V 49A TO220AB Infineon IRFZ44NPBF N-channel MOSFET Transistor, 49 A, 55 V, 3-Pin TO-220AB 4.83mm Infineon

> 942-IRFZ44NPBF IRFZ44NPBF

https://www.mouser.co.uk/ProductDetail/Infineon-Technologies/IRFZ44NPBF?qs=9%252BKlkBg LFf24zqhzPq2f9q%3D%3D

R-EU 0207/10 53 R1 220 0207/10 RESISTOR, European

symbol

81 R

54 R2 1k R-EU 0207/10 0207/10

RESISTOR, European symbol

55	R3 10k RESISTOR, symbol	European		R-EU_0207/10	0207/10
56	R4 47k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
57	R5 470 RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
58	R6 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
59	R7 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
60	R8 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
61	R9 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
62	R10 10k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10

63	R11 10k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
64	R12 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
65	R13 4k7 RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
66	R14 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
67	R15 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
68	R16 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
69	R17 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10

70	R18 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
71	R19 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
72	R20 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
73	R21 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
74	R22 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
75	R23 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
76	R24 22k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10

77	R25 220 RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
78	R26 47k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
79	R27 220 RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
80	R28 47k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
81	R29 220 RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
82	R30 47k RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
83	R31 220 RESISTOR, symbol	81 European	R	R-EU_0207/10	0207/10
84	R32 47k RESISTOR,	81 European	R	R-EU_0207/10	0207/10

81 R

RN1 10k G08R SIL9 SIL

RESISTOR

unknown

unknown 6

86 IRF5305PBF T1 IRF5305PBF TO254P469X1042X1967-3P MOSFET P-Channel 55V 31A TO220AB Infineon IRF5305PBF P-channel MOSFET Transistor, 31 A, 55 V, 3-Pin TO-220AB MOSFET P-Channel 55V 31A TO220AB Infineon IRF5305PBF P-channel MOSFET Transistor, 31 A, 55 V, 3-Pin TO-220AB 4.69mm

Infineon

IRF5305PBF 942-IRF5305PBF

https://www.mouser.co.uk/ProductDetail/Infineon-Technologies/IRF5305PBF?qs=9%252BKlkBg LFf3WAOOEkAEJ1w%3D%3D

87 T2 IRFZ44NPBF IRFZ44NPBF TO254P483X1016X1994-3P MOSFET N-Channel 55V 49A TO220AB Infineon IRFZ44NPBF N-channel MOSFET Transistor, 49 A, 55 V, 3-Pin TO-220AB MOSFET N-Channel 55V 49A TO220AB Infineon IRFZ44NPBF

N-channel MOSFET Transistor, 49 A, 55 V, 3-Pin TO-220AB 4.83mm

Infineon

942-IRFZ44NPBF IRFZ44NPBF

https://www.mouser.co.uk/ProductDetail/Infineon-Technologies/IRFZ44NPBF?qs=9%252BKlkBg LFf24zghzPg2f9g%3D%3D

88 Т3 IRF5305PBF IRF5305PBF TO254P469X1042X1967-3P MOSFET P-Channel 55V 31A TO220AB Infineon IRF5305PBF P-channel MOSFET Transistor, 31 A, 55 V, 3-Pin TO-220AB MOSFET P-Channel 55V 31A TO220AB Infineon IRF5305PBF

P-channel MOSFET Transistor, 31 A, 55 V, 3-Pin TO-220AB 4.69mm

Infineon

IRF5305PBF 942-IRF5305PBF

https://www.mouser.co.uk/ProductDetail/Infineon-Technologies/IRF5305PBF?qs=9%252BKlkBq LFf3WAOOEkAEJ1w%3D%3D

BC547 29 BC547 T092 т4 NPN

TRANSISTOR

43

T6 BD678AG BD678AG TO229P300X760X1364-3P 90

Source: Datasheet

> 3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2 52BrpJA%3D%3D

91 Т7 BD678AG BD678AG TO229P300X760X1364-3P

Source: Datasheet

> ON 3mm

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2

52BrpJA%3D%3D

92 T8 BD678AG BD678AG T0229P300X760X1364-3P

Source:
Datasheet

3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2

52BrpJA%3D%3D

93 T9 BD678AG BD678AG TO229P300X760X1364-3P

Source: Datasheet

3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2

52BrpJA%3D%3D

94 T10 BD678AG BD678AG T0229P300X760X1364-3P

Source: Datasheet

3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2

52BrpJA%3D%3D

95 T11 BD678AG BD678AG T0229P300X760X1364-3P

Source: Datasheet

3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2

52BrpJA%3D%3D

96 T12 BD678AG BD678AG T0229P300X760X1364-3P

Source:
Datasheet

3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2

52BrpJA%3D%3D

97 T13 BD678AG BD678AG T0229P300X760X1364-3P

Source:
Datasheet

3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2

52BrpJA%3D%3D

98 T14 BD678AG BD678AG T0229P300X760X1364-3P

Source:

3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2

52BrpJA%3D%3D

99 T15 BD678AG BD678AG T0229P300X760X1364-3P

Source: Datasheet

3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2

52BrpJA%3D%3D

100 T16 BD678AG BD678AG T0229P300X760X1364-3P

Source: Datasheet

3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2

52BrpJA%3D%3D

101 T17 BD678AG BD678AG T0229P300X760X1364-3P

Source: Datasheet

3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2

52BrpJA%3D%3D

102 T18\ BD678AG BD678AG T0229P300X760X1364-3P

Source: Datasheet

3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2

52BrpJA%3D%3D

103 T19 BD678AG BD678AG T0229P300X760X1364-3P

Source: Datasheet

3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2

52BrpJA%3D%3D

104 T20 BD678AG BD678AG T0229P300X760X1364-3P

Source: Datasheet

3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%2

52BrpJA%3D%3D

105 T21 BD678AG BD678AG T0229P300X760X1364-3P

Source: Datasheet

3mm ON

Semiconductor

BD678AG 863-BD678AG

https://www.mouser.co.uk/ProductDetail/ON-Semiconductor/BD678AG?qs=vNc2DXHODiLQQRiLe%252BrpJA%3D%3D

106 U\$2 ARDUINOMICRO ARDUINOMICRO

ARDUINOMICRO