PedalPCB

Byzantium Flanger

Revised 11/28/21

IMPORTANT NOTES

The PedalPCB Byzantium Flanger PCB utilizes a pair of stacked PCBs to remain compact and isolate the audio path from the BBD clock and LFO circuitry.

Because of this, body height must be considered when selecting components, specifically electrolytic and box film capacitors. Links are provided below for suppliers for these components.

Maximum component body height is 7mm for both PCBs. This is typically not a concern for resistors, diodes, transistors, or socketed ICs.

Component	Supplier URL
1uF	https://www.mouser.com/ProductDetail/647-USR1H010MDD1TP
22uF	https://www.mouser.com/ProductDetail/667-ECE-A1EKA220I
33uF	https://www.mouser.com/ProductDetail/667-EEA-GA1E330
47uF	https://www.mouser.com/ProductDetail/647-USR1E470MDD1TP
100uF	https://www.mouser.com/ProductDetail/80-ESS107M025AE2AA
220nF	https://www.taydaelectronics.com/0-22uf-100v-5-polyester-film-box-type-capacitor.html

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BBD PCB (Page 1 of 2)

LOCATION	VALUE	TYPE	NOTES
R2	220K	Resistor, 1/4W	
R4	1K5	Resistor, 1/4W	
R6	100K	Resistor, 1/4W	
R7	180K	Resistor, 1/4W	
R12	100K	Resistor, 1/4W	
R15	4K7	Resistor, 1/4W	
R18	4K7	Resistor, 1/4W	
R19	4K7	Resistor, 1/4W	
R22	100K	Resistor, 1/4W	
R25	4K7	Resistor, 1/4W	
R26	33K	Resistor, 1/4W	
R27	56K	Resistor, 1/4W	
R42	39K	Resistor, 1/4W	
R47	33K	Resistor, 1/4W	
R48	220K	Resistor, 1/4W	
R49	470K	Resistor, 1/4W	
R50	150K	Resistor, 1/4W	
R51	68K	Resistor, 1/4W	
R100	10K	Resistor, 1/4W	
R101	10K	Resistor, 1/4W	
R103	4K7	Resistor, 1/4W	
C3	33u	Electrolytic capacitor, 5mm	7mm maximum body height
C7	10n	Film capacitor, 7.2 x 2.5mm	
C8	1u	Electrolytic capacitor, 5mm	
C11	47p	Ceramic capacitor	
C14	1u	Electrolytic capacitor, 5mm	
C23	47n	Film capacitor, 7.2 x 2.5mm	
C27	47n	Film capacitor, 7.2 x 2.5mm	
C28	5p	Ceramic capacitor	
C29	22u	Electrolytic capacitor, 5mm	
C30	33u	Electrolytic capacitor, 5mm	
C100	100u	Electrolytic capacitor, 5mm	
C101	100n	Film capacitor, 7.2 x 2.5mm	
C103	47u	Electrolytic capacitor, 5mm	
C104	47u	Electrolytic capacitor, 5mm	
D3	1N4148	Signal diode, DO-35	
D4	1N4148	Signal diode, DO-35	
D100	1N5817	Schottky diode, DO-41	
Q2	BC550	BJT transistor, NPN TO-92	
Q4	BC550	BJT transistor, NPN TO-92	
Q6	BC560	BJT transistor, PNP TO-92	
Q7	BC550	BJT transistor, NPN TO-92	
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LOCATION	VALUE	TYPE	NOTES
IC1	TL022	Dual op-amp, DIP8	
IC3	V3207D	BBD Analog Delay Line	
IC4	V3102D	BBD Clock, Two-Phase	
IC6	L78L05	Voltage regulator, +5VDC	
VR5	20K	Trimmer potentiometer, 3362P type	
VR6	25K	Trimmer potentiometer, 3362P type	
VR7	1M	Trimmer potentiometer, 3362P type	
RATE	C250K	16mm right-angle PCB mount pot	
DEPTH	B50K	16mm right-angle PCB mount pot	
RES	C50K	16mm right-angle PCB mount pot	
MANUAL	B50K	16mm right-angle PCB mount pot	

QUANTITY	DESCRIPTION
5	2-pin Female Header (2.54mm spacing)
5	2-pin Male Header (2.54mm spacing)
1	6-pin Male Header (2.54mm spacing)

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Audio PCB (Page 1 of 2)

LOCATION	VALUE	TYPE	NOTES
R1	1M	Resistor, 1/4W	
R3	1K	Resistor, 1/4W	
R5	470K	Resistor, 1/4W	
R8	10K	Resistor, 1/4W	
R9	47K	Resistor, 1/4W	
R10	10K	Resistor, 1/4W	
R13	10K	Resistor, 1/4W	
R14	47K	Resistor, 1/4W	
R16	82K	Resistor, 1/4W	
R17	220K	Resistor, 1/4W	
R20	10K	Resistor, 1/4W	
R21	10K	Resistor, 1/4W	
R23	10K	Resistor, 1/4W	
R24	10K	Resistor, 1/4W	
R28	330K	Resistor, 1/4W	
R29	10K	Resistor, 1/4W	
R30	10K	Resistor, 1/4W	
R31	10K	Resistor, 1/4W	
R32	10K	Resistor, 1/4W	
R33	22K	Resistor, 1/4W	
R34	47K	Resistor, 1/4W	
R35	47K	Resistor, 1/4W	
R36	47K	Resistor, 1/4W	
R37	4K7	Resistor, 1/4W	
R38	47K	Resistor, 1/4W	
R39	10K	Resistor, 1/4W	
R40	470R	Resistor, 1/4W	
R41	100K	Resistor, 1/4W	
R43	47K	Resistor, 1/4W	
R44	27K	Resistor, 1/4W	
R45	33K	Resistor, 1/4W	
R46	33K	Resistor, 1/4W	
C1	47n	Film capacitor, 7.2 x 2.5mm	**7mm maximum body height**
C2	1u	Electrolytic capacitor, 5mm	
C4	6n8	Film capacitor, 7.2 x 2.5mm	
C5	100p	Ceramic capacitor	
C6	33n	Film capacitor, 7.2 x 2.5mm	
C9	12n	Film capacitor, 7.2 x 2.5mm	
C10	150p	Ceramic capacitor	
C12	33n	Film capacitor, 7.2 x 2.5mm	
C13	3n9	Film capacitor, 7.2 x 2.5mm	
C15	8n2	Film capacitor, 7.2 x 2.5mm	
C16	330p	Ceramic capacitor	
C17	220n	Film capacitor, 7.2 x 2.5mm	
C18	6n8	Film capacitor, 7.2 x 2.5mm	
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LOCATION	VALUE	TYPE	NOTES
C19	100p	Ceramic capacitor	7mm maximum body height
C20	1u	Electrolytic capacitor, 5mm	
C21	220p	Ceramic capacitor	
C22	47n	Film capacitor, 7.2 x 2.5mm	
C24	1n	Film capacitor, 7.2 x 2.5mm	
C25	150p	Ceramic capacitor	
C26	220n	Film capacitor, 7.2 x 2.5mm	
C31	100u	Electrolytic capacitor, 5mm	
C32	100n	Film capacitor, 7.2 x 2.5mm	
C102	47u	Electrolytic capacitor, 5mm	
D1	1N4148	Signal diode, DO-35	
D2	1N4148	Signal diode, DO-35	
Q1	BC550	BJT transistor, NPN TO-92	
Q3	BC550	BJT transistor, NPN TO-92	
Q5	BC550	BJT transistor, NPN TO-92	
IC2	RC4558	Dual op-amp, DIP8	
IC5	RC4558	Dual op-amp, DIP8	

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