

diyAudio Power Supply Board

Bill Of Materials

P-PSU-1V30

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For V3.0 PSU Board

BOM V1.0 10/24/2013

diyAudio™

NOTE: Parts specified are for ONE BOARD ONLY

Part	Description	Value	Rating	Alternate/Sample Value	Notes	Digi-Key P/N
D1 or D1X	D1=TO-247/TO-3P or D1X=TO-220 Diodes		See Note 2 & 4	FEP30DP (TO-3P), MBR20200CT (TO-220)	Only one package style must be used at a time!	FEP30DP-E3/45GI-ND
D2 or D2X	D2=TO-247/TO-3P or D2X=TO-220 Diodes		See Note 2 & 4	FEP30DP (TO-3P), MBR20200CT (TO-220)	Only one package style must be used at a time!	FEP30DP-E3/45GI-ND
D3 or D3X	D3=TO-247/TO-3P or D3X=TO-220 Diodes		See Note 2 & 4	FEP30DP (TO-3P), MBR20200CT (TO-220)	Only one package style must be used at a time!	FEP30DP-E3/45GI-ND
D4 or D4X	D4=TO-247/TO-3P or D4X=TO-220 Diodes		See Note 2 & 4	FEP30DP (TO-3P), MBR20200CT (TO-220)	Only one package style must be used at a time!	FEP30DP-E3/45GI-ND
D5 or D5X	D5=TO-247/TO-3P or D5X=TO-220 Diodes		See Note 2 & 4	FEP30DP (TO-3P), MBR20200CT (TO-220)	Only one package style must be used at a time!	FEP30DP-E3/45GI-ND
D6 or D6X	D6=TO-247/TO-3P or D6X=TO-220 Diodes		See Note 2 & 4	FEP30DP (TO-3P), MBR20200CT (TO-220)	Only one package style must be used at a time!	FEP30DP-E3/45GI-ND
D7 or D7X	D7=TO-247/TO-3P or D7X=TO-220 Diodes		See Note 2 & 4	FEP30DP (TO-3P), MBR20200CT (TO-220)	Only one package style must be used at a time!	FEP30DP-E3/45GI-ND
D8 or D8X	D8=TO-247/TO-3P or D8X=TO-220 Diodes		See Note 2 & 4	FEP30DP (TO-3P), MBR20200CT (TO-220)	Only one package style must be used at a time!	FEP30DP-E3/45GI-ND

LED1	Light Emitting Diode	3mm or 5mm		Green or Red		751-1139-ND
LED2	Light Emitting Diode	3mm or 5mm		Green or Red		751-1139-ND

R1	PI Resistor	0.47R - 1R	3W	Flame-proof resistor recommended	Replace with jumper if CRC filtering not required	P0.47W-3BK-ND
R2	PI Resistor	0.47R - 1R	3W	Flame-proof resistor recommended	Replace with jumper if CRC filtering not required	P0.47W-3BK-ND
R3	PI Resistor	0.47R - 1R	3W	Flame-proof resistor recommended	Replace with jumper if CRC filtering not required	P0.47W-3BK-ND
R4	PI Resistor	0.47R - 1R	3W	Flame-proof resistor recommended	Replace with jumper if CRC filtering not required	P0.47W-3BK-ND
R5	PI Resistor	0.47R - 1R	3W	Flame-proof resistor recommended	Replace with jumper if CRC filtering not required	P0.47W-3BK-ND
R6	PI Resistor	0.47R - 1R	3W	Flame-proof resistor recommended	Replace with jumper if CRC filtering not required	P0.47W-3BK-ND
R7	PI Resistor	0.47R - 1R	3W	Flame-proof resistor recommended	Replace with jumper if CRC filtering not required	P0.47W-3BK-ND
R8	PI Resistor	0.47R - 1R	3W	Flame-proof resistor recommended	Replace with jumper if CRC filtering not required	P0.47W-3BK-ND
R_Optional1	PI Resistor	0.47R - 1R	3W	Flame-proof resistor recommended	Replace with jumper if CRC filtering not required	P0.47W-3BK-ND
R_Optional2	PI Resistor	0.47R - 1R	3W	Flame-proof resistor recommended	Replace with jumper if CRC filtering not required	P0.47W-3BK-ND
R_Optional3	PI Resistor	0.47R - 1R	3W	Flame-proof resistor recommended	Replace with jumper if CRC filtering not required	P0.47W-3BK-ND

R_Optional4	PI Resistor	0.47R - 1R	3W	Flame-proof resistor recommended	Replace with jumper if CRC filtering not required	P0.47W-3BK-ND
R_Optional5	PI Resistor	0.47R - 1R	3W	Flame-proof resistor recommended	Replace with jumper if CRC filtering not required	P0.47W-3BK-ND
R_Optional6	PI Resistor	0.47R - 1R	3W	Flame-proof resistor recommended	Replace with jumper if CRC filtering not required	P0.47W-3BK-ND
R9	Bleeder Resistor	4.7K - 22K	3W	Flame-proof resistor recommended	Use higher resistance values for high voltage outputs	P22KW-3BK-ND
R10	Bleeder Resistor	4.7K - 22K	3W	Flame-proof resistor recommended	Use higher resistance values for high voltage outputs	P22KW-3BK-ND
R11	Output Snubber Resistor	1R	3W	Flame-proof resistor recommended		P1.0W-3BK-ND
R12	Output Snubber Resistor	1R	3W	Flame-proof resistor recommended		P1.0W-3BK-ND
R20	LED Dropping Resistor	4.7K - 10K	1/4W	Carbon or Metal composition		S10KQCT-ND
R21	LED Dropping Resistor	4.7K - 10K	1/4W	Carbon or Metal composition		S10KQCT-ND
RS1	Input Snubber Resistor	See Note 4	1/2W	Carbon or Metal composition	See Note 3	
RS2	Input Snubber Resistor	See Note 4	1/2W	Carbon or Metal composition	See Note 3	

C1	Electrolytic Capacitor	10Kuf - 15Kuf	See Note 1	10mm Lead Spacing	Fits 25mm, 30mm, and 35mm diameter capacitors	See Note 3
C2	Electrolytic Capacitor	10Kuf - 15Kuf	See Note 1	10mm Lead Spacing	Fits 25mm, 30mm, and 35mm diameter capacitors	See Note 3
C3	Electrolytic Capacitor	10Kuf - 15Kuf	See Note 1	10mm Lead Spacing	Fits 25mm, 30mm, and 35mm diameter capacitors	See Note 3
C4	Electrolytic Capacitor	10Kuf - 15Kuf	See Note 1	10mm Lead Spacing	Fits 25mm, 30mm, and 35mm diameter capacitors	See Note 3
C5	Electrolytic Capacitor	10Kuf - 15Kuf	See Note 1	10mm Lead Spacing	Fits 25mm, 30mm, and 35mm diameter capacitors	See Note 3
C6	Electrolytic Capacitor	10Kuf - 15Kuf	See Note 1	10mm Lead Spacing	Fits 25mm, 30mm, and 35mm diameter capacitors	See Note 3
C7	Electrolytic Capacitor	10Kuf - 15Kuf	See Note 1	10mm Lead Spacing	Fits 25mm, 30mm, and 35mm diameter capacitors	See Note 3
C8	Electrolytic Capacitor	10Kuf - 15Kuf	See Note 1	10mm Lead Spacing	Fits 25mm, 30mm, and 35mm diameter capacitors	See Note 3
C17	Output Snubber Capacitor	0.1uf	63V - 100V	5mm Lead Spacing		495-2479-1-ND
C18	Output Snubber Capacitor	0.1uf	63V - 100V	5mm Lead Spacing		495-2479-1-ND
CX1	Input Snubber Capacitor	See Note 4		5mm or 7mm Lead Spacing		
CX2	Input Snubber Capacitor	See Note 4		5mm or 7mm Lead Spacing		
CS1	Input Snubber Capacitor	See Note 4		2.5mm or 5mm Lead Spacing		
CS2	Input Snubber Capacitor	See Note 4		2.5mm or 5mm Lead Spacing		

Heatsinks	Suitable Heasinks for D1 to D8			PCB Mount Heatsinks		HS347-ND
Fast-On	Snap-On board connectors					A24742-ND
EuroBlocks	Screw-Type Vertical Bboard Connectors	3-Pin		5mm Lead Spacing	Molex Incorporated	WM15826-ND

Note 1	Capacitor Voltage Rating depends on your Transformer's Secondary Voltage rating!!!					
Note 2	Diode Reverse Voltage rating depends on your Transformer's Secondary Voltage rating!!!					
Note 3	Optimal values differ from one application to another. See forums for more information					
Note 4	See this article from Hagerman Technology for information in computing optimal vaues					