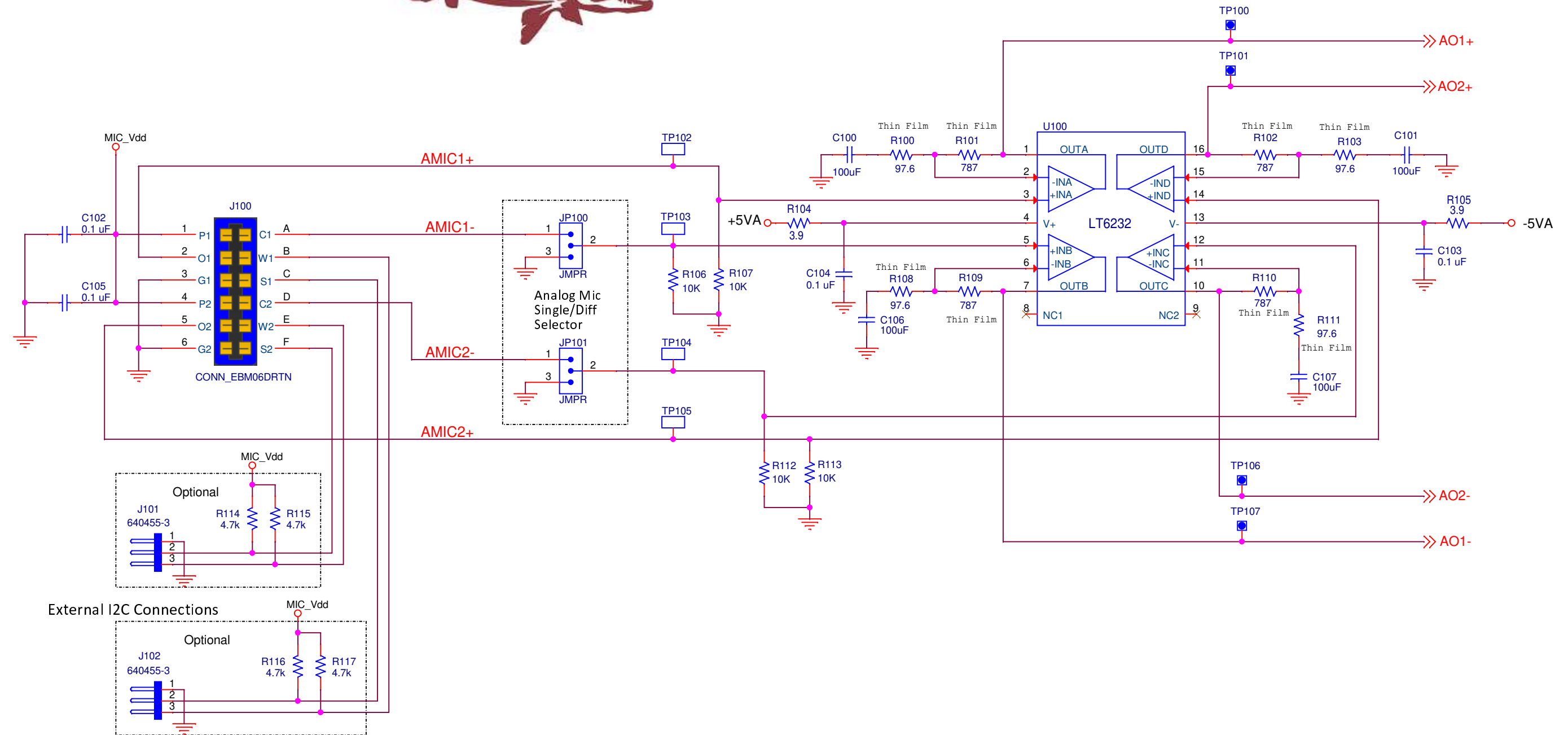
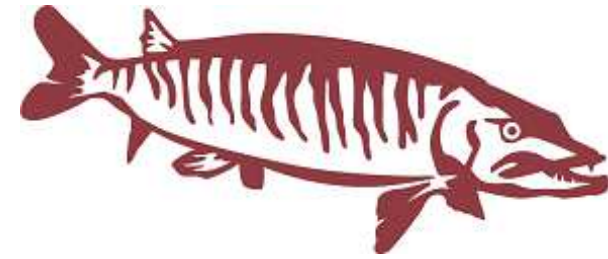

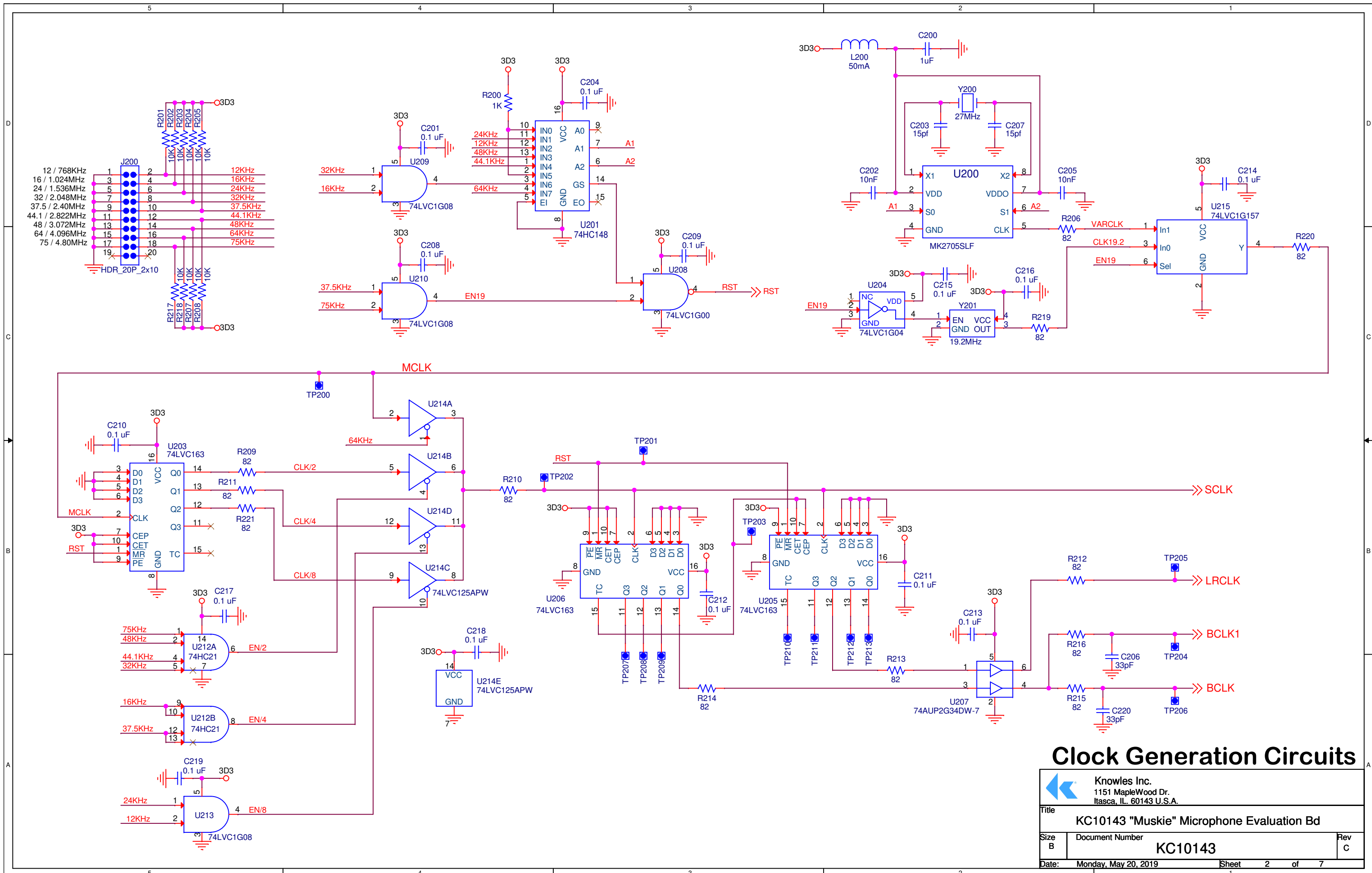


KC10143 "Muskie" Microphone Evaluation Board




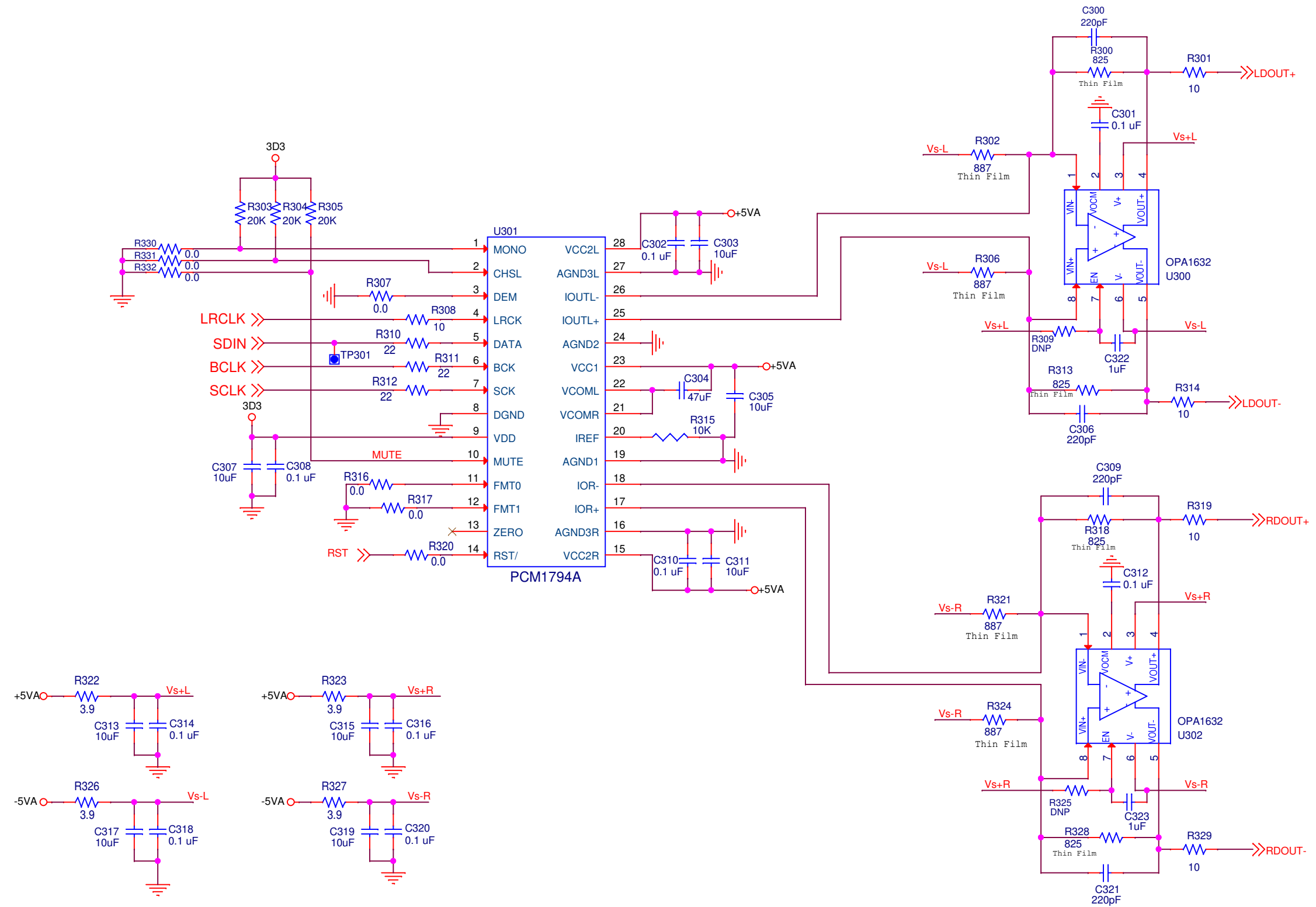
Analog Microphone Interface

 Knowles Inc. 1151 MapleWood Dr. Itasca, IL 60143 U.S.A.		
Title KC10143 "Muskie" Microphone Evaluation Bd		
Size B	Document Number KC10143	Rev C
Date: Monday, May 20, 2019	Sheet 1	of 7




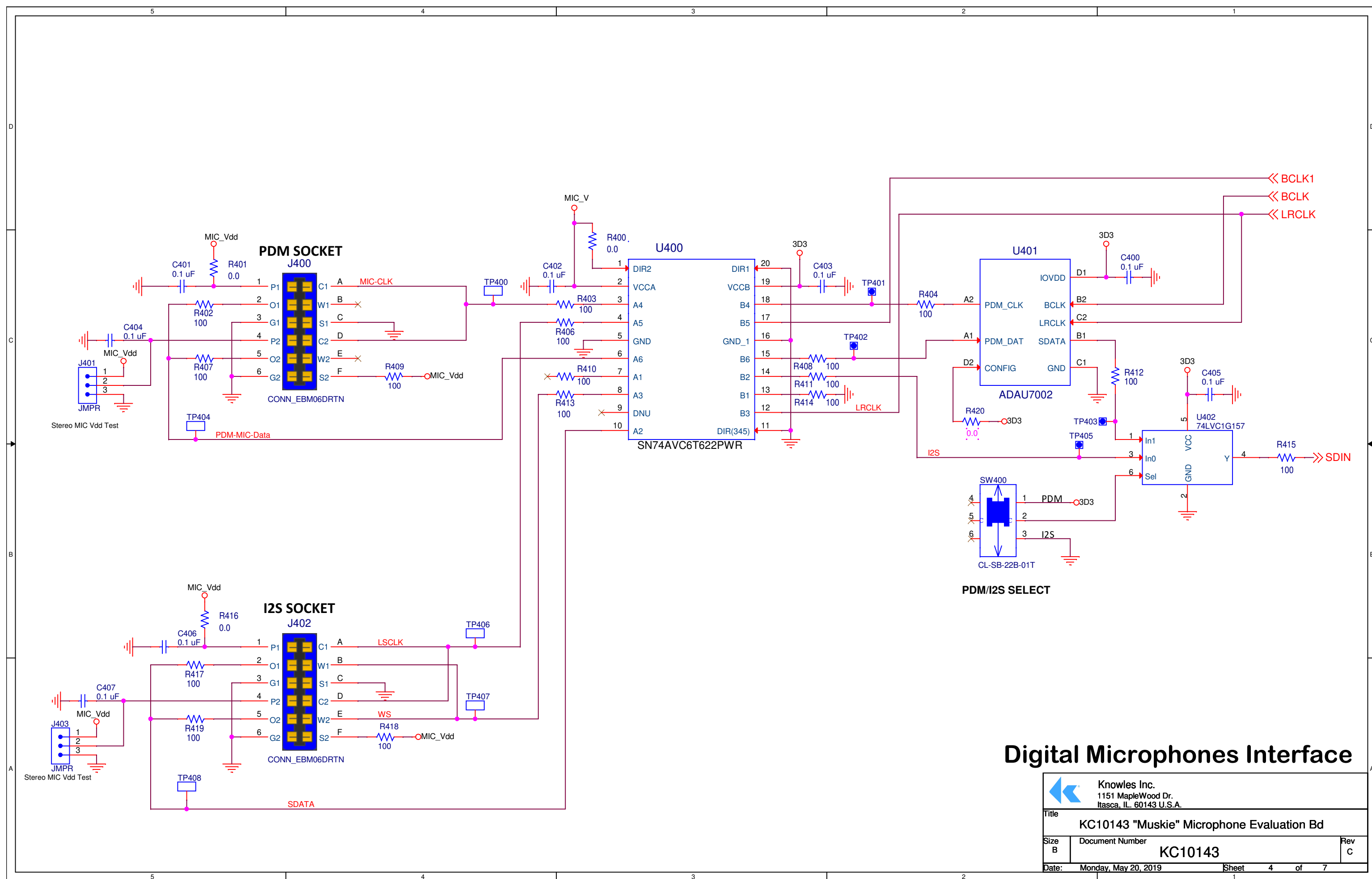
Clock Generation Circuits

 Knowles Inc. 1151 MapleWood Dr. Itasca, IL 60143 U.S.A.		
Title KC10143 "Muskie" Microphone Evaluation Bd		
Size B	Document Number KC10143	Rev C
Date: Monday, May 20, 2019 Sheet 2 of 7		




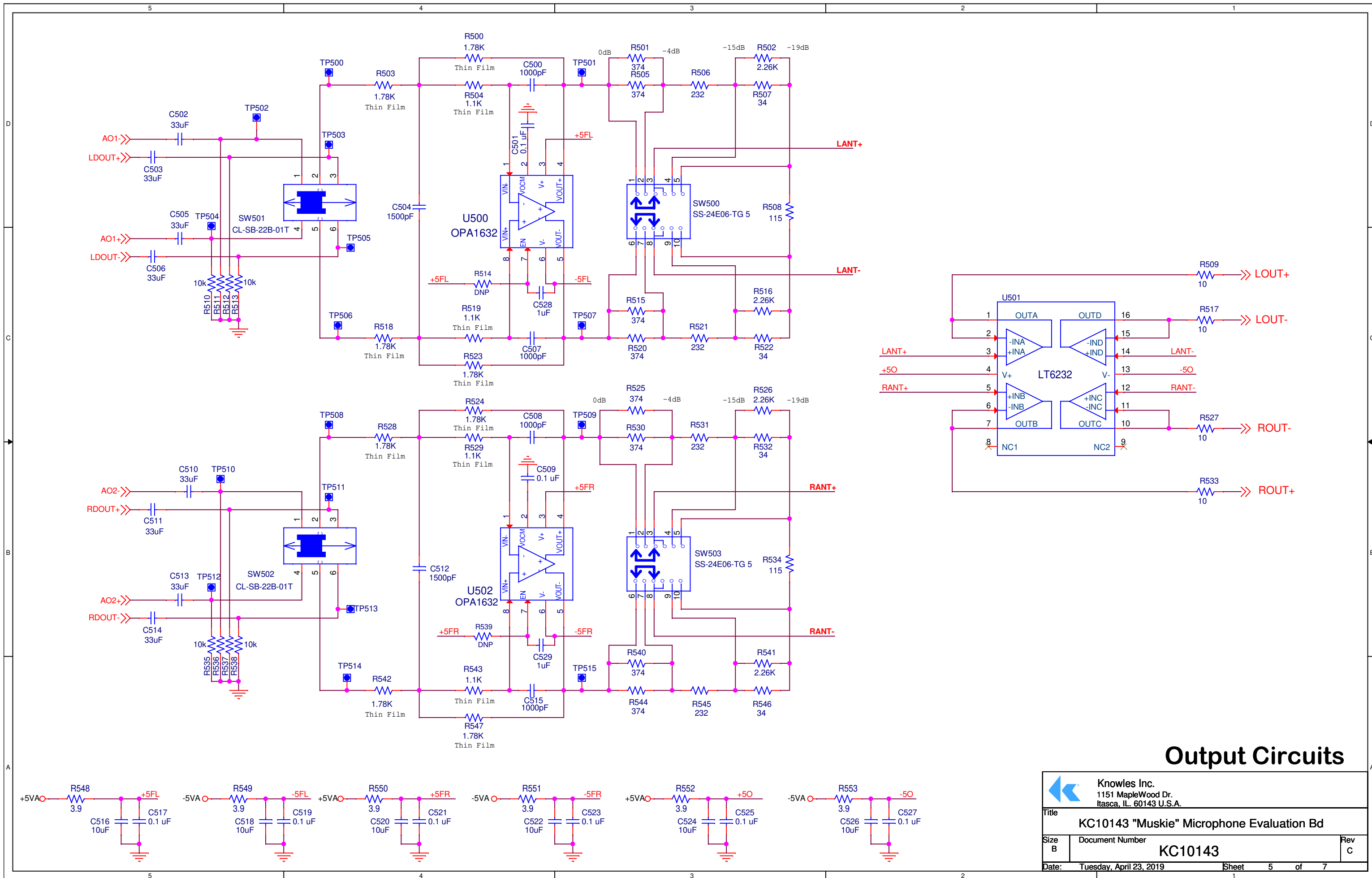
Digital to Analog Signal Conversion

 Knowles Inc. 1151 MapleWood Dr. Itasca, IL 60143 U.S.A.		
Title KC10143 "Muskie" Microphone Evaluation Bd		
Size B	Document Number KC10143	Rev C
Date: Monday, May 20, 2019	Sheet 3	of 7




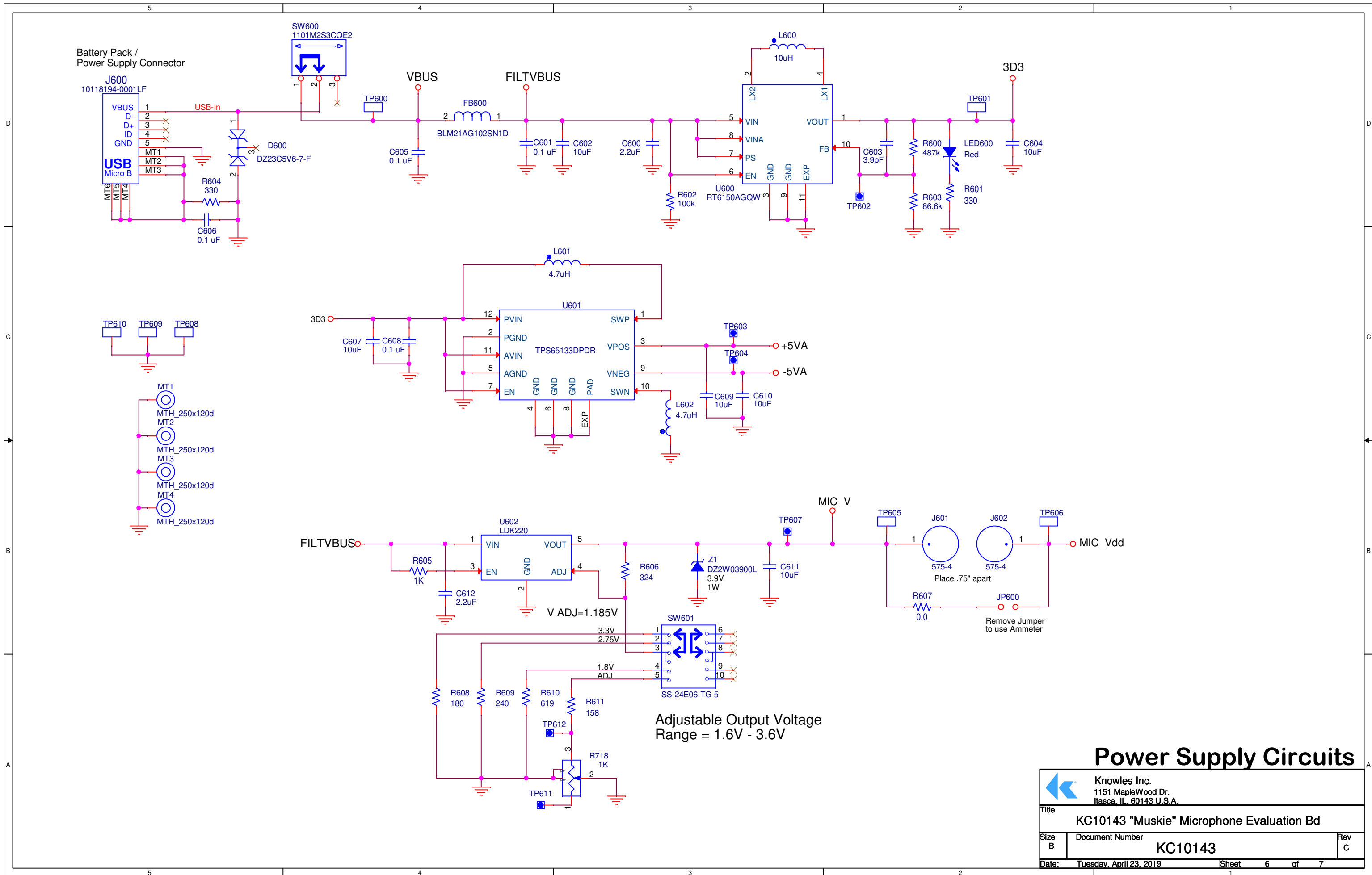
Digital Microphones Interface

 Knowles Inc. 1151 MapleWood Dr. Itasca, IL 60143 U.S.A.		
Title KC10143 "Muskie" Microphone Evaluation Bd		
Size B	Document Number KC10143	Rev C
Date: Monday, May 20, 2019	Sheet 4	of 7




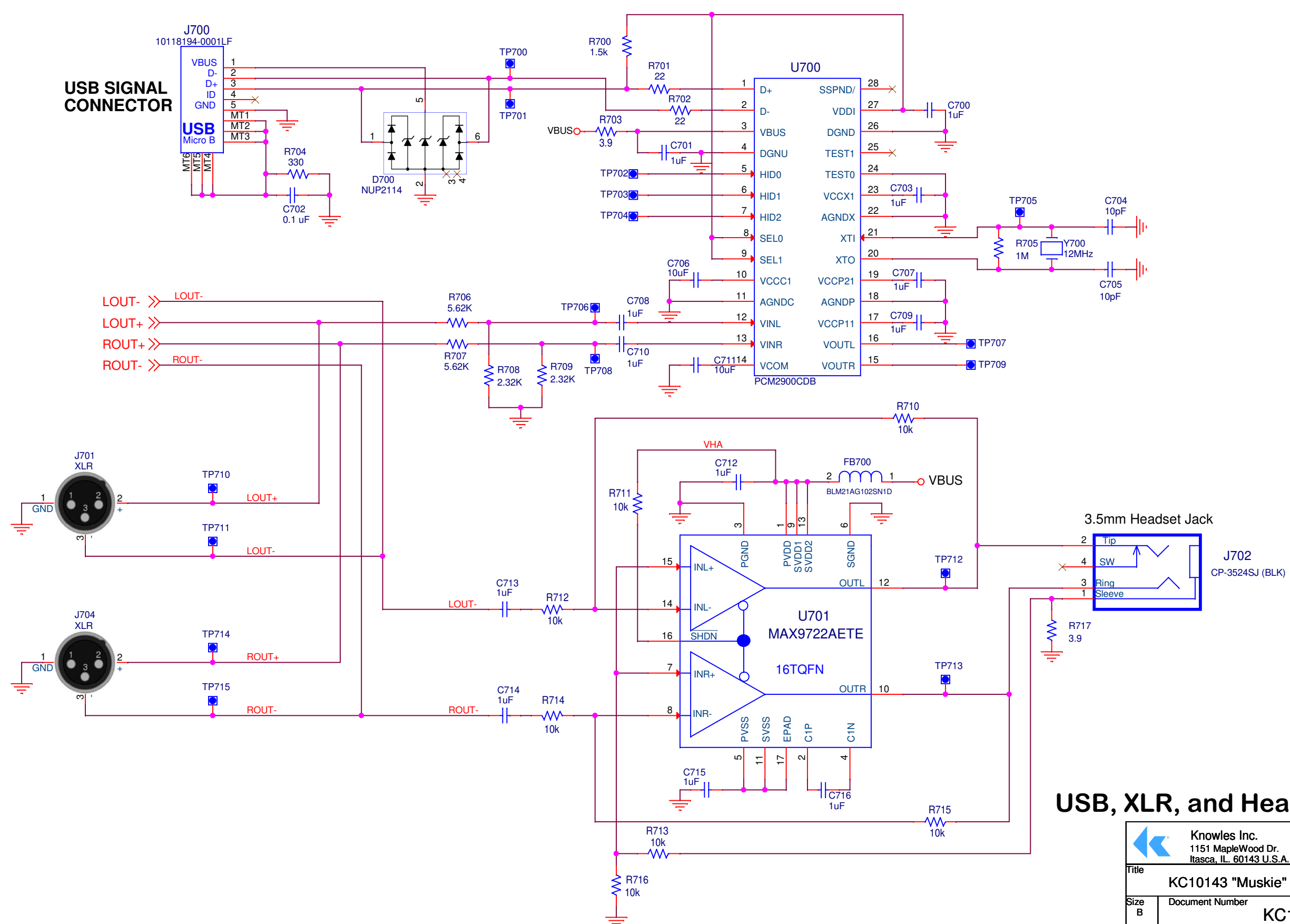
Output Circuits

 Knowles Inc. 1151 MapleWood Dr. Itasca, IL 60143 U.S.A.		
Title KC10143 "Muskie" Microphone Evaluation Bd		
Size B	Document Number KC10143	Rev C
Date: Tuesday, April 23, 2019 Sheet 5 of 7		




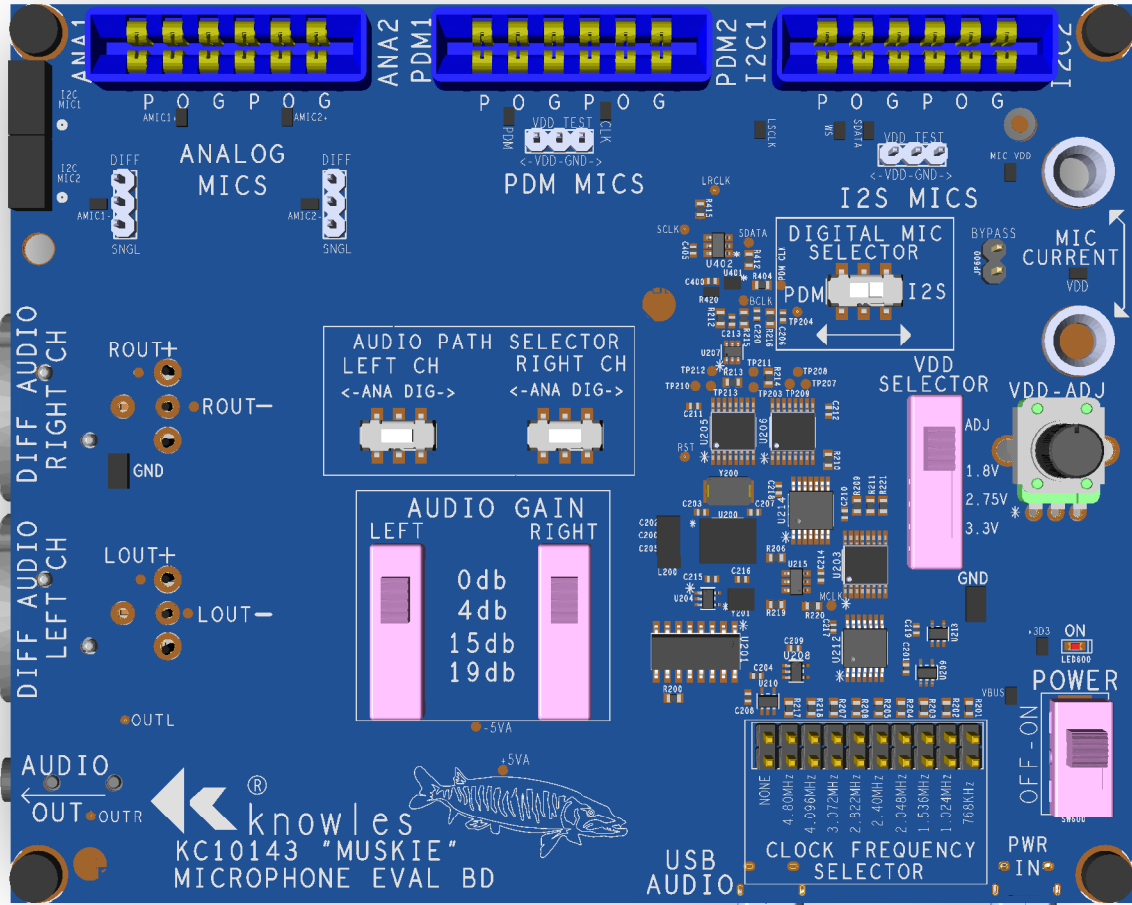
Power Supply Circuits

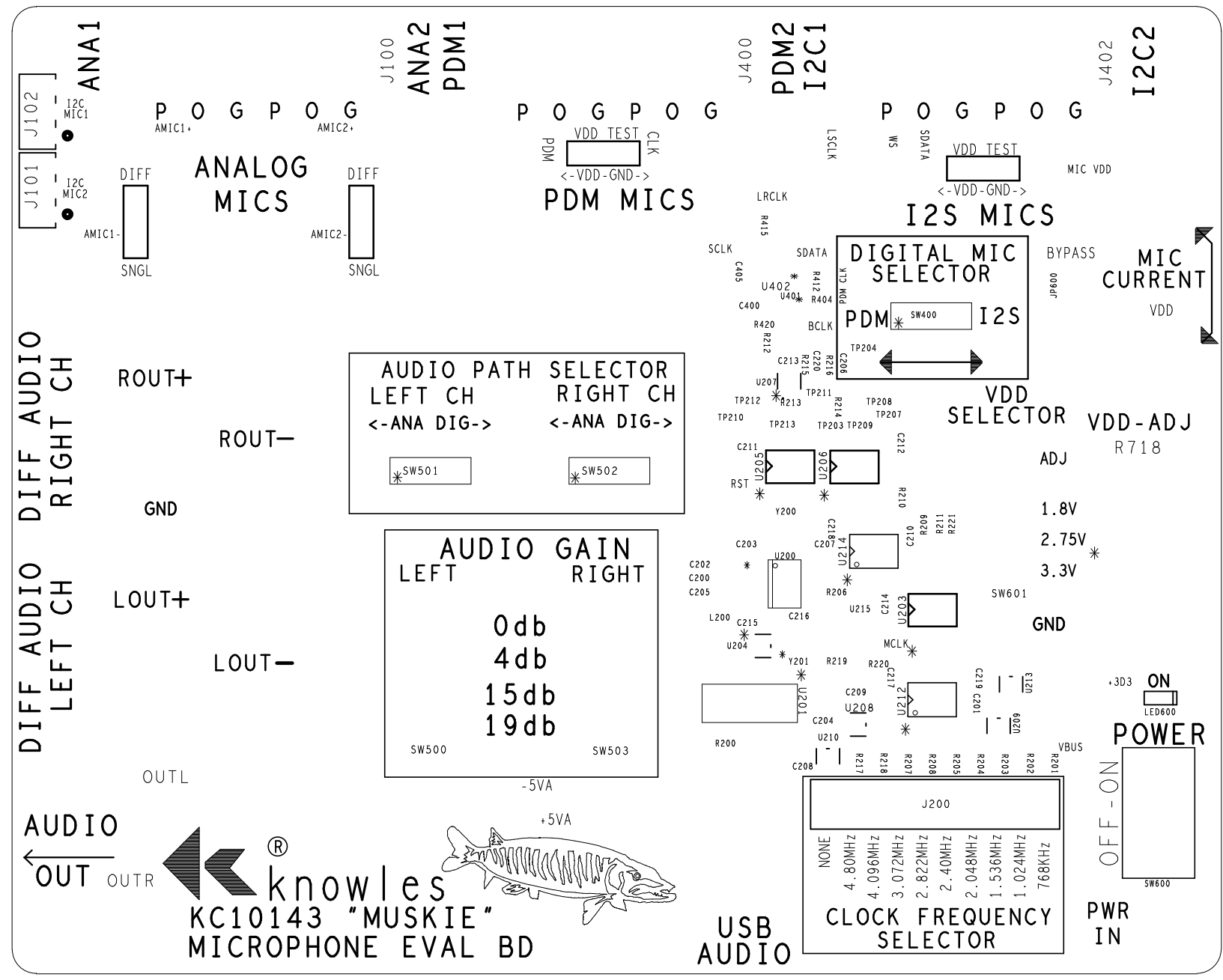
 Knowles Inc. 1151 MapleWood Dr. Itasca, IL 60143 U.S.A.		
Title KC10143 "Muskie" Microphone Evaluation Bd		
Size B	Document Number KC10143	Rev C
Date: Tuesday, April 23, 2019	Sheet 6	of 7



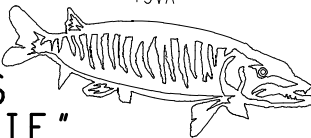
USB, XLR, and Headphone Interface

 Knowles Inc. 1151 MapleWood Dr. Itasca, IL 60143 U.S.A.		
Title KC10143 "Muskie" Microphone Evaluation Bd		
Size B	Document Number KC10143	Rev C
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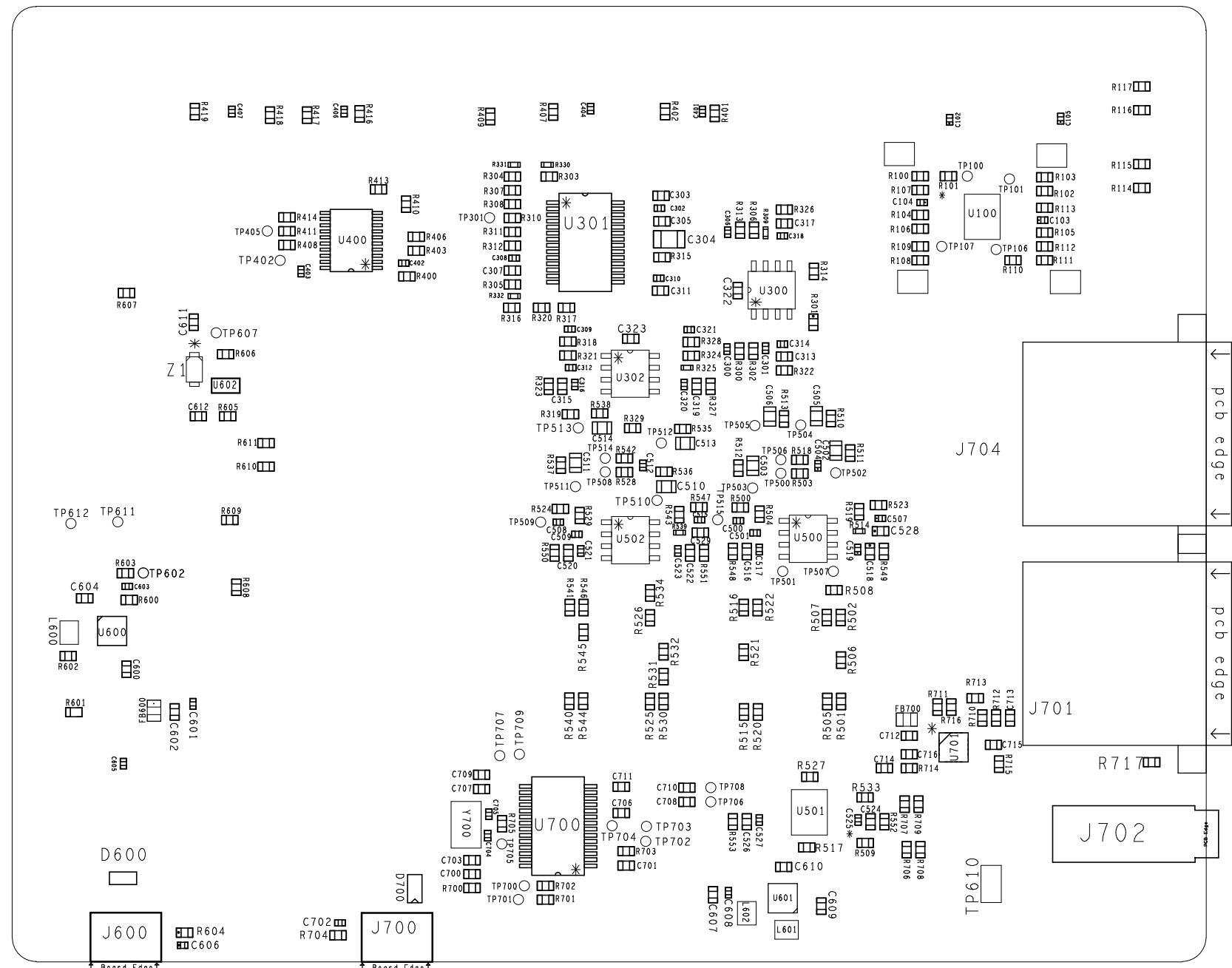
AUDIO OUT ←
 ←
 knowles
 KC10143 "MUSKIE"
 MICROPHONE EVAL BD



USB AUDIO

J200	
NONE	
4.80MHz	Z11
4.096MHz	Z12
3.072MHz	Z13
2.822MHz	Z14
2.40MHz	Z15
2.048MHz	Z16
1.536MHz	Z17
1.024MHz	Z18
768KHz	Z19

PWR IN
 OFF-ON
 SW600



KC10143 "Muskie" Microphone Evaluation Bd						
Item	Quan	Reference	Part	Description	Manuf#	Manuf Part#
1	4	C100,C101,C106,C107	100uF	CAP CER 100UF 10V X5R 1210	Taiyo Yuden	LMK325BJ107MM-T
2	48	C102,C103,C104,C105,C201,C204,C208,C209,C210,C211,C212,C213,C214,C215,C216,C217,C218,C219,C301,C302,C308,C310,C312,C314,C316,C318,C320,C400,C401,C402,C403,C404,C405,C406,C407,C501,C509,C517,C519,C521,C523,C525,C527,C601,C605,C606,C608,C702	0.1 uF	CAP CER 0.1UF 16V X5R 0402	Murata	GRM155R61C104KA88D
3	17	C200,C322,C323,C528,C529,C700,C701,C703,C707,C708,C709,C710,C712,C713,C714,C715,C716	1uF	CAP CER 1UF 16V X7R 0603	Samsung	CL10B105MO8NNWC
4	2	C202,C205	10nF	10nF 50V Ceramic Capacitor X7R 0603	Samsung	CL10B103KB8NCNC
5	2	C203,C207	15pf	CAP CER 15PF 16V NPO 0402	Kemet	C0402C150J4GACTU
6	2	C206,C220	33pF	CAP CER 0402 33PF 16V X7R 5% AUT	KEMET	C0402C330J4RACAUTO
7	4	C300,C306,C309,C321	220pF	220pF ±10% 50V Ceramic Capacitor X7R 0402	Yageo	CC0402KRX7R9BB221
8	22	C303,C305,C307,C311,C313,C315,C317,C319,C516,C518,C520,C522,C524,C526,C602,C604,C607,C609,C610,C611,C706,C711	10uF	CAP CER 10UF 16V X5R 0603	Murata	GRM188R61C106KAALD
9	1	C304	47uF	CAP CER 47UF 16V X5R 1206	TDK	C3216X5R1C476M160AB
10	4	C500,C507,C508,C515	1000pF	CAP CER 1000PF 25V NPO 0402	Murata	GRM1555C1E102JA01D
11	8	C502,C503,C505,C506,C510,C511,C513,C514	33uF	33µF ±20% 10V Ceramic Capacitor JB 0805	TDK	C2012JB1A336M125AC
12	2	C504,C512	1500pF	CAP CER 1500PF 25V NPO 0402	Samsung	C0402C152J5GAC7867
13	2	C600,C612	2.2uF	2.2µF ±10% 16V Ceramic Capacitor X5R 0603	Yageo	CC0603KRX5R7BB225
14	1	C603	3.9pF	3.9pF ±0.25pF 50V Ceramic Capacitor COG, NPO 0402	Murata	GRM1555C1H3R9CA01D
15	2	C704,C705	10pF	10pF ±10% 50V Ceramic Capacitor COG, NPO 0402	Johanson Dielectrics Inc.	500R07N100JV4T
16	1	D600	DZ23C5V6-7-F	Zener Diode Array 1 Pair Common Cathode 300mW ±5% SOT-23	Diodes Incorporated	DZ23C5V6-7-F
17	1	D700	NUP2114	TVS DIODE 5VWM 10VC 6TSOP	ON Semi	NUP2114UCMR6T1G
18	2	FB600,FB700	BLM21AG102SN1D	FERRITE BEAD 1 KOHM 0805 1LN	Murata	BLM21AG102SN1D
19	2	JP100,JP101	JMPR	3 Positions Header, Unshrouded Connector 0.100"	Amphenol	68000-103HLF
20	1	JP600	JMPR_TH_68000-102HLF	2 Positions Header, .100"	Amphenol	609-3500-ND
21	3	J100,J400,J402	CONN_EBM06DRTN	CONN EDGE DUAL FEMALE 12POS 0.156	Sullins	EBM06DRTN
22	2	J101,J102	DNP	CONN HEADER RT ANG 3POS .100	TE	640455-3
23	1	J200	HDR_20P_2x10	CONN HEADER 20POS .100" DBL	Samtec	TSW-110-07-F-D
24	2	J401,J403	JMPR	3 Positions Header, Unshrouded Connector 0.100"	Amphenol	68000-103HLF
25	2	J600,J700	10118194-0001LF	CONN USB MICRO B RECPT SMT R/A	Amphenol	10118194-0001LF
26	2	J601,J602	575-4	Banana Jack, TH, Terminal	Keystone	575-4
27	2	J701,J704	XLR	XLR Audio Connector, Plug, 3, PCB Mount	Neutrik	NC3MAAH-0
28	1	J702	CP-3524SJ (BLK)	3.5mm Headphone Phone Jack Stereo	CUI Inc.	SJ-3524-SMT-TR
29	1	LED600	Blue	LED BLUE CLEAR CHIP SMD	Lite On	LTST-C193TBKT-5A
30	1	L200	50mA	FERRITE BEAD 2.5 KOHM 0603 1LN	Murata	BLM18BD252SN1D
31	1	L600	10uH	10µH Shielded Wirewound Inductor 1A 460 mOhm	Murata	1239AS-H-100M=P2
32	2	L601,L602	4.7uH	4.7µH Shielded Inductor 1.5A 190 mOhm	Murata	DFE252012F-4R7M=P2
33	4	R100,R103,R108,R111	97.6	97.6 Ohms ±0.1% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200 Thin Film	Panasonic	ERA-3AEB97R6V
34	4	R101,R102,R109,R110	787	787 Ohms ±0.1% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Moisture Resistant Thin Film	Yageo	RT0603BRD07787RL
35	14	R104,R105,R322,R323,R326,R327,R548,R549,R550,R551,R552,R553,R703,R717	3.9	RES SMD 3.9 OHM 1% 1/10W 0603	Rohm	KTR03EZPF3R90
36	4	R106,R107,R112,R113	10K	10 kOhms ±0.5% 0.063W, 1/16W Chip Resistor 0603 (1608 Metric) Thin Film	Susumu	RR0816P-103-D
37	4	R114,R115,R116,R117	4.7k	RES SMD 4.7K OHM 1% 1/10W 0603	Yageo	RC0603FR-074K7L
38	2	R200,R605	1K	RES SMD 1K OHM 1% 1/10W 0603	Yageo	RC0603FR-071KL
39	25	R201,R202,R203,R204,R205,R207,R208,R217,R218,R315,R510,R511,R512,R513,R535,R536,R537,R538,R710,R711,R712,R713,R714,R715,R716	10k	RES SMD 10K OHM 1% 1/10W 0603	Yageo	RC0603FR-0710KL
40	12	R206,R209,R210,R211,R212,R213,R214,R215,R216,R219,R220,R221	82	RES SMD 82 OHM 1% 1/10W 0603	Yageo	RC0603FR-0782RL
41	4	R300,R313,R318,R328	825	RES SMD 825 OHM 0.5% 1/10W 0603 Thin Film	Yageo	RT0603DRD07825RL
42	9	R301,R308,R314,R319,R329,R509,R517,R527,R533	10	RES SMD 10 OHM 1% 1/10W 0603	Yageo	RC0603FR-0710RL
43	4	R302,R306,R321,R324	887	RES SMD 887 OHM 0.1% 1/10W 0603 Thin Film	Panasonic	ERA-3AEB8870V
44	3	R303,R304,R305	20K	RES SMD 20K OHM 1% 1/10W 0603	Yageo	RC0603FR-0720KL
45	8	R307,R316,R317,R320,R400,R401,R416,R607	0	RES SMD 0.00HM JUMPER 1/10W 0603	Yageo	RC0603FR-070RL
46	4	R309,R325,R514,R539	DNP	RES SMD 0 OHM JUMPER 1/16W 0402	Yageo	RC0402JR-070RL
47	5	R310,R311,R312,R701,R702	22	RES SMD 22 OHM 1% 1/10W 0603	Yageo	RC0603FR-0722RL
48	4	R330,R331,R332,R420	0	RES SMD 0 OHM JUMPER 1/16W 0402	Yageo	RC0402JR-070RL
49	16	R402,R403,R404,R406,R407,R408,R409,R410,R411,R412,R413,R414,R415,R417,R418,R419	100	RES SMD 100 OHM 1% 1/10W 0603	Yageo	RC0603FR-07100RL
50	8	R500,R503,R518,R523,R524,R528,R542,R547	1.78K	1.78 kOhms ±0.1% 0.063W, 1/16W Chip Resistor 0603 Thin Film	Vishay	MCT06030D1781BP500
51	8	R501,R505,R515,R520,R525,R530,R540,R544	374	RES SMD 374 OHM 1% 1/10W 0603	Panasonic	ERJ-3EKF3740V
52	4	R502,R516,R526,R541	2.26K	2.26 kOhms ±1% 0.1W, 1/10W Chip Resistor 0603	Yageo	RC0603FR-072K26L
53	4	R504,R519,R529,R543	1.1K	1.1 kOhms ±1% 0.063W, 1/16W Chip Resistor 0603 Thin Film	TE	CPF0603F1K1C1
54	4	R506,R521,R531,R545	232	RES SMD 232 OHM 1% 1/10W 0603	Yageo	RC0603FR-07232RL
55	4	R507,R522,R532,R546	34	RES SMD 34 OHM 1% 1/10W 0603	Yageo	RC0603FR-0734RL
56	2	R508,R534	115	115 Ohms ±1% 0.1W, 1/10W Chip Resistor 0603	Yageo	RC0603FR-07115RL

KC10143 "Muskie" Microphone Evaluation Bd						
Item	Quan	Reference	Part	Description	Manuf#	Manuf Part#
57	1	R600	487k	RES SMD 487K OHM 1% 1/10W 0603	Yageo	RC0603FR-07487KL
58	3	R601,R604,R704	330	RES SMD 330 OHM 1% 1/10W 0603	Yageo	RC0603FR-07330RL
59	1	R602	100k	RES SMD 100K OHM 1% 1/10W 0603	Yageo	RC0603FR-07100KL
60	1	R603	86.6k	RES SMD 86.6K OHM 1% 1/10W 0603	Yageo	RC0603FR-0786K6L
61	1	R606	324	RES SMD 324 OHM 0.1% 1/10W 0603	Panasonic	ERA-3AEB3240V
62	1	R608	180	RES SMD 180 OHM 1% 1/10W 0603	Panasonic	ERJ-3EKF1800V
63	1	R609	240	RES 240 OHM 1% 1/8W 0603	Vishay	MCT06030C2400FP500
64	1	R610	619	RES SMD 619 OHM 1% 1/10W 0603	Panasonic	ERJ-3EKF6190V
65	1	R611	158	RES SMD 158 OHM 1% 1/10W 0603	Yageo	RC0603FR-07158RL
66	1	R700	1.5k	RES SMD 1.5K OHM 1% 1/10W 0603	Yageo	RC0603FR-071K5L
67	1	R705	1M	RES SMD 1M OHM 1% 1/10W 0603	Yageo	RC0603FR-071ML
68	2	R706,R707	5.62K	5.62 kOhms ±1% 0.1W, 1/10W Chip Resistor 0603	Yageo	RC0603FR-075K62L
69	2	R708,R709	2.32K	2.32 kOhms ±1% 0.1W, 1/10W Chip Resistor 0603	Yageo	RC0603FR-072K32L
70	1	R718	1K	POT 1K OHM 1/20W LINEAR 1TURN	Bourns	PTV09A-4015F-B102
71	3	SW400,SW501,SW502	CL-SB-22B-01T	Slide Switch DPDT Surface Mount	Copal	CL-SB-22B-01T
72	3	SW500,SW503,SW601	SS-24E06-TG 5	SWITCH SLIDE DP4T 300MA 30V	C&K	SS-24E06-TG 5
73	1	SW600	1101M2S3CQE2	SWITCH SLIDE SPDT 6A 120V	C&K	1101M2S3CQE2
74	3	TP608,TP609,TP610	TP_150x80	PC TEST POINT MINI SMD	Keystone	5019
75	2	U100,U501	LT6232	General Purpose Amplifier 4 Circuit Rail-to-Rail	Linear Technology	LT6232IGN#PBF
76	1	U200	MK2705SLF	IC AUDIO CLOCK SOURCE 8-SOIC	IDT	MK2705SLF
77	1	U201	74HC148	Encoder 1 x 8:3	TI	SN74HC148DR
78	3	U203,U205,U206	74LVC163	Counter IC Binary Counter 1 Element 4 Bit Positive Edge	NXP	74LVC163PW,118
79	1	U204	74LVC1G04	IIC SINGLE INVERTER GATE SC70-5	TI	SN74LVC1G04DCKR
80	1	U207	74AUP2G34DW-7	IC BUF NON-INVERT 3.6V SOT363	Diodes Inc	74AUP2G34DW-7
81	1	U208	74LVC1G00	IC GATE NAND 1CH 2-INP SC70-5	TI	SN74LVC1G00MDCKREP
82	3	U209,U210,U213	74LVC1G08	C GATE AND 1CH 2-INP SC-70-5	TI	SN74LVC1G08QDCKRQ1
83	1	U212	74HC21	IC GATE AND 2CH 4-INP 14TSSOP	TI	SN74HC21PWR
84	1	U214	74LVC125APW	IC BUFF DVR TRI-ST QD 14TSSOP	Nexperia	74LVC125APW
85	2	U215,U402	74LVC1G157	IC MULTIPLEXER 2INPUT 6TSOP	TI	SN74LVC1G57DBVR
86	4	U300,U302,U500,U502	OPA1632	IC OPAMP AUDIO 180MHZ 8SOIC	TI	OPA1632DR
87	1	U301	PCM1794A	DAC, Audio 24 bit 200k I ² S 28-SSOP	TI	PCM1794ADBR
88	1	U400	Value	AUDIO CODEC AC'97 VOLTAGE-TRANSLATION TRANSCEIVER	TI	SN74AVC6T622PWR
89	1	U401	ADAU7002	Stereo PDM-to-I2S	Analog Devices	ADAU7002ACBZ-R7
90	1	U600	RT6150AGQW	Buck-Boost Switching Regulator IC Positive Adj 800mA	Richtek	RT6150AGQW
91	1	U601	TPS65133DPDR	Voltage Regulator IC 2 Output 12-WSON	TI	TPS65133DPDR
92	1	U602	LDK220	Linear Voltage Regulator Adjustable 200mA SOT-23-5	STMicro	LDK220M-R
93	1	U700	PCM2900CDB	Stereo Audio Interface 16 b USB 28-SSOP	TI	PCM2900CDB
94	1	U701	MAX9722AETE	Amplifier IC Headphones, 2-Channel (Stereo) Class AB	Maxim	MAX9722AETE+T
95	1	Y200	27MHz	27MHz ±20ppm Crystal 18pF 40 Ohm	CTS	445C25D27M00000
96	1	Y201	19.2MHz	19.2MHz XO Oscillator 3.3V Enable/Disable 4-SMD,	ECS Inc.	ECS-1633-192-BN-TR
97	1	Y700	12MHz	12MHz ±20ppm Crystal 18pF 50 Ohm	CTS	445I23D12M00000
98	1	Z1	DZ2W03900L	DIODE ZENER 3.9V 1W MINI2	Panasonic	DZ2W03900L
99	4	N/A	N/A	HEX STANDOFF #4-40 ALUMINUM 1"	RAF Electronic Hardware	2112-440-AL
100	4	N/A	N/A	MACHINE SCREW PAN PHILLIPS 4-40	Keystone	9900
101	1	PCB	KC10143	Printed Circuit Board	Knowles	KC10143
102	1	USB Cable	N/A	USB Cable	Stewart Connector	SC-2AMK003F
103	6	Jumper	N/A	Jumper	Sullins	QPC02SXGN-RC
Total Part Count	385					