Potential Control Loop

VCC/2 Fixed Reference

MBED

RE & CE

External Power

WE Connectors

Zero Ohm Resistor

Analog Components Decoupling Capacitors

Digital Components Decoupling Capacitors

Channel 1 Electrodes 1-16

Channel 2 Electrodes 17-32

Channel 3 Electrodes 33-48

Channel 4 Electrodes 49-64

Channel 5 Electrodes 65-80

Title block:
- Size: A1
- Number:
- Revision:
- Date: 25/05/2015
- Sheet of
- File: C:\Users\...\Multi-channel Potentiostat Schematic
- Drawn By:

ENTRY

Justin Hu FYP 2015

Comment	Description	Designator	Farnell Order Code	Footprint	LibRef	Quantity
100uF	Capacitor	C1, C2	1907361	3225[1210]	Cap	2
0.1uF	Capacitor	C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41, C42	1759265	2012[0805]	Cap	39
4.7uF	Capacitor	C17	1833810	2012[0805]	Cap	1
100pF	Capacitor	C43, C44, C45, C46, C47, C48, C49, C50, C55, C56, C57, C58, C59, C60, C61, C62, C67, C68, C69, C70	1759203	2012[0805]	Cap	20
0.47uF	Capacitor	C51, C52, C53, C54, C63, C64, C65, C66, C71, C72	1854857	RAD-0.3	Cap	10
40PINCON		P1, P2	1757130	CONN_FFC40	40PINCON	2
MBED 1-20, MBED 21-40	Header, 20-Pin	P3, P4	7991967	HDR1X20	Header 20	2
Header 2	Header, 2-Pin	P5	7991916	HDR1X2	Header 2	1
CON2		P6	9491902	JST-PH2	PCB_2WAY_CON	1
0	Resistor	R1	9333681	2012[0805]	Res1	1
10K	Resistor	R2, R3, R4, R5, R8, R9, R10, R11, R18, R19, R20, R21, R28, R29, R30, R31, R38, R39, R40, R41, R47, R48, R52, R53	9332391	2012[0805]	Res1	24
1.78M	Resistor	R6, R7, R26, R27, R46	2139146	2012[0805]	Res1	5
162.0k	Resistor	R12, R13, R32, R33, R49	2141909	2012[0805]	Res1	5
16.0k	Resistor	R14, R15, R34, R35, R50	1127695	2012[0805]	Res1	5
16.0M	Resistor	R16, R17, R36, R37, R51	1887393	2012[0805]	Res1	5
8.2K	Resistor	R22, R23, R24, R25, R42, R43, R44, R45, R54, R55	2129187	2012[0805]	Res1	10
AD8603AUJ-REEL	Single Channel Single-Supply Operation Operational Amplifier, 400 KHz BW, 100 mV/us SR, Industrial, 5-pin SOT23 (UJ-5), Reel	U1, U2	1651290	ADI-UJ-5_N	AD8603AUJ-REEL	2
ADA4528-1ARMZ	Single Channel RRIO Operational Amplifier, 6.5 MHz BW, 500 mV/us SR, Industrial, 8-pin SOP (RM-8), Tube	U3, U14, U15, U16, U17, U28, U29, U30, U31, U37, U38	1897114	ADI-RM-8_N	ADA4528-1ARMZ	11
ADG714	9.5 Ohm RON +/-15 V / +12 V / +/-5 V iCMOS Serially-Controlled Octal SPST Switch, -40 to 125 degC, 24-pin SOP (RU-24), Tube	U4, U5, U6, U7, U10, U11, U12, U13, U18, U19, U20, U21, U24, U25, U26, U27, U32, U33, U35, U36	9604367	ADI-RU-24_N	ADG1414BRUZ	20
TS5A3359		U8, U9, U22, U23, U3	1755411	SOP8-TI	TS5A3359	5