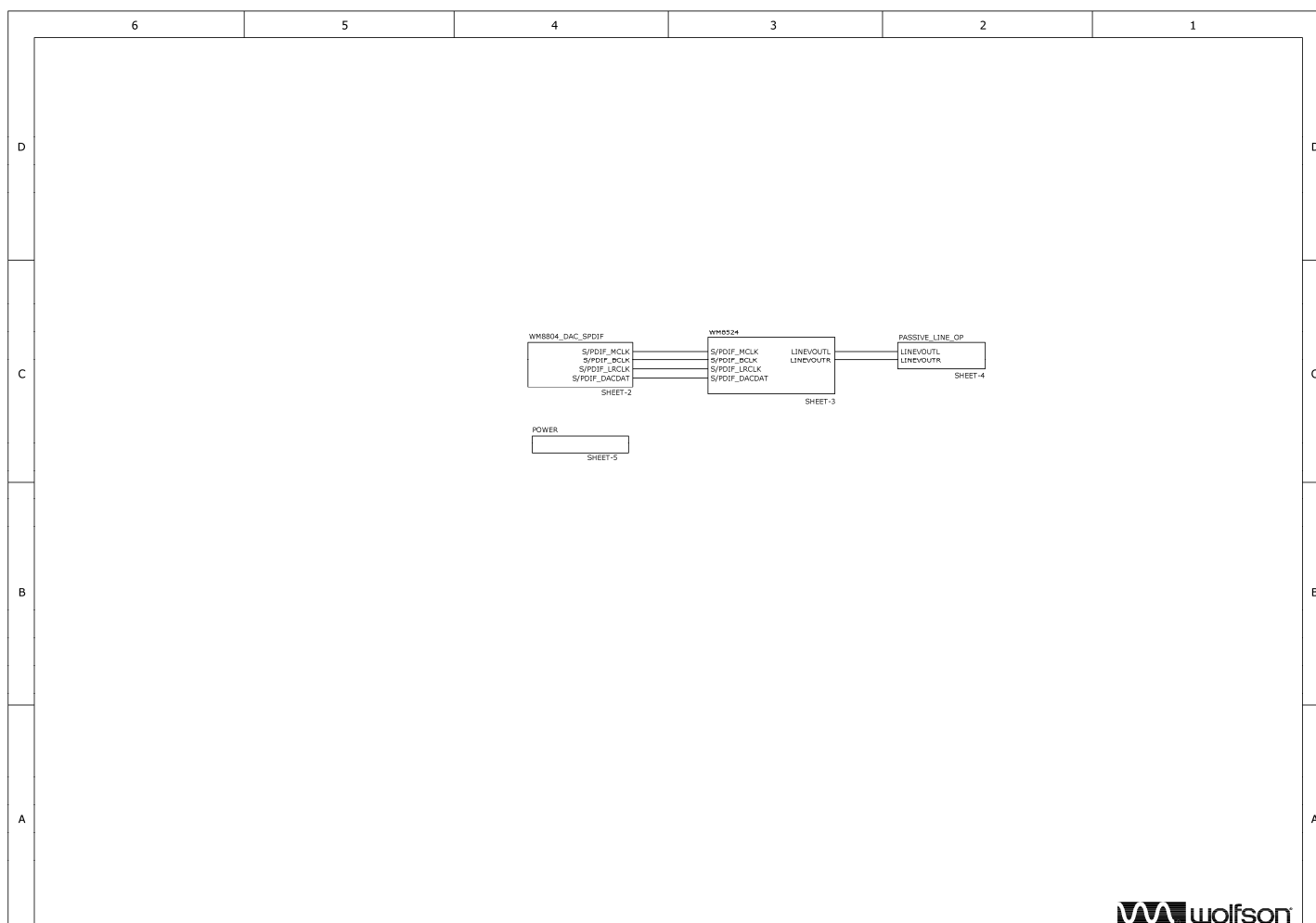


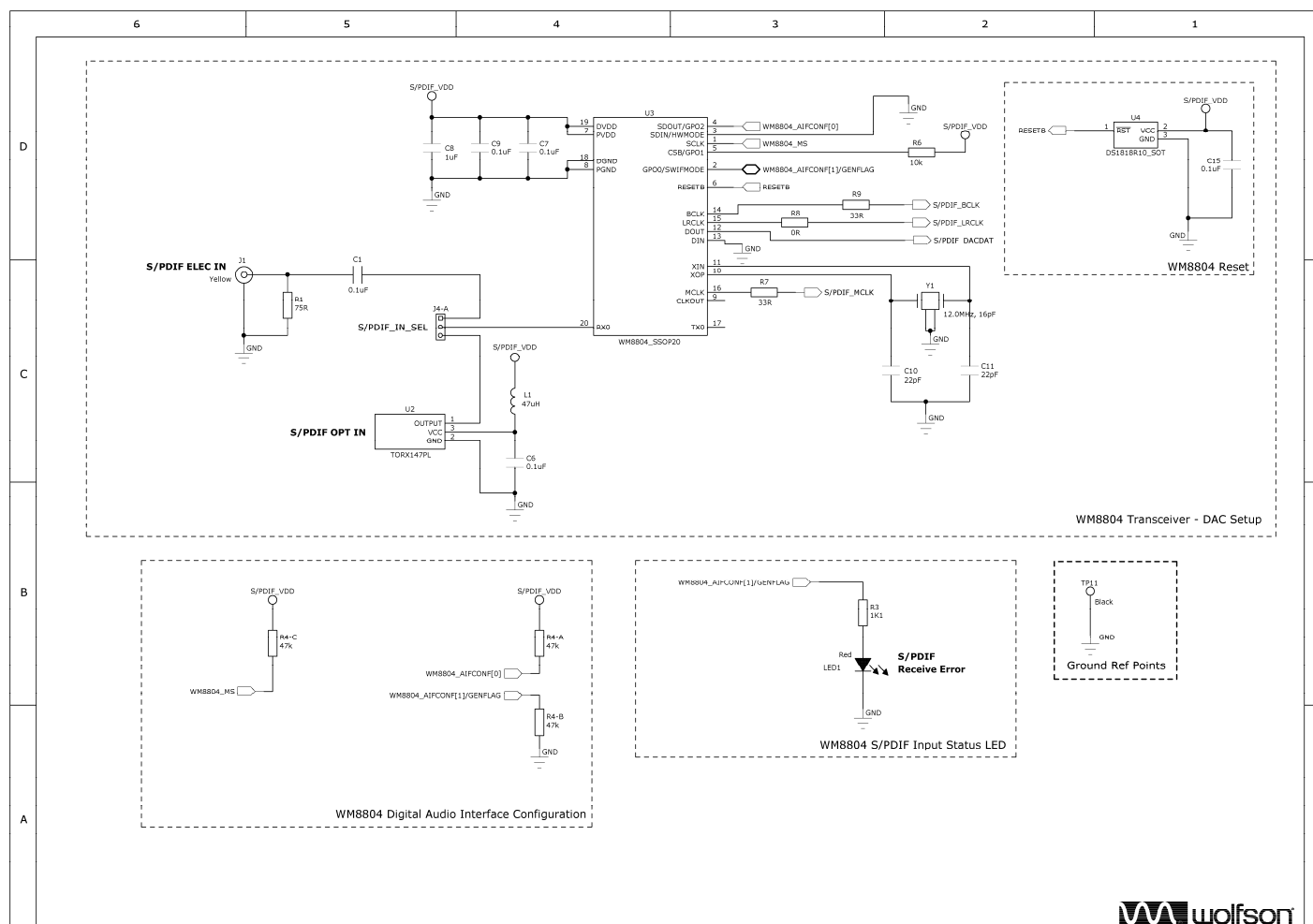
DOC TYPE:	Schematic and Layout
BOARD REFERENCE:	WM8524-6228-DT16-EV1
BOARD TYPE:	Customer Standalone Board
WOLFSON DEVICE(S):	WM8524
DATE:	August 2009
DOC REVISION:	Rev 1.0

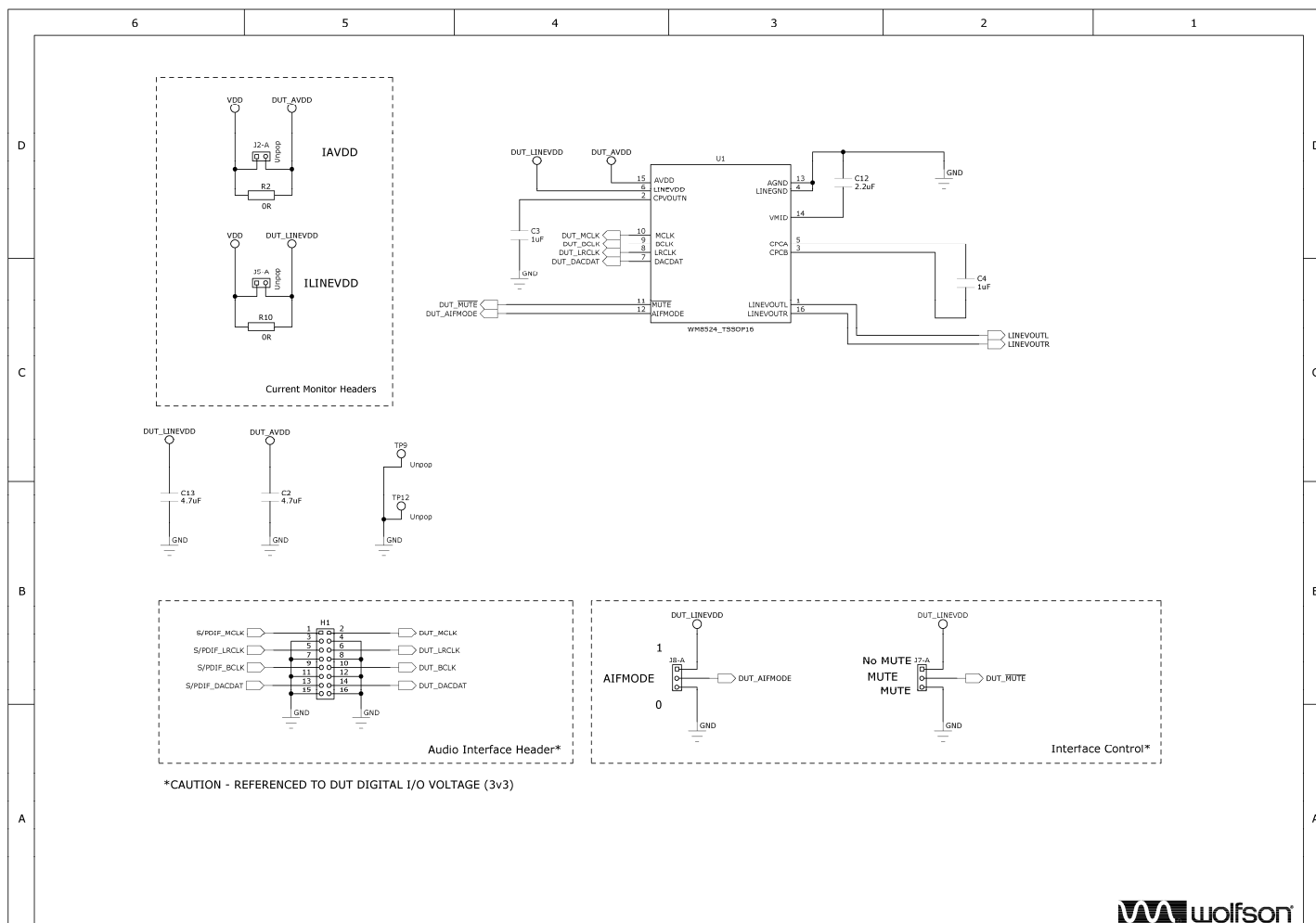
SCHEMATIC

Sheet 1: Main Schematic

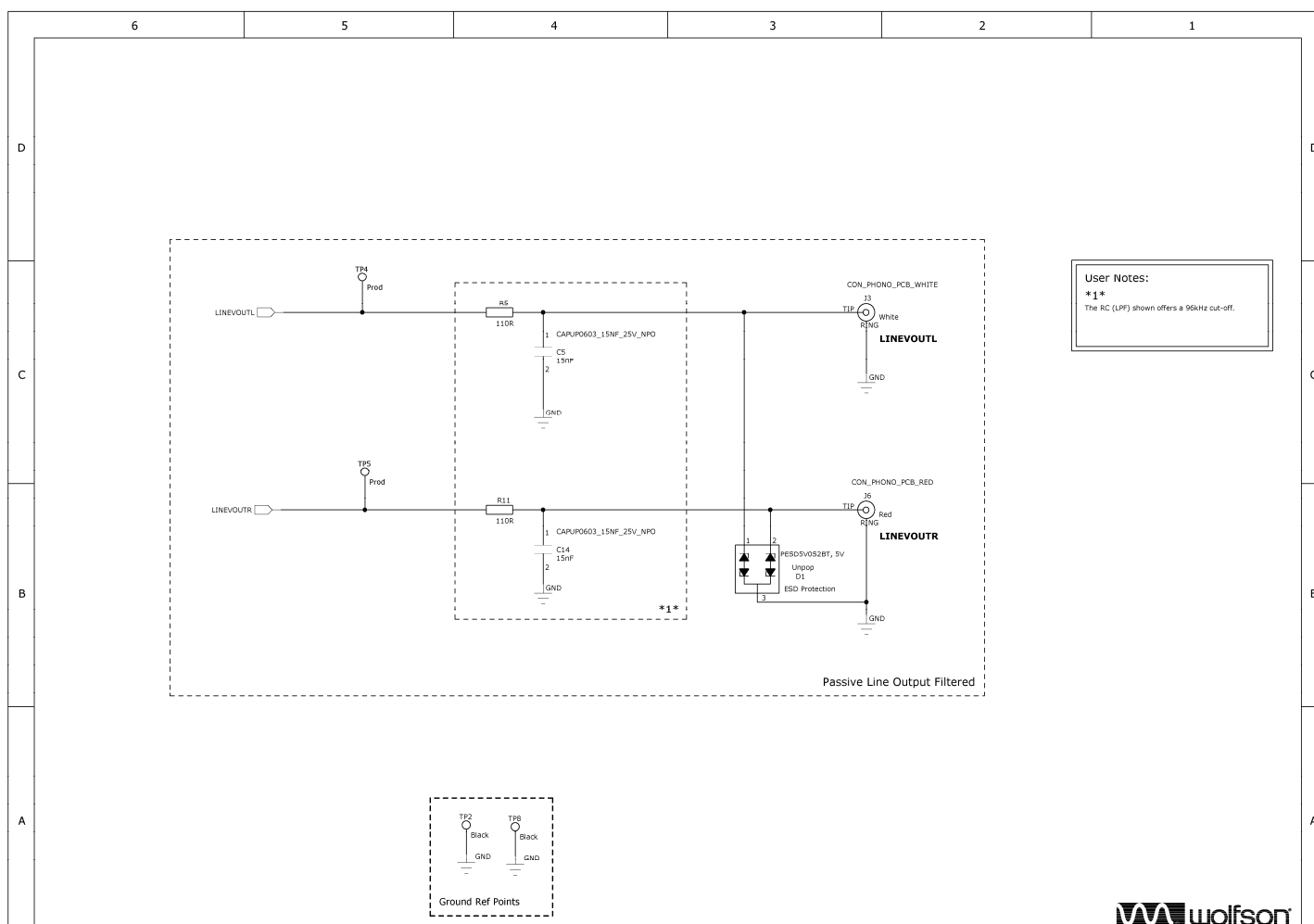


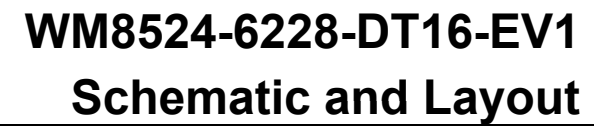
Sheet 2: S/PDIF Interface





Sheet 4: Passive Line Output



[illegible]

Sheet 6: Reference Tables

6

5

4

3

2

1

D

	Short 1-2	Short 2-3
310-B	EXT	USB
PCB Ref:	+5V_SEL	

LNK 310

RED

Pin to 310:2-3

2-3

	Short 1-2	Short 2-3
34-B	Electrical Input	Optical Input
PCB Ref:	S/PDIF_IN_SEL	

LNK 34

YELLOW

Pin to 34:1-2

1-2

	Short 1-2	Short 2-3
38-B	1	0
PCB Ref:	AFMODE	

LNK 38

YELLOW

Pin to 38:1-2

1-2

	Short 1-2	Short 2-3
37-B	No MUTE	MUTE
PCB Ref:	MUTE	

LNK 37

YELLOW

Pin to 37:1-2

1-2

C

B

Default: USB Power, Electrical S/PDIF, I2S Format, No MUTE

A

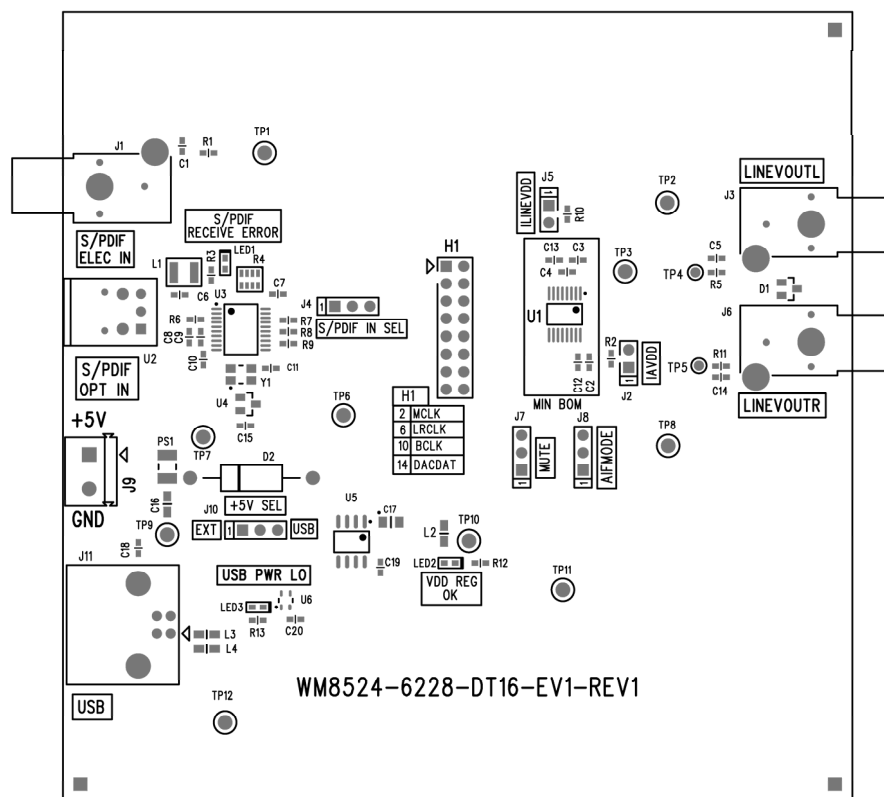


BILL OF MATERIALS (BOM)

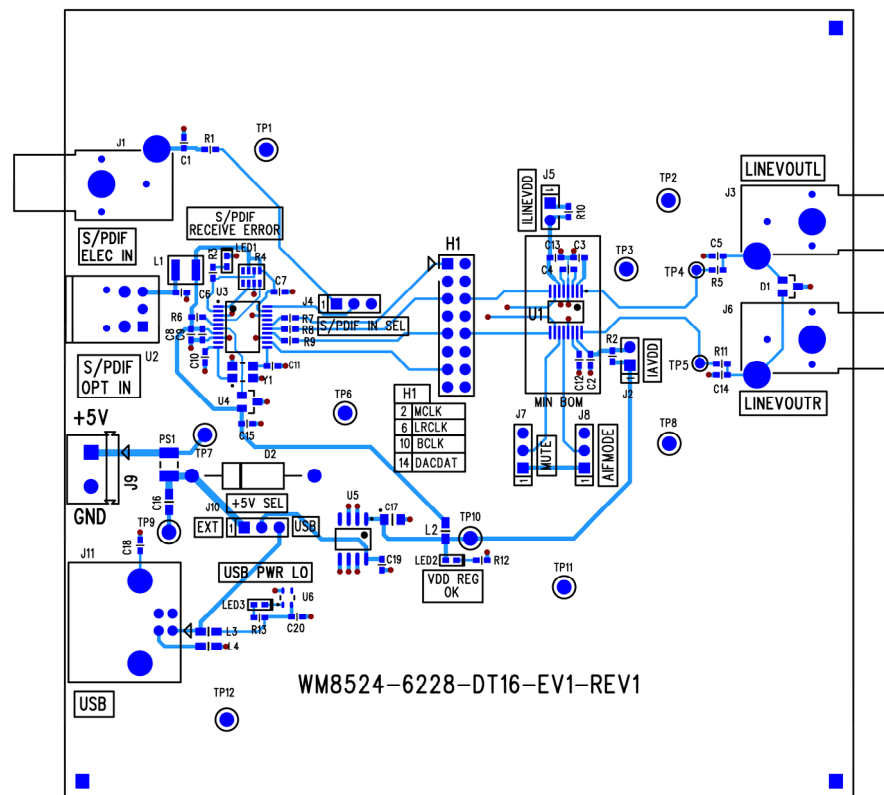
<i>Item</i>	<i>RefDes</i>	<i>Description</i>	<i>Manufacturer</i>	<i>Manufacturer's Part Number</i>
1	C12	2.2uF 0603 SMD Ceramic Capacitor 10V X5R	MuRata	GRM188R61A225KE34D
2	C2 C13	4.7uF 0603 SMD Ceramic Capacitor 6.3V X5R	MuRata	GRM188R60J475KE19D
3	J1	Phono Socket PCB mount YELLOW	Dragon City	RS109 - Yellow
4	J6	Phono Socket PCB mount RED	Dragon City	RS-109 Red
5	J3	Phono Socket PCB mount WHITE	Dragon City	RS-109 White
6	MISC2	Lead-free label, 15mm round	Brady	Y436425
7	H1	2x8 2.54mm pitch PCB Pin Header VERTICAL	Harwin	M20-9980845
8	J4 J7 J8 J10	1x3 2.54mm Header Vertical	Harwin	M20-9990345
9	J11	USB receptacle Type B	FCI	61729-0010BLF
10	MECH3	Feet black 12.7sq self-adhesive 40 pack - qty 4	3M	SJ5018BLACK
11	J9	PCB mount 1X2 terminal block for 2.5mm wire gauge	LUMBERG	KRM 02
12	L2 L3 L4	300R 0805 BMB2A Ferrite Bead	Meggitt	BMB2A0300AN1
13	L1	47uH 1210 Surface Mount Inductor 'PA series'	Panasonic	ELJPA470KF
14	U2	TORX147PL Digital Audio Fiber Optic Receiver	Toshiba	TORX147PL
15	PS1	0.75A Poly Switch 1210	Raychem	MICROSMD075F-2
16	C3 C4	1uF 0603 SMD Ceramic Capacitor 16V X7R	Phycomp	225524615663
17	C5 C14	15nF 0603 SMD Ceramic Capacitor 25V NPO	Kemet	C0603C153J3GAC 7867
18	C17	220uF 4V SMD Tantalum Capacitor case P	Vishay	298D227X0004P2T
19	C1 C6 C7 C9 C15 C19 C20	0.1uF 0603 SMD Ceramic Capacitor 16V X7R	Phycomp	2238 786 15649
20	C10 C11	22pF 0603 SMD Ceramic Capacitor 50V NPO	Phycomp	2238 867 15229
21	C18	0.01uF 0603 SMD Ceramic Capacitor 50V X7R	Phycomp	2238 586 15636
22	LED2	KP-1608MGC 0603 SMD Chip LED GREEN	Kingbright	KP-1608MGC
23	LED1 LED3	KP-1608SURC 0603 SMD Chip LED RED	Kingbright	KP-1608SURC
24	TP2 TP3 TP6 TP8 TP11	1.32mm PCB Test Terminal BLACK	Vero	20-2136
25	TP10	1.32mm PCB Test Terminal RED	Vero	20-313141
26	C16	4.7uF 0805 SMD Ceramic Capacitor 16V X5R	Kemet	C0805C475K4PAC
27	R4	47k 1206 SMD chip 4 resistor array 5% 0.063W	Phycomp	2350 035 10473
28	R6	10k 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 10K
29	R5 R11	110R 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 110R
30	R3 R12	1K1 0603 SMD chip resistor 1% 0.1W	Multicomp	MC 0.063W 0603 1% 1K1
31	R13	2K4 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 2K4

<i>Item</i>	<i>RefDes</i>	<i>Description</i>	<i>Manufacturer</i>	<i>Manufacturer's Part Number</i>
32	R7 R9	33R 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 33R
33	R1	75R 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 1% 75R
34	R2 R8 R10	0R 0603 SMD chip resistor 1% 0.063W	Multicomp	MC 0.063W 0603 0R
35	D2	1N5341B 6.2V 5W Zener Diode PTH	ON Semiconductor	1N5341BG
36	U4	DS1818 3.3V active-low Power-On-Reset chip SOT	Dallas Semiconductor	DS1818R-10+
37	U5	KF33BD Very Low Drop +3.3V Voltage Regulator SO	ST Microelectronics	KF33BD
38	Y1	XTAL 12MHz 16pF SM GSX-433 Series	Golledge	GSX-433/111DF 12MHz
39	LNK_J10	0.1" OPEN JUMPER LINK RED	Protech	22-3565
40	LNK_H1-4 LNK_H1-3 LNK_H1-2 LNK_H1-1 LNK_J4 LNK_J7 LNK_J8	0.1" OPEN JUMPER LINK YELLOW	Protech	22-3570
41	C8	1uF 0603 SMD Ceramic Capacitor 6.3V X5R	MuRata	GRM188R60J105KA01D
42	U6	XC61C Low Power Consumption Voltage Detector	Torex	XC61CN4402NRN
43	U1	WM8524 Stereo DAC with integral Charge Pump	Wolfson Microelectronics	WM8524
44	PCB1	PCB	Kelan Circuits Ltd	WM8524-6228-DT16-EV1-REV1
45	U3	WM8804 1:1 Digital Interface Transceiver with PLL	Wolfson Microelectronics	WM8804GEDS
Unpop				
46	TP4 TP5	1.0mm PCB Hole test point		
47	J2 J5	1x2 PCB Pin Header 0.1" VERTICAL	Harwin	M20-9990245
48	D1	TVS Diode PESD5V0S2BT V _{rw} m=5V dual ESD Protection SOT23	Philips	PESD5V0S2BT
49	TP1 TP7 TP9 TP12	1.32mm off-board connection point	N/A	N/A

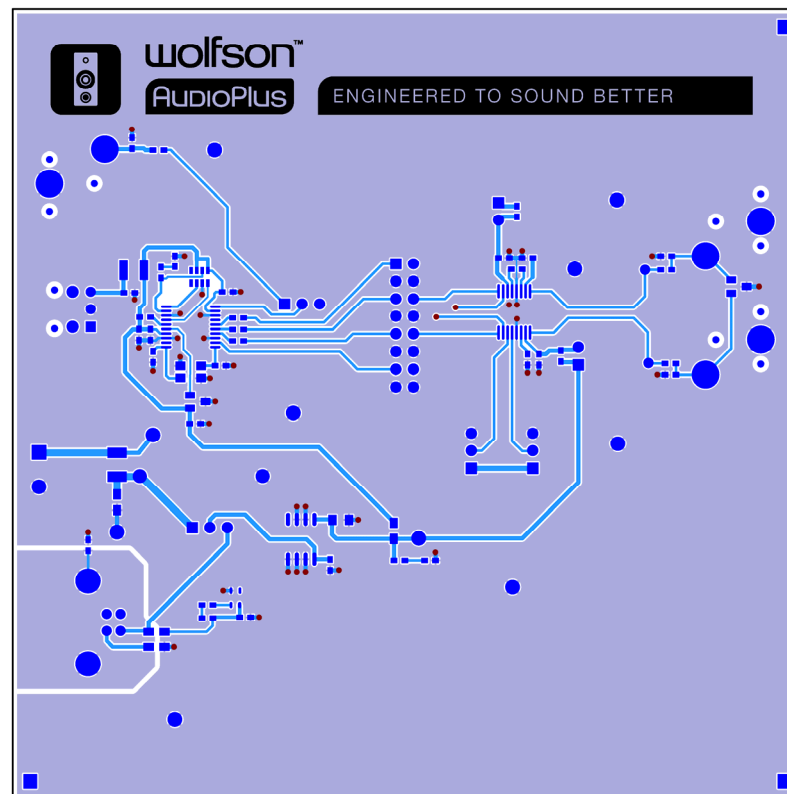
PCB LAYOUT



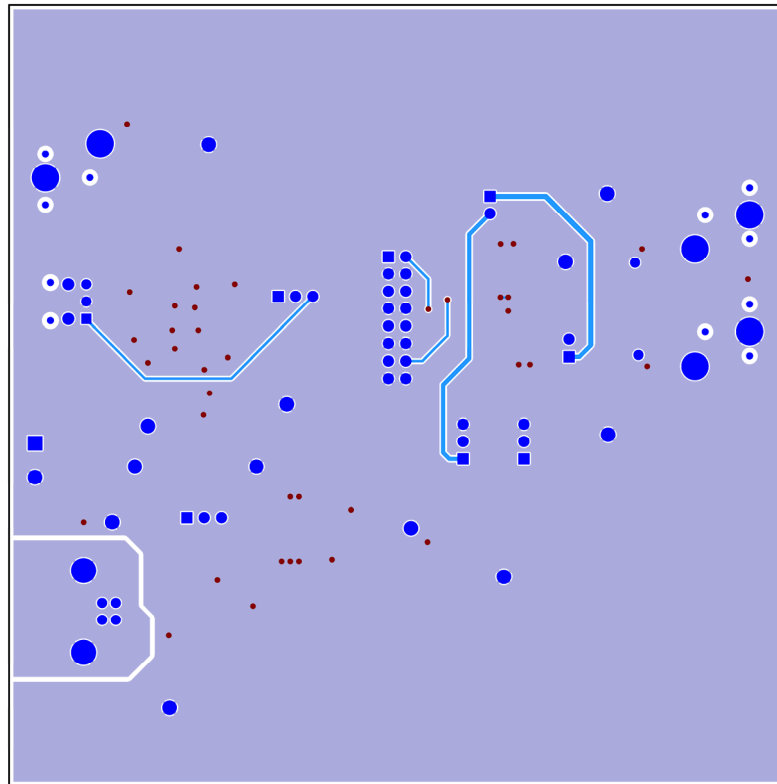
Top Layer: Overview



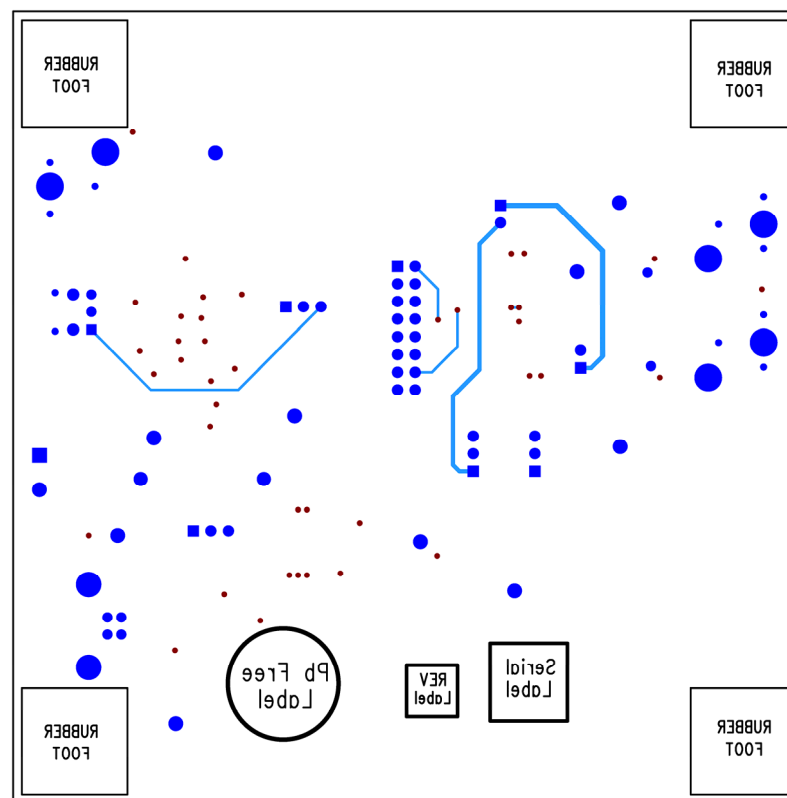
Top Layer: Silkscreen + Copper



Top Layer: Copper



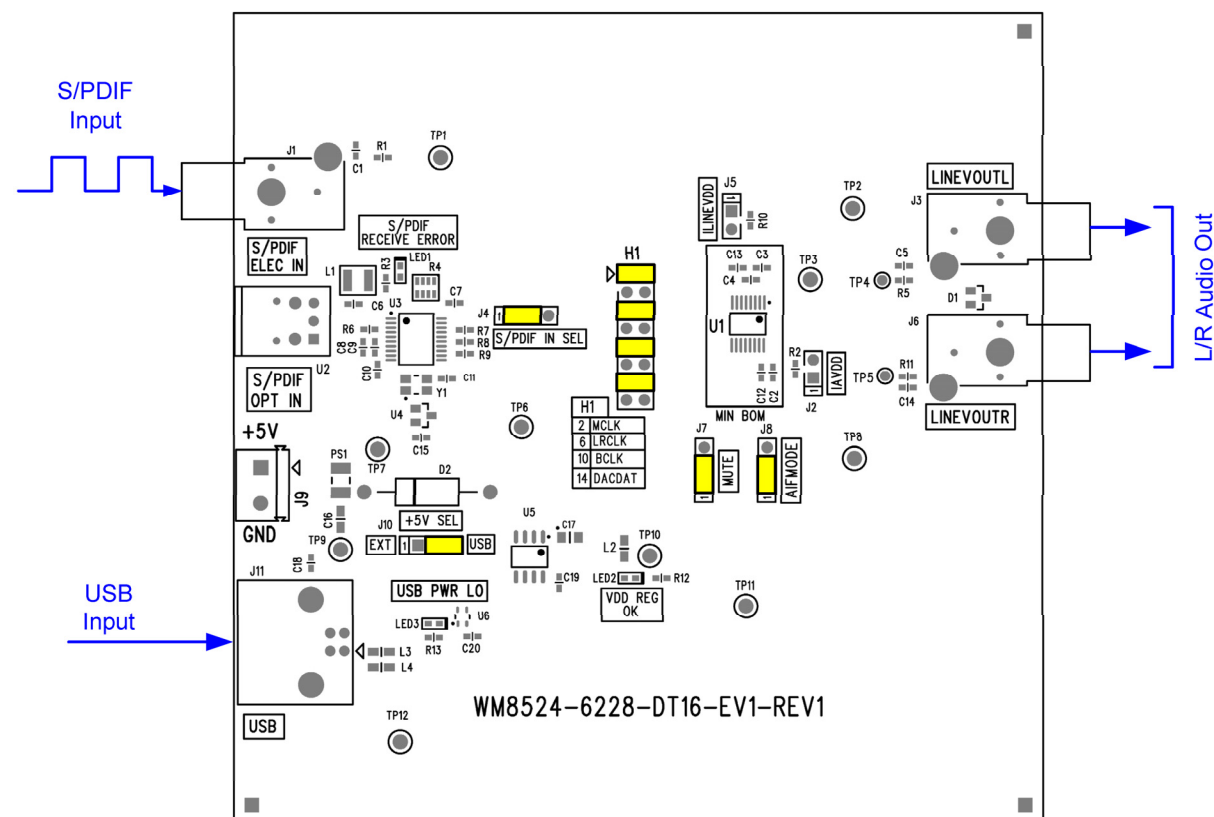
Bottom Layer: Copper



Bottom Layer: Silkscreen + Copper

DEFAULT BOARD CONFIGURATION

USB Power, Electrical S/PDIF input, DAC in 24-bit I2S Mode, No MUTE



APPLICATION SUPPORT

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or contact your local Wolfson representative.

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