

Bill Of Materials (Aleph J UMS PCB) Draft

Part			Manufacturer		Supplier	
Designation	Description	Value	Name	Part Number	Mouser	Digi-Key
Capacitors						
C1	MKP Type Polypropylene Film Capacitor	1uF	WIMA	MKP4-1.0/250/10	505-MKP41.0/250/10	
C2, C3	35V Electrolytic Capacitor	220uF	Elna	RFS-50V221MJ6#5	555-RFS50V221MJ6#5	604-1123-ND
			Nichicon	UFG1H221MHM	647-UFG1H221MHM	
				UKZ1H221MHM	647-UKZ1H221MHM	
C4	35V Electrolytic Capacitor	10uF	Elna	RFS-50V100MG3#5	555-RFS50V100MG3#5	604-1119-ND
			Nichicon	UKZ2A100MPM	647-UKZ2A100MPM	
C5	Silver Mica or Polystyrene Capacitor	5pF	Cornell Dubilier	CD15CD050DO3F	598-CD15CD050DO3F	338-2606-ND
C6	MKP Type Polypropylene Film Capacitor	100nF to 1uF	WIMA	MKP4F031003C00JSSD	505-MKP4.1/250/5P10	
Diodes						
D1	Zener Diode	9V1	Vishay	BZX85B9V1-TR	78-BZX85B9V1	
Jumpers						
J1						
J2						
LEDs						
LED2						
LED3						

Transistors						
Q1A, Q1B	Small Signal P-Channel JFET	2SJ74	Toshiba	2SJ74-BL		
Q2	Small Signal PNP BJT	ZTX550	Zetex	ZTX550	522-ZTX550	
		BC560C	Fairchild	BC560CTA	512-BC560CTA	
Q3, Q4	Small Signal NPN BJT	ZTX450	Zetex	ZTX450	522-ZTX450	
		BC550C	Fairchild	BC550CTA	512-BC550CTA	
Q5, Q6, Q7, Q8	N-Channel MOSFET	IRFP240	Vishay	IRFP240PBF	844-IRFP240PBF	IRFP240PBF-ND
Resistors						
R1, R3	0.25W Resistor	22K1	Vishay Dale	RN60D2212FB14	71-RN60D-F-22.1K	1135-1588-MIL
				CMF5522K100FHEK	71-CMF5522K100FHEK	CMF22.1KHA-ND
R2, R4	0.25W Resistor	221K	Vishay Dale	RN60D2213FB14	71-RN60D-F-221K	1135-1589-MIL
				CMF55221K00FHEK	71-CMF55221K00FHEK	CMF55221K00FHEK-ND
R5	0.25W Resistor	4K75	Vishay Dale	RN60D4751FB14	71-RN60D-F-4.75K	1135-1611-MIL
				CMF554K7500FHEK	71-CMF554K7500FHEK	CMF4.75KHA-ND
R6	0.25W Resistor	562R	Vishay Dale	RN60D5620FB14	71-RN60D-F-562	1135-1623-MIL
				CMF55562R00FHEK	71-CMF55562R00FHEK	CMF562HA-ND
R7	Multi-Trimmer Potentiometer (See Note 1)	2K	Bourns	3386K-1-202LF	652-3386K-1-202LF	3386K-1-202LF-ND
				3296W-1-202LF	652-3296W-1-202LF	3296W-202LF-ND
				3296Y-1-202LF	652-3296Y-1-202LF	3296Y-202LF-ND
				3299W-1-202LF	652-3299W-1-202LF	3299W-202LF-ND
				3299Y-1-202LF	652-3299Y-1-202LF	3299Y-202LF-ND
R8	Multi-Trimmer Potentiometer (See Note 1)	500R	Bourns	3386K-1-501LF	652-3386K-1-501LF	3386K-1-501LF-ND
				3296W-1-501LF	652-3296W-1-501LF	3296W-501LF-ND
				3296Y-1-501LF	652-3296Y-1-501LF	3296Y-501LF-ND
				3299W-1-501LF	652-3299W-1-501LF	3299W-501LF-ND
				3299Y-1-501LF	652-3299Y-1-501LF	3299Y-501LF-ND

R9, R10, R11, R12, R13	0.25W Resistor	221R	Vishay Dale	RN60D2210FB14	71-RN60D-F-221	1135-1586-MIL
				CMF55221R00FHEK	CMF55221R00FHEK	CMF221HA-ND
R14	0.25W Resistor	392R	Vishay Dale	RN60D3920FB14	71-RN60D-F-392	RN60D3920FB14-MIL
				CMF55392R00FHEK	71-CMF55392R00FHEK	CMF392HA-ND
R15	0.25W Resistor	1K	Vishay Dale	RN60D1001FB14	71-RN60D-F-1.0K	RN60D1001FB14-MIL
				CMF551K0000FHEK	71- CMF551K0000FHEK	CMF1.00KHA-ND
R16, R17, R18, R19, R20, R21, R22, R23	3W Resistor	0R47	Panasonic	ERX-3FJR47	667-ERX-3FJR47	
			Vishay Dale	CPF3R47000JNB14	71-CPF3.475%T00	
R24	0.25W Resistor	1K2	Vishay Dale	RN60D1201FB14	71-RN60D-F-1.2K	1135-1566-MIL
				CMF551K2000FKR6	71-CMF551K2000FKR6	CMF551K2000FKR6-ND
R25	0.25W Resistor	1K5	Vishay Dale	RN60D1501FB14	71-RN60D-F-1.5K	1135-1572-MIL
				CMF551K5000FHEK	71-CMF551K5000FHEK	CMF1.50KHA-ND
R26	0.25W Resistor	3K32	Vishay Dale	RN60D3321FB14	71-RN60D-F-3.32K	1135-1605-MIL
				CMF553K3200FHEK	71-CMF553K3200FHEK	CMF3.32KHA-ND
R27	Multi-Trimmer Potentiometer (See Note 1)	100K	Bourns	3386K-1-104LF	652-3386K-1-104LF	3386K-1-104LF-ND
				3296W-1-104LF	652-3296W-1-104LF	3296W-104LF-ND
				3296Y-1-104LF	652-3296Y-1-104LF	3296Y-104LF-ND
				3299W-1-104LF	652-3299W-1-104LF	3299W-104LF-ND
				3299Y-1-104LF	652-3299Y-1-104LF	3299Y-104LF-ND
R28	0.25W Resistor	3K to 5K	Vishay Dale			
R29	0.25W Resistor	3K to 5K	Vishay Dale			
R30	0.25W Resistor					

Note 1

For the trimmer potentiometers I have specified both the 1 turn and the 25 turn types. The 1 turn variant is listed first and the 25 turn the rest. I would highly recommend the use of the 25 turn variant for the added resolution of adjustability. The builder is also encouraged to replace the trimmer potentiometer with a fixed value resistor if possible and the PCB does provide the required holes for such a replacement.

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