ANALOG FRONTEND FOR LOW COST ULTRASOUND BOM REV 1

DATE COMPANY COMMENT 1 COMMENT 2

2017-05-18 Columbia University - Creative

Machines Lab

COMMENT 3 COMMENT 4 TOTAL PARTS

62 (Unique 32)

C - Capacitors	Ref	Qty	Value	Footprint		
C21 C20 2 6.8aF Capacitors_SMD.C_0603 C8 C9 2 1u Capacitors_SMD.C_0603 C14 C13 C16 C11 C12 C15 C17 C23 C4 C2 C1.MD1 C1NH1 C7 C6 14 0.1ÅμF Capacitors_SMD.C_0603 C18 C19 2 1nF Capacitors_SMD.C_0603 C3 1 0.33ÅμF Capacitors_SMD.C_0603 C1 1 10ÅμF Capacitors_SMD.C_0603 C22 1 470pF Capacitors_SMD.C_0603 [CFB] - [CFB] - C8H] - [CSH] - [CSH] - [D] - Diodes D1 BAV99T custom:SOT-523 [J] - [J] - [J] - [J] - [J] - [L] - Inductors [L] - Inductors [L] - Inductors [LS] - [LS] - [LS] - [LS] - [LS] - </td <td></td> <td></td> <td></td> <td></td> <td>[C] - Capacitors</td>					[C] - Capacitors	
C8 C9 2 1u Capacitors_SMDcC_0603 C14 C13 C16 C11 C12 C15 C17 C23 C4 C2 CLMD1 CINH1 C7 C6 14 0.1ÅμF Capacitors_SMDcC_0603 C18 C19 2 1nF Capacitors_SMDcC_0603 C3 1 0.33ÅμF Capacitors_SMDcC_0603 C1 1 10ÅμF Capacitors_SMDcC_0603 C22 1 470pF Capacitors_SMDcC_0603 CFB1 1 18nF Capacitors_SMDcC_0603 CSH1 1 22pF Capacitors_SMDcC_0603 CSH1 1 BAV99T Custom:SOT-523 D1 1 BAV99T custom:SOT-523 J311412 4 CONN_COAXLAL custom:SMA L1 1 1 Capacitors_THF.C_Radia_D5_L6.P2.5 L613121415 5 120nH FB Resistors_SMDr0603 L1 1 1 Capacitors_THF.C_Radia_D5_L6.P2.5 L1 1 1 Resistors_SMDr0603	C5	1	1n	Capacitors_SMD:C_0603		
Cla Cl3 Cl6 Cl1 Cl2	C21 C20	2	6.8nF	Capacitors_SMD:C_0603		
C1S C19 2 InF Capacitors_SMD-C_0603 C1	C8 C9	2	1u	Capacitors_SMD:C_0603		
C3 1 0.33µF Capacitors_SMD:C_0603 C1 1 10µF Capacitors_SMD:C_1206 C22 1 470pF Capacitors_SMD:C_0603 [CFB] - CFB1 1 18nF Capacitors_SMD:C_0603 [CSH] - CSH1 1 22pF Capacitors_SMD:C_0603 [D] - Diodes D1 1 BAV99T custom:SOT-523 [J] - 13 J1 J4 J2 4 CONN_COAXIAL custom:SMA [L] - Inductors L1 1 1	C15 C17 C23 C4 C2	14	$0.1 { m \hat{A}} \mu { m F}$	Capacitors_SMD:C_0603		
C1 1 10µF Capacitors_SMD:C_1206 C22 1 470pF Capacitors_SMD:C_0603 [CFB] - CFB1 1 18nF Capacitors_SMD:C_0603 [CSH] - CSH1 1 22pF Capacitors_SMD:C_0603 [D] - Diodes D1 1 BAV99T custom:SOT:523 [J] - 13 J1 J4 J2 4 CONN_COAXIAL custom:SMA [L] - Inductors L1 1 1	C18 C19	2	1nF	Capacitors_SMD:C_0603		
CFB	С3	1	$0.33 \hat{A} \mu F$	Capacitors_SMD:C_0603		
CFB	C1	1	$10 {\hat { m A}} \mu { m F}$	Capacitors_SMD:C_1206		
CFB1	C22	1	470pF	Capacitors_SMD:C_0603		
CSH -					[CFB] -	
CSH1	CFB1	1	18nF	Capacitors_SMD:C_0603		
[D] - Diodes D1					[CSH] -	
D1 1 BAV99T custom:SOT-523 [J] - J3 J1 J4 J2 4 CONN_COAXIAL custom:SMA [L] - Inductors L1 1 1u Capacitors_THT:C_Radial_D5_L6_P2.5 L6 L3 L2 L4 L5 5 120nH FB Resistors_SMD:R_0603 [LS] - LS1 1 Piezo Pin_Headers:Pin_Header_Straight_1x02_Pitch2.54mm	CSH1	1	22pF	Capacitors_SMD:C_0603		
J J J J J J J J J J					[D] - Diodes	
J3 J1 J4 J2	D1	1	BAV99T	custom:SOT-523		
[L] - Inductors L1 1 1u Capacitors_THT:C_Radial_D5_L6_P2.5 L6 L3 L2 L4 L5 5 120nH FB Resistors_SMD:R_0603 [LS] - LS1 1 Piezo Pin_Header_Straight_1x02_Pitch2.54mm					[J] -	
L1 1 1u Capacitors_THT:C_Radial_D5_L6_P2.5 L6 L3 L2 L4 L5 5 120nH FB Resistors_SMD:R_0603 [LS] - LS1 1 Piezo Pin_Header_Straight_1x02_Pitch2.54mm	J3 J1 J4 J2	4	CONN_COAXIAL	custom:SMA		
L6 L3 L2 L4 L5 5 120nH FB Resistors_SMD:R_0603 [LS] - LS1 1 Piezo Pin_Header_Straight_1x02_Pitch2.54mm					[L] - Inductors	
[LS] - LS1 1 Piezo Pin_Header_Straight_1x02_Pitch2.54mm	L1	1	1u	Capacitors_THT:C_Radial_D5	5_L6_P2.5	
LS1 1 Piezo Pin_Header_Straight_1x02_Pitch2.54mm	L6 L3 L2 L4 L5	5	120nH FB	Resistors_SMD:R_0603		
					[LS] -	
[P] - Connectors	LS1	1	Piezo	Piezo Pin_Header_Straight_1x02_Pitch2.54mm		
					[P] - Connectors	

P2 P1 P3	3	CONN_01X02	Pin_Headers:Pin_Header_Straight_1x02_Pitch2.54mm	
			[Q] - Transistors	
Q1	1	IRF510N	TO_SOT_Packages_THT:TO- 220_Vertical	
Q2	1	IRF9510N	TO_SOT_Packages_THT:TO- 220_Vertical	
			[R] - Resistors	
R2	1	15	Resistors_THT:R_Axial_DIN0411_L9.9mm_D3.6mm_P12.70mm_Horizontal	
R1 R5	2	100	Resistors_SMD:R_0805	
R4 R7	2	200k	Resistors_SMD:R_0805	
R3	1	1k	Resistors_SMD:R_0805	
R8 R9	2	100	Resistors_SMD:R_0603	
R6 R10	2	237	Resistors_SMD:R_0603	
R11	1	68	Resistors_SMD:R_0805	
			[RFB] -	
RFB1	1	274	Resistors_SMD:R_0603	
			[T] -	
T1	1	CX2041NLT	custom:CX2041NLT	
			[U] - Semiconductors	
U6	1	LTC5507	custom:TSOT-23- 6_MK06A	
U5	1	AD8331	custom:QSOP- 20_3.9x8.6mm_Pitch0.64mm	
U1	1	LM7805CT	TO_SOT_Packages_THT:TO- 220_Vertical	
U3 U4	2	LM7171	Housings_DIP:DIP- 8_W7.62mm	
U2	1	MD0100N8	TO_SOT_Packages_SMD:SOT89- 3_Housing_Handsoldering	

BOM made with <u>KICAD_BOM_WIZARD</u> (Generated Monday, June 05, 2017 'PMt' 12:22:48 PM)