

Button for Push-to-Talk (PPT)

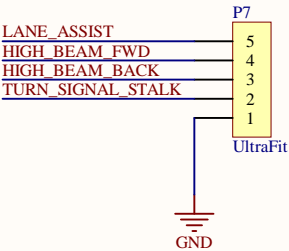
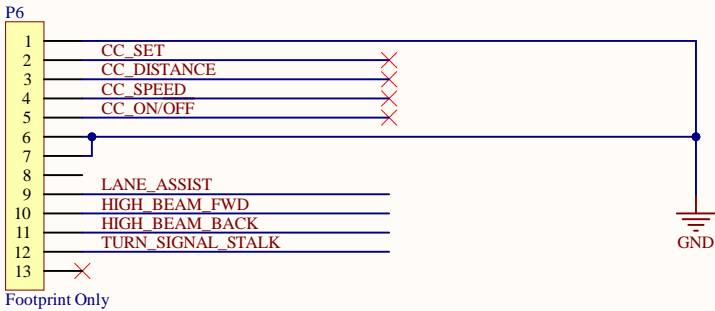
PROJECT	MSXIV_SteeringWheelInterfaceBoard.PrjPcb	
DOCUMENT	Steering Wheel Interface - Mezzanine	
PART NUMBER	MS-ELE0008	VARIANT [No Variations]
DRAWN BY	Jenny Xia	REVISION 4.0
LAST MODIFIED	2020-01-14	SHEET 1 OF 5


MIDNIGHT

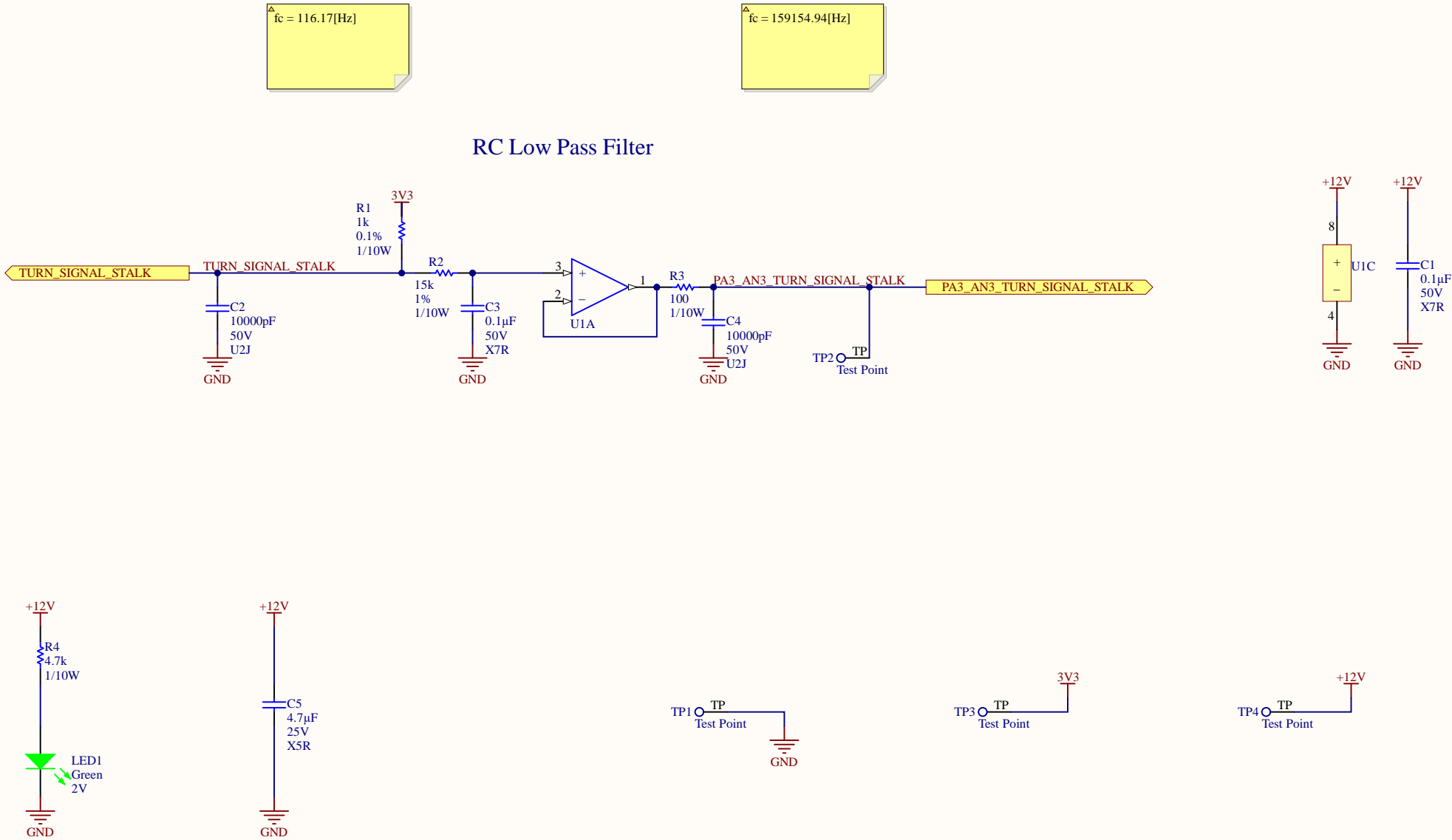
SUN

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hardware@uwmidsun.com

Steering Stalk Connector



PROJECTMSXIV_SteeringWheelInterfaceBoard.PrjPcb		<div>MIDNIGHTSUN</div>
DOCUMENTSteering Wheel - Steering Stalk Connector		
PART NUMBERMS-ELE0008	VARIANT[No Variations]	
DRAWN BYJenny Xia	REVISION4.0	
LAST MODIFIED2020-01-14	SHEET2 OF5	



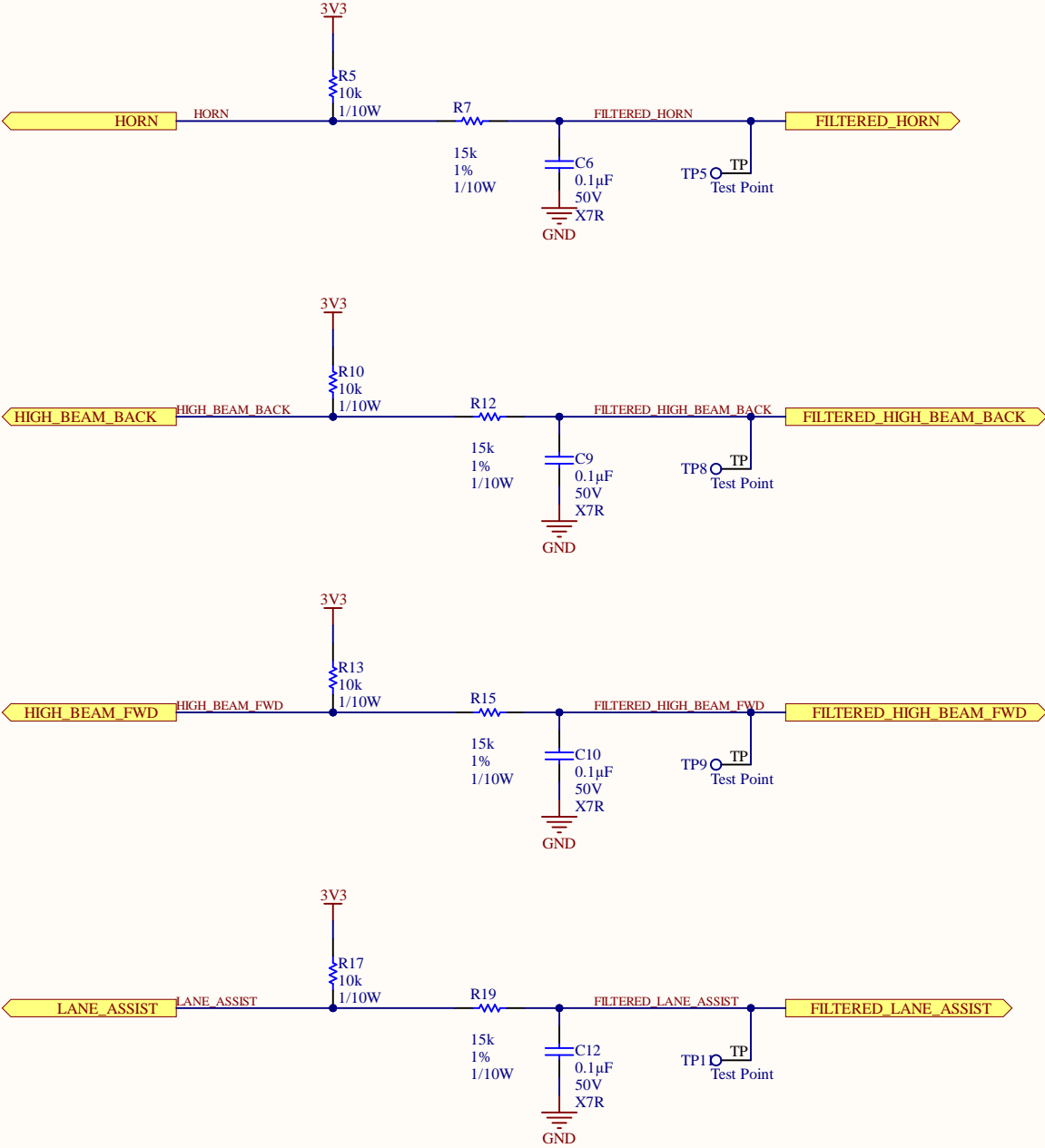
PROJECT	MSXIV_SteeringWheelInterfaceBoard.PrjPcb	
DOCUMENT	Steering Wheel Interface - Analog Inputs	
PART NUMBER	MS-ELE0008	VARIANT [No Variations]
DRAWN BY	Jenny Xia	REVISION 4.0
LAST MODIFIED	2020-01-14	SHEET 3 OF 5

MIDNIGHT

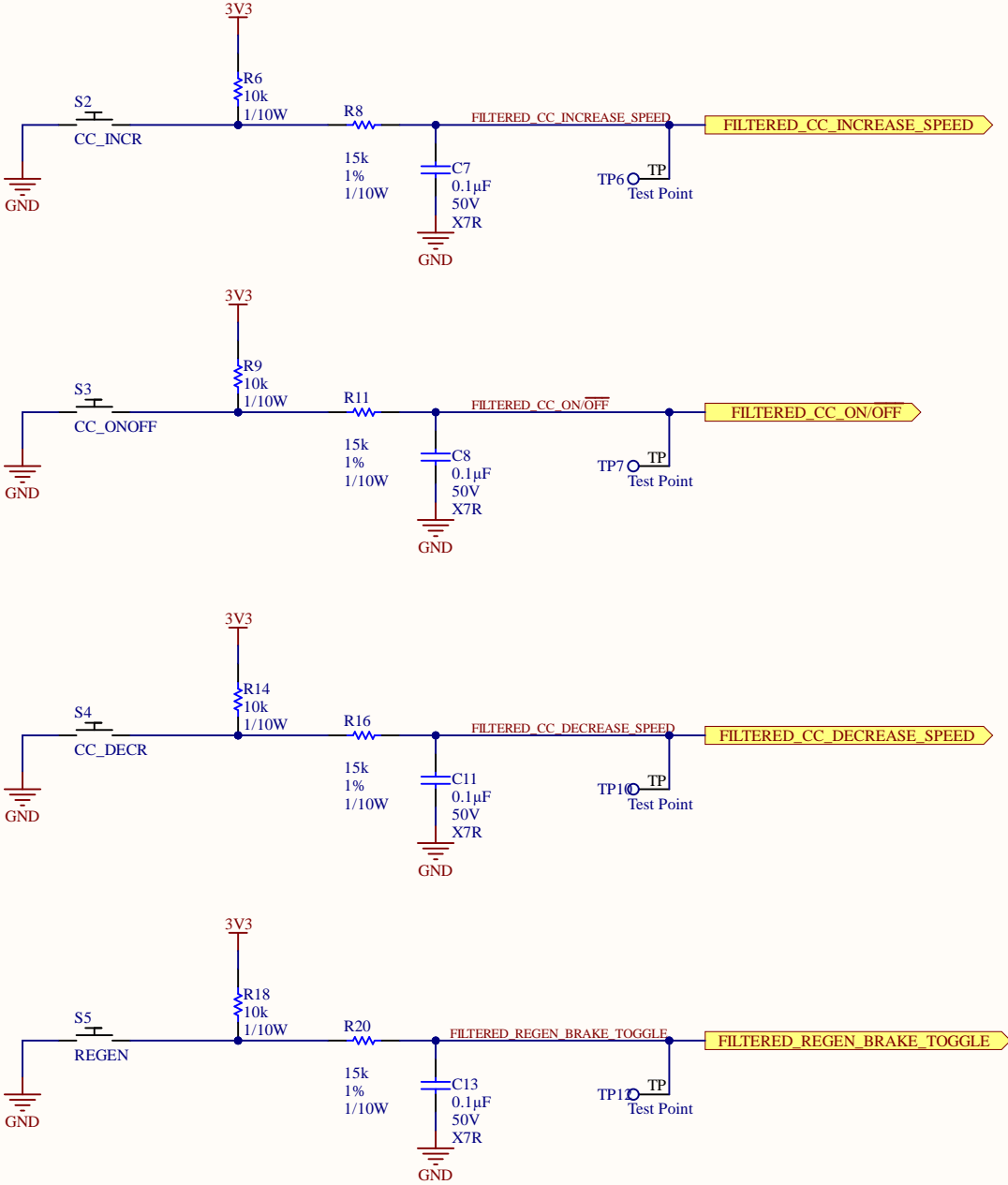
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Horn and Steering Stalk Inputs



Steering Wheel Button Inputs



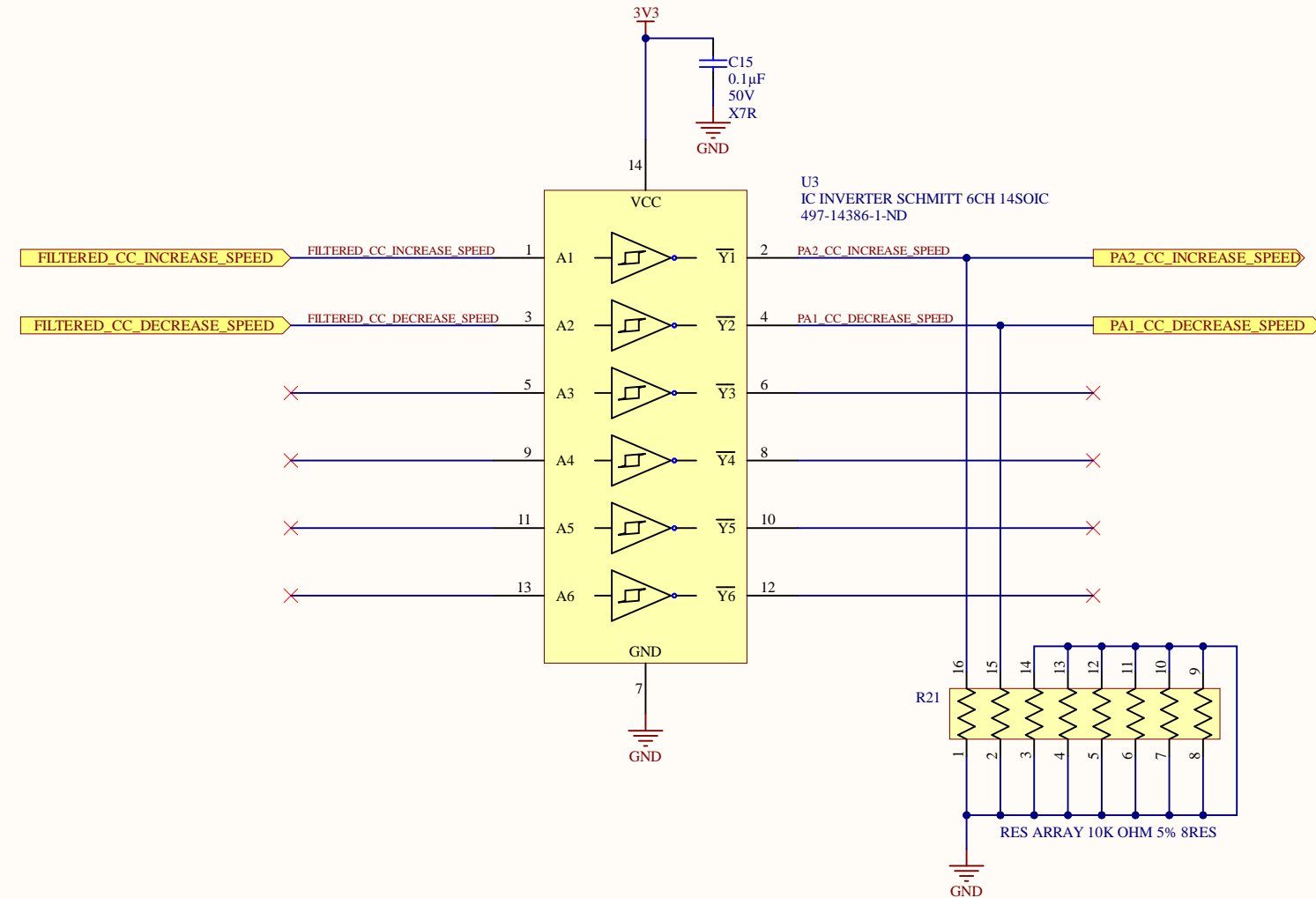
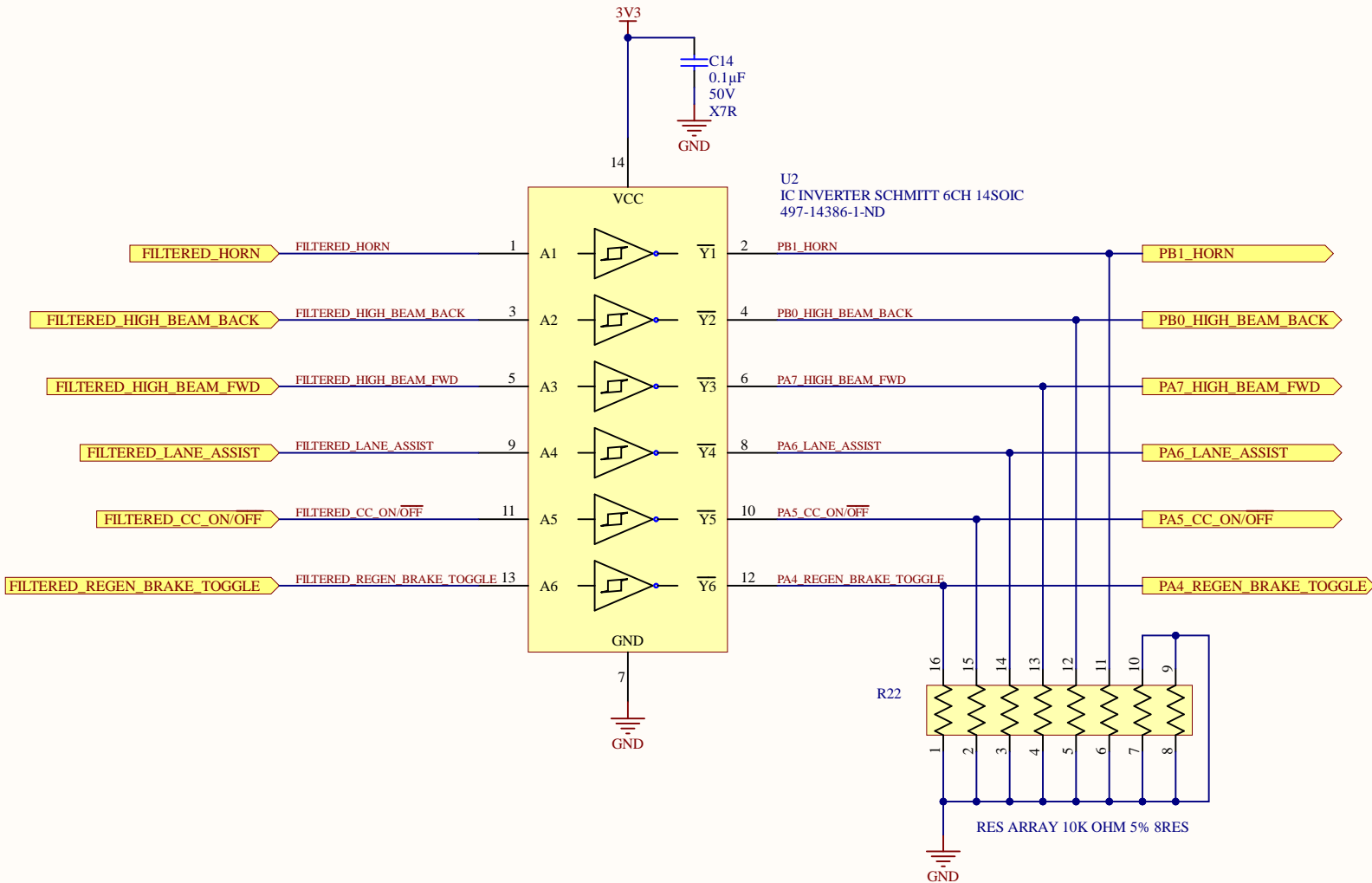
$f_c = 116.17[\text{Hz}]$

PROJECT	MSXIV_SteeringWheelInterfaceBoard.PrjPcb		
DOCUMENT	Steering Wheel Interface - Digital Inputs		
PART NUMBER	MS-ELE0008	VARIANT	[No Variations]
DRAWN BY	Jenny Xia	REVISION	4.0
LAST MODIFIED	2020-01-14	SHEET	4 OF 5

MIDNIGHT

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Comment	Description	Designator	Footprint	LibRef	Quantity
CAP CER 0.1UF 50V 10% X7R 0603	0.1 μ F \pm 10% 50V Ceramic Capacitor X7R 0603 (1608 Metric)	C1, C3, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15	CAP_0603	CAP CER 0.1UF 50V 10% X7R 0603	12
CAP CER 10nF 50V 5% X7R 0603	10000pF \pm 5% 50V Ceramic Capacitor U21 0603 (1608 Metric)	C2, C4	CAP_0603	CAP CER 10nF 50V 5% X7R 0603	2
CAP CER 4.7UF 25V 10% X5R 0603	4.7 μ F \pm 10% 25V Ceramic Capacitor X5R 0603 (1608 Metric)	C5	CAP_0603	CAP CER 4.7UF 25V 10% X5R 0603	1
LED GREEN CLEAR 2V 0603	Green 572nm LED Indication - Discrete 2V 0603 (1608 Metric)	LED1	LED_0603	LED GREEN CLEAR 2V 0603	1
CONN 50POS Bergstak Plug 0.02"	50 Position Connector Plug, Outer Shroud Contacts Surface Mount Gold	P1	CONN, Bergstak 50 Pos Plug	CONN 50POS Bergstak Plug 0.02"	1
CONN 5POS ULTRA-FIT 0.138"	5 Positions Header Connector 0.138" (3.50mm) Through Hole Tin	P2, P7	CONN, 5POS ULTRA-FIT	CONN 5POS ULTRA-FIT 0.138"	2
Dura-Click	2 Positions Header, Shrouded Connector 0.079" (2.00mm) Surface Mount, Vertical Tin	P3	CONN, 2POS Dura-Click Vertical	CONN 2POS DURA-CLICK 0.079" VERT	1
CONN 2POS ULTRA-FIT 0.138"	2 Positions Header, Shrouded Connector 0.138" (3.50mm) Through Hole Gold	P4	CONN, 2POS ULTRA-FIT	CONN 2POS ULTRA-FIT 0.138"	1
CONN 2POS MICRO-FIT 3mm	Connector Header Through Hole 2 position	P5	CONN, 2POS MICRO-FIT	CONN 2POS MICRO-FIT 3mm	1
RES SMD 1K OHM 0.1% 1/10W 0603	1 kOhms \pm 0.1% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Automotive AEC-Q200 Thin Film	R1	RES_0603	RES SMD 1K OHM 0.1% 1/10W 0603	1
RES SMD 15K OHM 1% 1/10W 0603	15 kOhms \pm 1% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Moisture Resistant Thick Film	R2, R7, R8, R11, R12, R15, R16, R19, R20	RES_0603	RES SMD 15K OHM 1% 1/10W 0603	9
RES 100 OHM 1% 1/10W 0603	100 Ohm \pm 1% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Moisture Resistant Thick Film	R3	RES_0603	RES 100 OHM 1% 1/10W 0603	1
RES 4.7K OHM 1% 1/10W 0603	4.7k Ohm \pm 1% 0.1W, 1/10W Chip Resistor 0603 (1608 Metric) Moisture Resistant Thick Film	R4	RES_0603	RES 4.7K OHM 1% 1/10W 0603	1
RES 10K OHM 1% 1/10W 0603	RES SMD 10K OHM 1% 1/10W 0603	R5, R6, R9, R10, R13, R14, R17, R18	RES_0603	RES 10K OHM 1% 1/10W 0603	8
RES ARRAY 10K OHM 5% 8RES	RES ARRAY SMD 10K 5% 62.5mW 1506	R21, R22	RES ARRAY, 8 POS 1506	RES ARRAY 10K OHM 5% 8RES EXB-2HV103JV	2
PPT	Pushbutton Switch SPST-NO Standard Through Hole	S1	SW SPST-NO ESE-20C321	SW PUSH SPST-NO 0.1A 14V	1
CC_INCR	Pushbutton Switch SPST-NO Standard Through Hole	S2	SW SPST-NO ESE-20C321	SW PUSH SPST-NO 0.1A 14V	1
CC_ONOFF	Pushbutton Switch SPST-NO Standard Through Hole	S3	SW SPST-NO ESE-20C321	SW PUSH SPST-NO 0.1A 14V	1
CC_DECR	Pushbutton Switch SPST-NO Standard Through Hole	S4	SW SPST-NO ESE-20C321	SW PUSH SPST-NO 0.1A 14V	1
REGEN	Pushbutton Switch SPST-NO Standard Through Hole	S5	SW SPST-NO ESE-20C321	SW PUSH SPST-NO 0.1A 14V	1
IC OP AMP DUAL GP RR 10MHZ 8-VSSOP	General Purpose Amplifier 2 Circuit Rail-to-Rail 8-VSSOP	U1	IC OP AMP DUAL 8-VSSOP	IC OP AMP DUAL GP RR 10MHZ 8-VSSOP	1
IC INVERTER SCHMITT 6CH 14SOIC	Inverter IC 6 Channel Schmitt Trigger 14-SOIC	U2, U3	IC INVERTER SCHMITT 6CH 14TSSOP	IC INVERTER SCHMITT 6CH 14TSSOP	2

