Statement of Work for the acquisition of 20 research grade Gallium Nitride ampplifiers capable of operating at 800 °C in air for a minimum of 1 hour

20 GaN amplifiers, each shall have the following performance characteristics:

- Transistor minimum On/Off ratio of 500 at 800 C, but higher numbers would be preferred.
- The amplifier chip size shall not exceed 2.5 mm x 2.5 mm in area.
- The amplifiers pin layouts and pin counts shall be such that the input ports are diagonally opposite, from bottom right to top left; The amplifier output port shall be placed top right above the input port.
- Unity gain bandwidth of 0.5 MHz at 800 °C in air.
- Extraction of CMMR (Common Mode Rejection Ratio) value suggested but not required.
- Minimum gain of 20 dB at 800 °C in air while higher gains are preferred.
- Vdd-Vss rail-rail voltage of 15 V or less.
- In-situ electrical testing of 3 representative amplifiers, from the same batch that is delivered, at 800 °C for minimum of 1 hour in N_2, with longer duration preferred.
- Ex-situ electrical testing of 3 representative amplifiers, from the same batch that is delivered, before and after aging at 800 °C in air for 1 hour.

Testing documents to be delivered:

- Room temperature to 800 °C electrical testing of 3 representative amplifiers from the same batch as the 20 amplifiers to be delivered.
- Room temperature electrical testing of the 20 amplifiers to be delivered.
- A customer's dummy silicon carbide pressure sensor chip from shall be tested with each of the 20 to be delivered.
- Sensor output load between 500 and 1500 ohms.

Delivery Date

Delivery shall be not later than 6 months upon receipt of purchase order.