

Head-mounted EMG and EEG Preamplifier

(Alpha 1c, 2018)

Name	Value	Package	Description	Part Number
C1, C2	.033 uF	0805	Input LP filter (diff channel)	
C7, C8, C11, C12	.1 uF	0805	Input LP filter (common channels)	
C3, C5, C9, C10, C13, C14	.1 uF	0805	Supply bypass caps	
C4, C6	10 uF	0805	Supply bypass caps	
RG1, RG2, RG3	499	0805	Gain resistor	
R1-R6	1.5M	0805	LP filter resistor	
IC1-IC3		SOIC8	Instrumentation amplifier	AD8221

HP Filter

Capacitors should be low leakage e.g. film

EMG: 1.5M and .01 uF (10.6 Hz cutoff)

EEG: 1.5M and .22uF (.48 Hz cutoff)

Version History:

Alpha 1a (Fabbed 2018)

Alpha 1b (Fabbed 2018)

1. Enlarged holes for millmax connector
2. Realized there is an error. IC3 was not connected to V-