

Technical Datasheet

Graphenea Card

General Description

The Graphenea Card interfaces the graphene microdevice and the electrical equipment used for its readout. This card is a printed circuit board (PCB) with a socket into which insert a leadless chip carrier (LCC), connected to a series of switches that link to the input/output BNC connectors. These structures are duplicated, allowing for parallel or multiplexed testing. The PCB is fully compatible with the mGFET 4x4 series. The individual source switches allow to choose an individual channel or to combine multiple at the same time. The 3 safety global switches for source, drain and gate enable to electrically isolate the board to replace the mGFET after a measurement in a quick and safe manner.

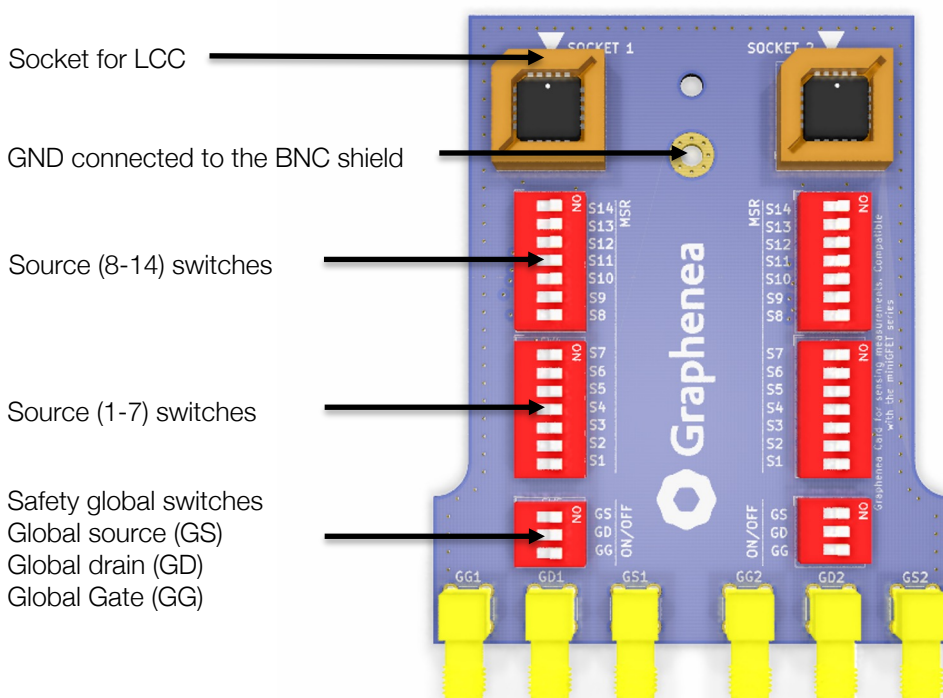
Features

- A reusable, intuitive interface, fully compatible with the mGFET 4x4 series.
- Choose to measure sequentially or multiple devices at once.
- Two sockets per board enable parallel or multiplexed testing.
- High-quality components for a reliable readout, even at low power.
- Coaxial miniBNC connectors for an easy link with the measurement equipment.

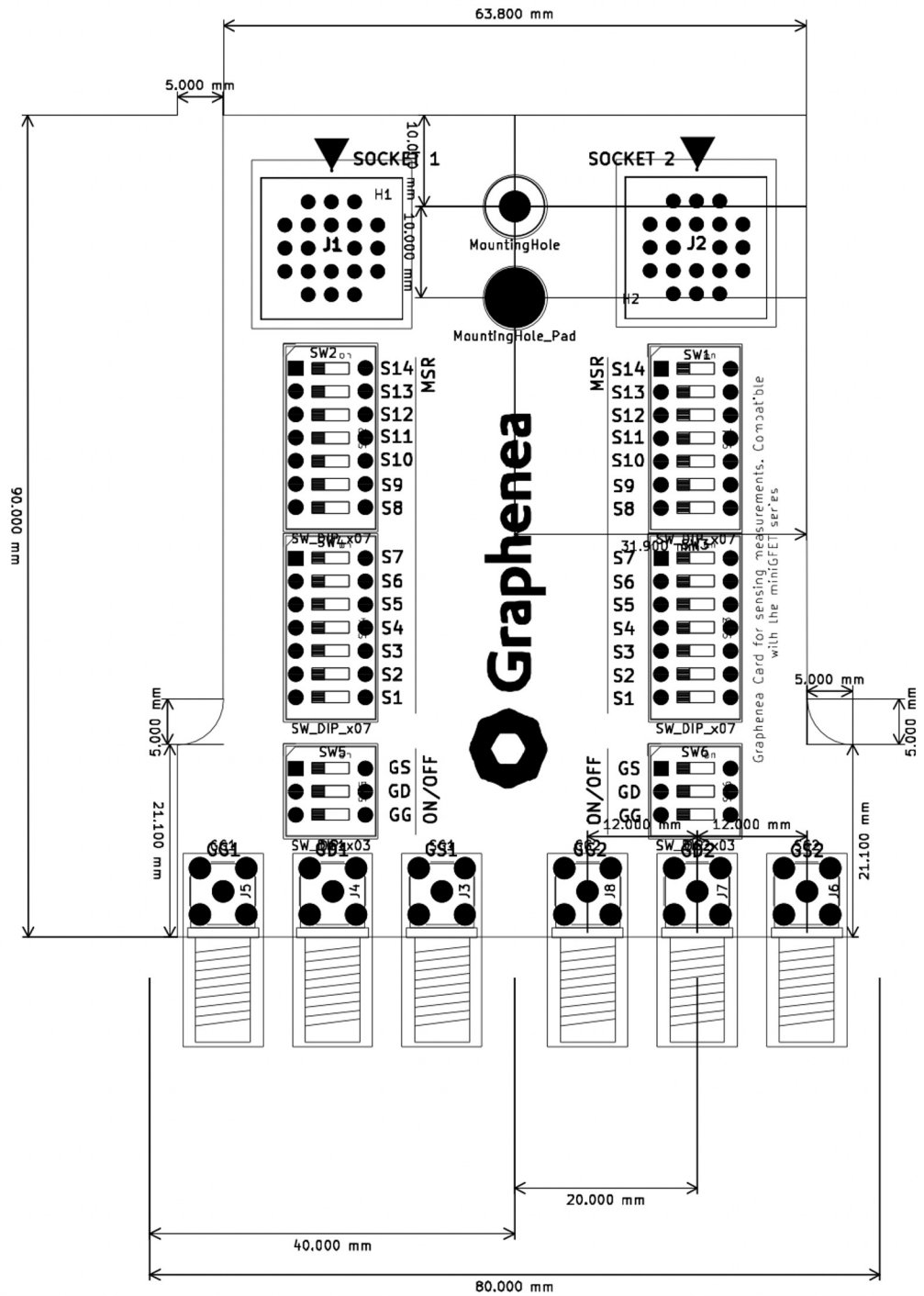
Applications

- Graphene device research
- Biosensors
- Chemical sensors
- Bioelectronics
- Pre-clinical tests
- Healthcare
- Industrial detectors

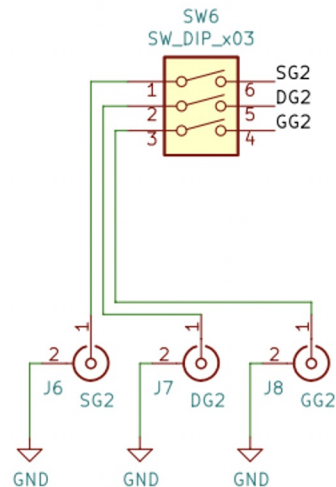
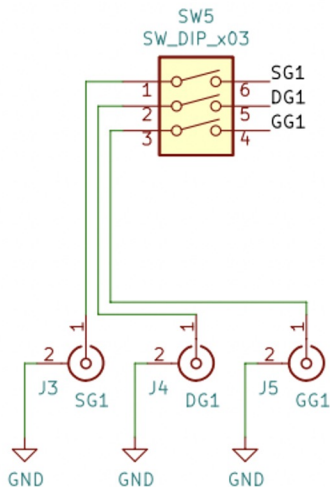
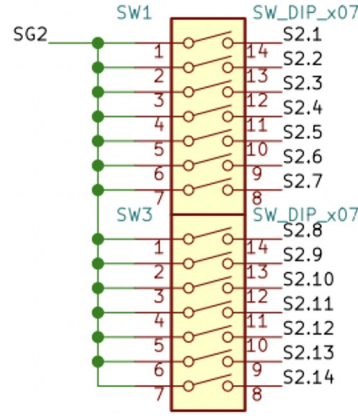
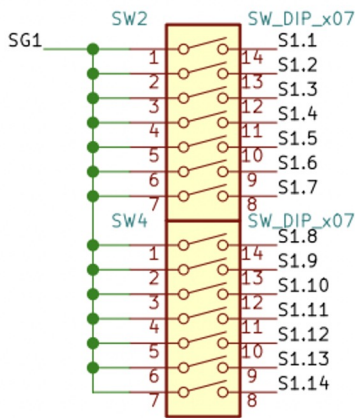
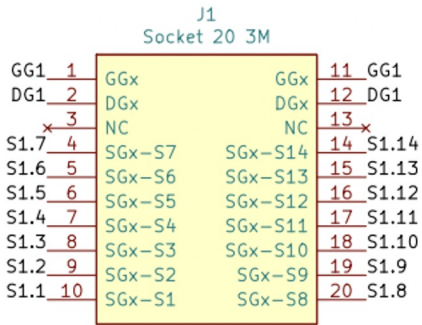
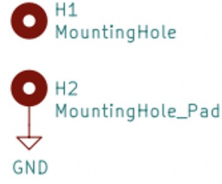
General Schematic



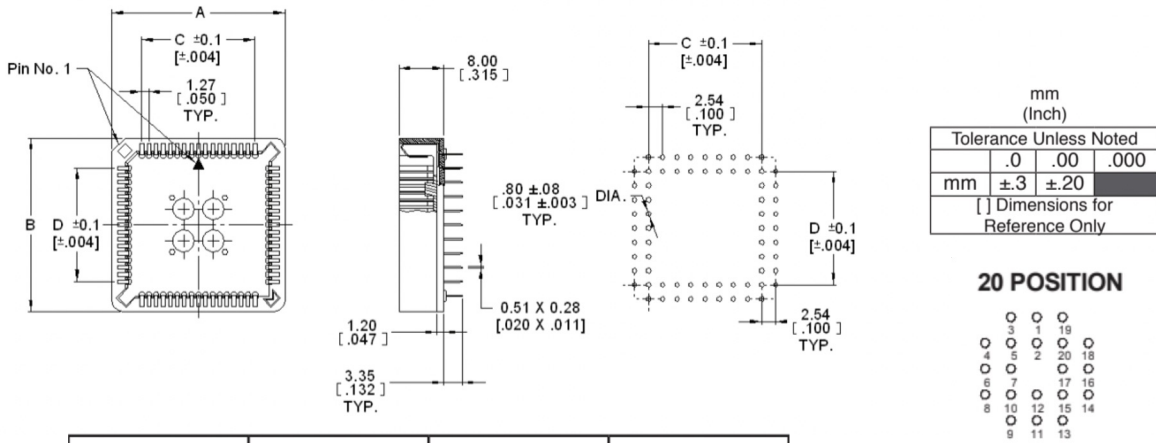
Dimensions



Electrical Layout



Socket Specifications



A	B	C	D
15.50 [0.611]	15.50 [0.611]	5.08 [0.200]	5.08 [0.200]

Model	3M 8420-11B1-RK-T
Standard	JEDEC MO-047
Socket material	Glass filled polyester
Contact material	Copper alloy + Ni plating (50 µm)
Contact resistance	15 mΩ
Insulation resistance	>1000 MΩ
Capacitance	<1pF @1MHz
Temperature rating	-40 to 105 °C

How to insert the mGFET into the Graphene Card

