

A

A

DSP VERSION 1.0

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DESIGN CONSIDERATIONS

DESIGN NOTE:
Functions of this block

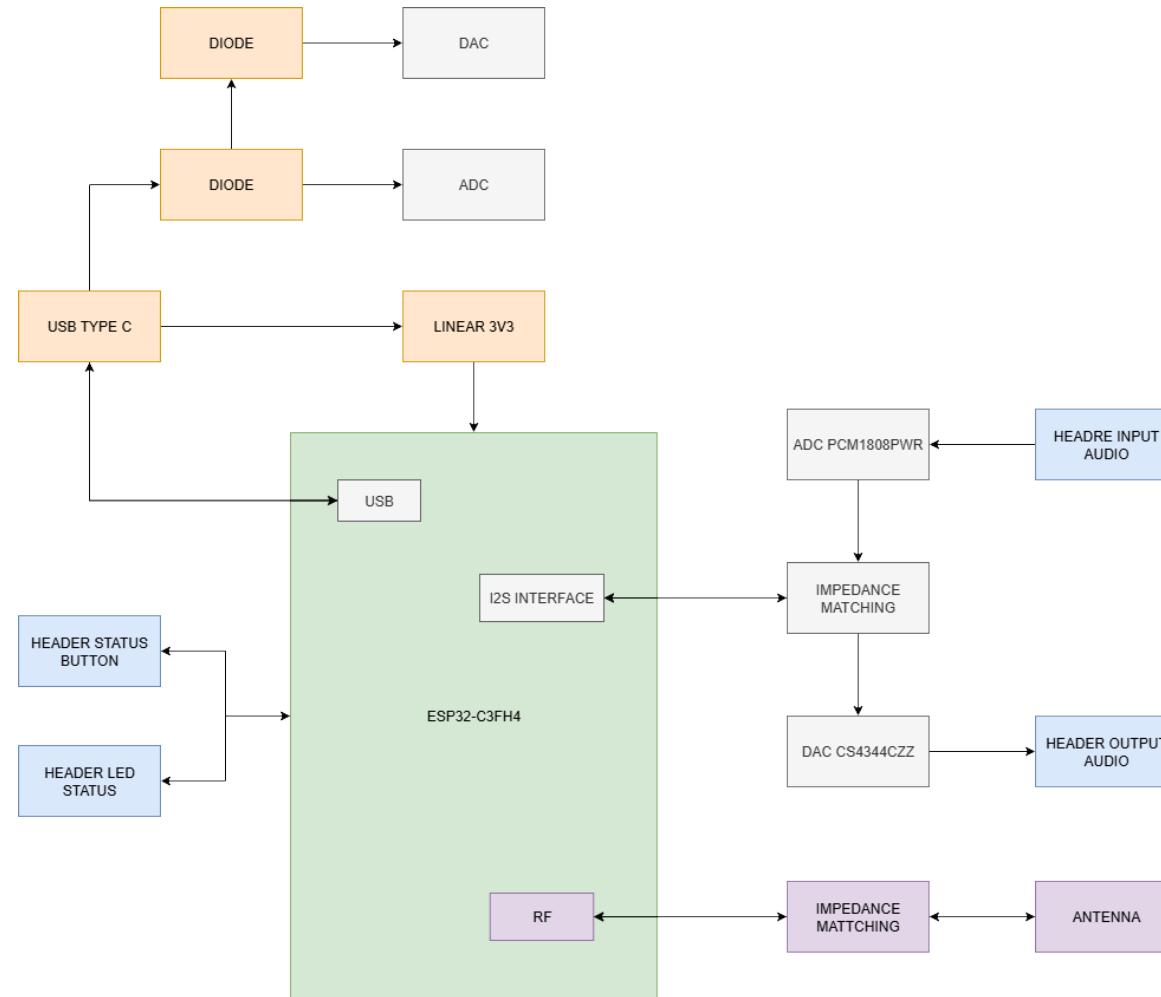
DESIGN NOTE:
Calculation equations

DESIGN NOTE:
Calculations when choosing
this component

Title: *	Author: *
Approved: *	CONFIDENTIAL
Size: A4	Project: DSP_VERSION_1.0
Date: 1/26/2026	Modified Date: 1/26/2026
	Revision: *
	SW Version: 24.1.2.44



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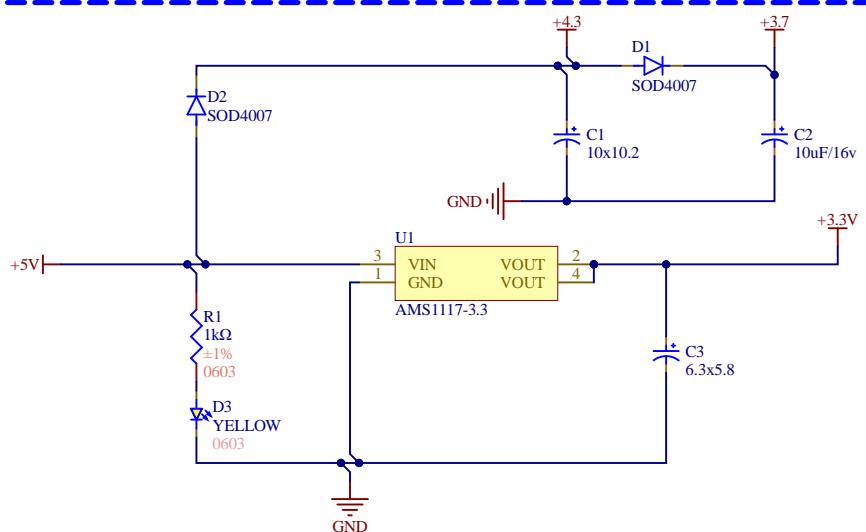
C

D

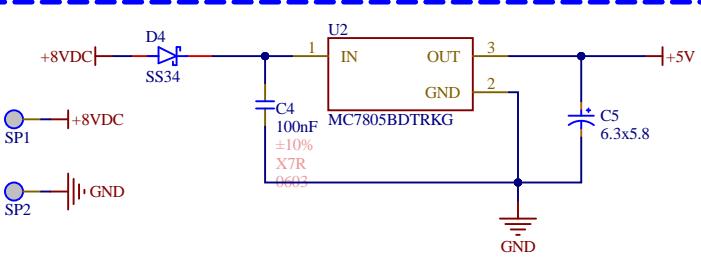
Title: *		Author: *
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Size: A4	Project: DSP_VERSION_1.0	Modified Date: 1/26/2026
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LINEAR MCU ADC DAC



LINEAR 5V



Title: *		Author: *
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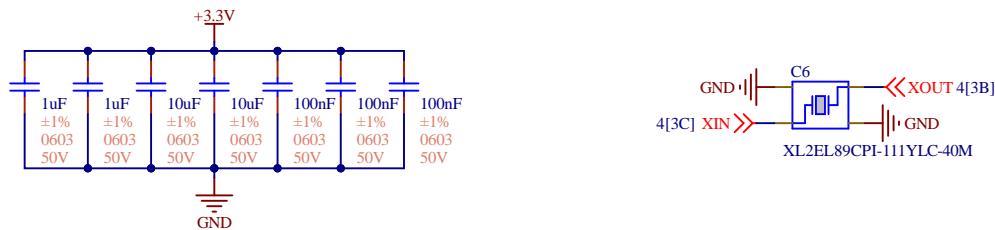
1

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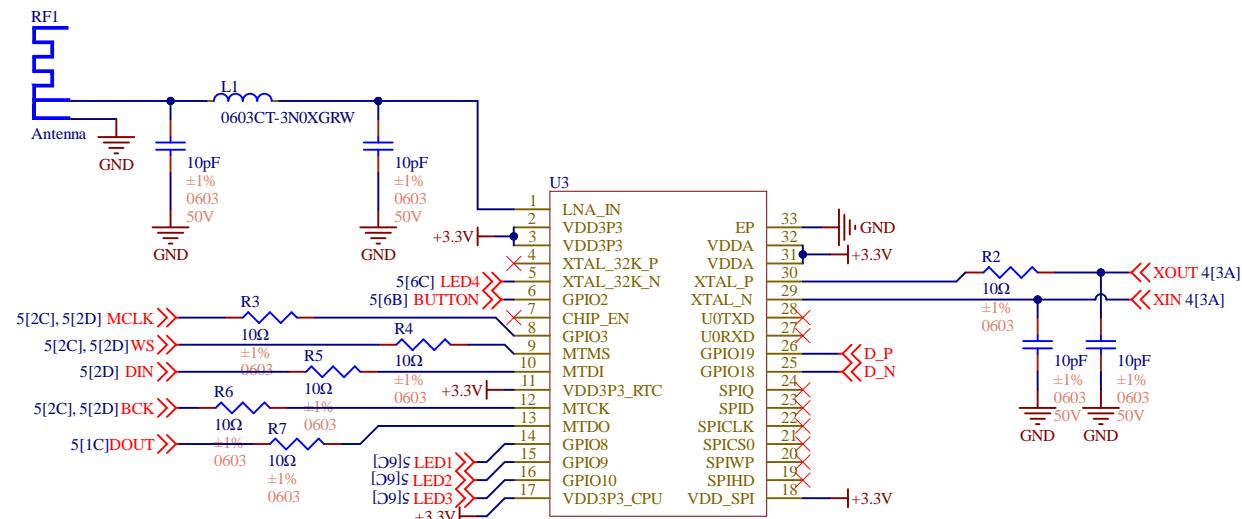
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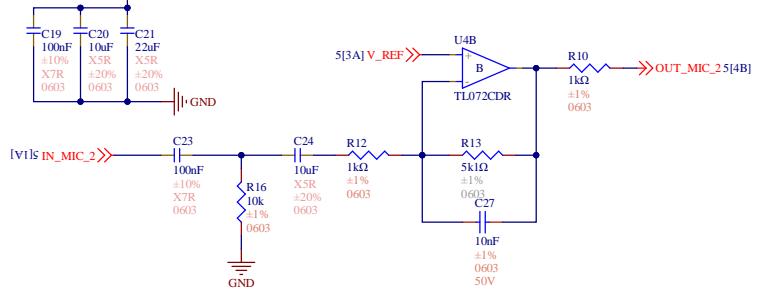
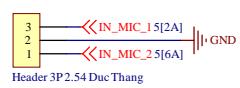
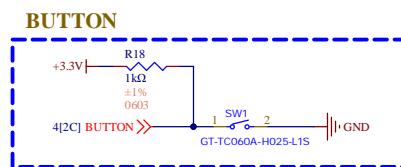
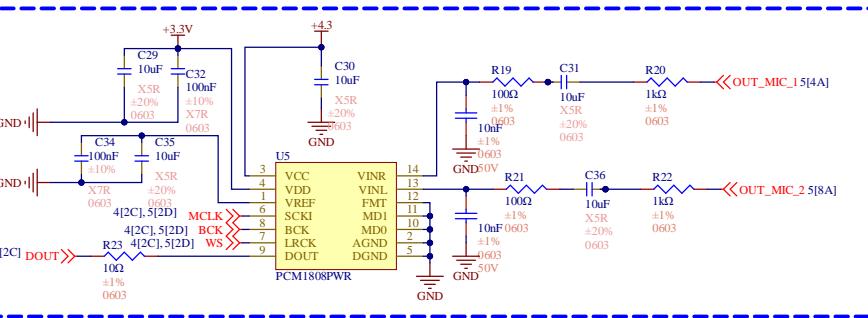
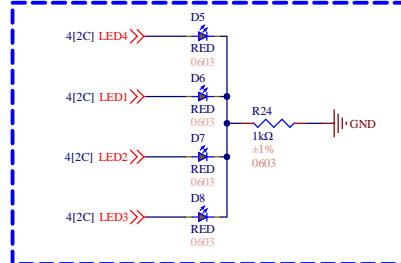
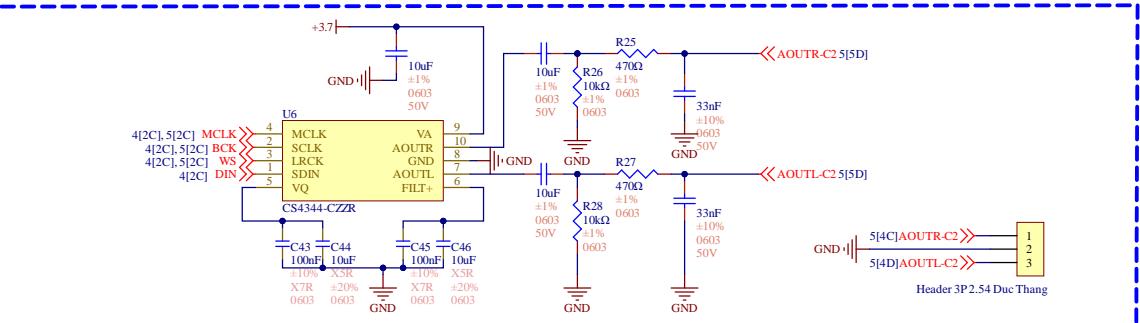
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1 2 3 4 5 6 7 8

OPAMP**ADC****LED STATUS****DAC**

DDL

Title: *	Author: *
Size: A3	Project: DSP_VERSION_1.0
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1 2 3 4 5 6 7 8

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Title: *		Author: *
Approved: *		CONFIDENTIAL
Size: A4	Project: DSP_VERSION_1.0	Modified Date: 1/26/2026
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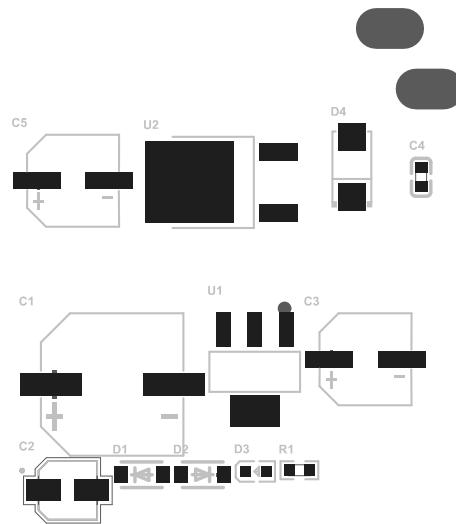
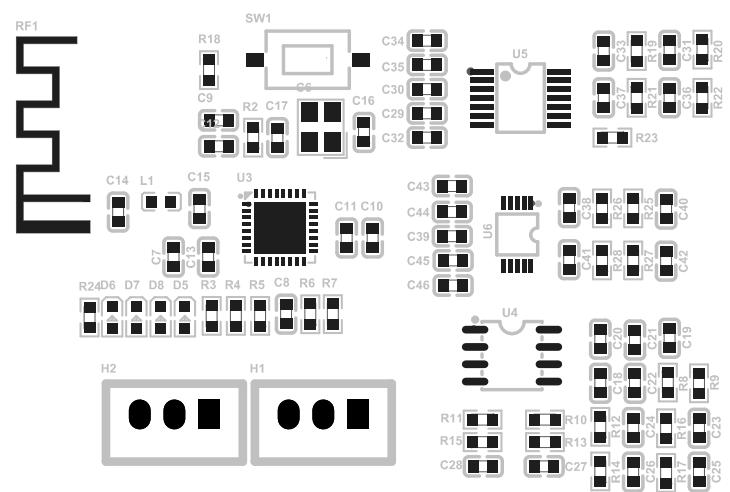


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Comment	Description	Designator	Footprint	Value	Quantity
10x10.2	10uf 10V Axial 24mmx10.2mm SMD D104.10.2mm Multi-Layer Ceramic Capacitors R&H	C1	C_10x10.2mm_AlumC_10x10.2_Aluminum_SMD		1
10uf/16v	10uf 16V Aluminum Electrolytic Capacitors Multi-Layer 2000 hr at 105°C	C2	C_4.3x5_Aluminum_3mm	C_4.3x5_Aluminum_5mm	1
1.3x5.8	1.3V 10uf ±20% GND Die 3x5.8mm Multi-Layer Ceramic Capacitors R&H	C3.C5	C_6.3x5.8mm_AlumC_6.3x5.8_Aluminum_SMD	C_6.3x5.8mm_AlumC_6.3x5.8_Aluminum_SMD	2
100f	100V 10nf ±10% MLCC - SMD/SMT Hausmann 100V 10nf 1% 0402 Multi-layer Ceramic Capacitors MLCC - SMD/SMT Hausmann	C4.C11.C12.C13. C16.C22.C23.C25 C27.CM.C45.C47	C0603_100PF_±10%, FR C0603_300PF_±1%		12
0.21UFPC-111YC.	Crystal Oscillator 15pf 40M	C6	XZL21UFPC-111YC. 40M	XZL21UFPC-111YC. 40M	1
1uf	10V 1uf ±1% MLCC - SMD/SMT Hausmann	C7.C8	C0603	C0603_1uf_±1%	2
10uf	10V 10uf ±1% 0402 Multi-layer Ceramic Capacitors MLCC - SMD/SMT Hausmann	C9.C10.C15.C20. C21.C25.C26.C28 C29.C41.C44.C46	C0603_10uF_±1%, FR C0603_10uF_±10%,X		16
10pf	100V 10pf ±1% 0402 Multi-layer Ceramic Capacitors MLCC - SMD/SMT Hausmann	C14.C15.C16.C17	C0603	C0603_10pf_±1%	4
22uf	220V 22uf ±20% 0402 Multi-layer Ceramic Capacitors MLCC - SMD/SMT Hausmann	C21	C0603	C0603_22uF_±20%,X	1
10nf	10V 10nf ±1% 0402 Multi-layer Ceramic Capacitors MLCC - SMD/SMT Hausmann	C27.C28.C33.C37	C0603	C0603_10nF_±1%	4
13nf	130V Thick Film Resistor 75V ±10ppm/°C ±1% 4700 ohm Chip Resistor - Surface Mount R0H5	C40.C42	C0603	C0603_33nF_±10%	2
SOD407	1.1V/1A 500-123FL Diodes - General Purpose Diodes	D1.D2	SOD407	SOD407	2
YELLOW	25mil-40mil Water Clear -40°C ~85°C 1000 ohm 40mW 0402 LED Indicator Diode R0H5	D3	LED0603	D0603_YELLOW	1
S334	40V Independent 3A High Current SMA-DO 210mA Switching Diodes R0H5	D4	S334	S334	1
RED	25mil-40mil Water Clear -40°C ~85°C 424nm Red 120° 40mW 0402 LED Indicator Diode R0H5	D5.D6.D7.D8	LED0603	D0603_RED	4
Header 3P.2.54 Dic Thru	Cables	H1.H2	W02.54M.3	Header 3P.2.54 Dic Thru	2
SG03CT.3N0XGRW	1.6A 3mil 39mil Wire- wrap-on-chip Indicator Diode - General Purpose Diodes	L1	0603CT.3N0XGRW	L_3H_3.3A_0603	1
R40	42.5mH Thick Film Resistor 50V 1% ±20ppm/°C 100 0402 Chip Resistor - Surface Mount R0H5	R1.R10.R11.R12. R14.R18.R20.R22.	R0603	R0603_Y40_±1%	9
R00	42.5mH Thick Film Resistor 50V 1% ±20ppm/°C 100 0402 Chip Resistor - Surface Mount R0H5	R2.R3.R4.R5.R6.R7. R22	R0603	R0603_Y00_±1%	7
S410	100V 100mA 100m Resistor 75V ±10ppm/°C ±1% 0402 Chip Resistor - Surface Mount R0H5	R8.R9.R13.R15	R0603	R0603_S410_±1%	4
R5K	100V 100mA 100m Resistor 50V 1% ±20ppm/°C 100 0402 Chip Resistor - Surface Mount R0H5	R16.R17	R0603	R0603_Y5K_±1%	2
4700	42.5mH Thick Film Resistor 50V 1% ±20ppm/°C 100 0402 Chip Resistor - Surface Mount R0H5	R25.R27	R0603	R0603_4700_±1%_L	2
R5K0	42.5mH Thick Film Resistor 50V 1% ±20ppm/°C 100 0402 Chip Resistor - Surface Mount R0H5	R26.R28	R0603	R0603_Y5K_±1%	2
Antenna	RF1	2.4GHZ-500MHZ_v1.1		Antenna	1
G1	Tactile Switch SPST Held 2.5mm SMD 1000 ohm 3.5mm Surface Mount	G1	SP	SP	0
GT-T060A-HD25-L15	GT-T060A-HD25-L15				1
AM51117.3.3	Fixed 3.3V Positive 100mA 100m Voltage Regulators - Linear, Low-Drop Out 100mA Regulators R0H5	U1	AM51117.3.3	AM51117.3.3	1
MIC7805BDTRIG	MIC7805BDTRIG 4.5V-5.5V 2412S 100mA 100m Transistor Modules and Modules R0H5	U2	7805	7805	1
TL072CDR	13V/ua 2.50E-8 FET Input Amplifiers R0H5	U4	TL072CDR	TL072CDR	1
PCM1808PWR	4.5V-5.5V 2412S 100mA 100m Special Purpose R0H5	U5	PCM1808PWR	PCM1808PWR	1
CS4344-CZ2R	900ms 0.5-2.1V 9124 TSSOP-10,2mm Digital to Analog Converters (DAC) R0H5	U6	CS4344-CZ2R	CS4344-CZ2R	1