

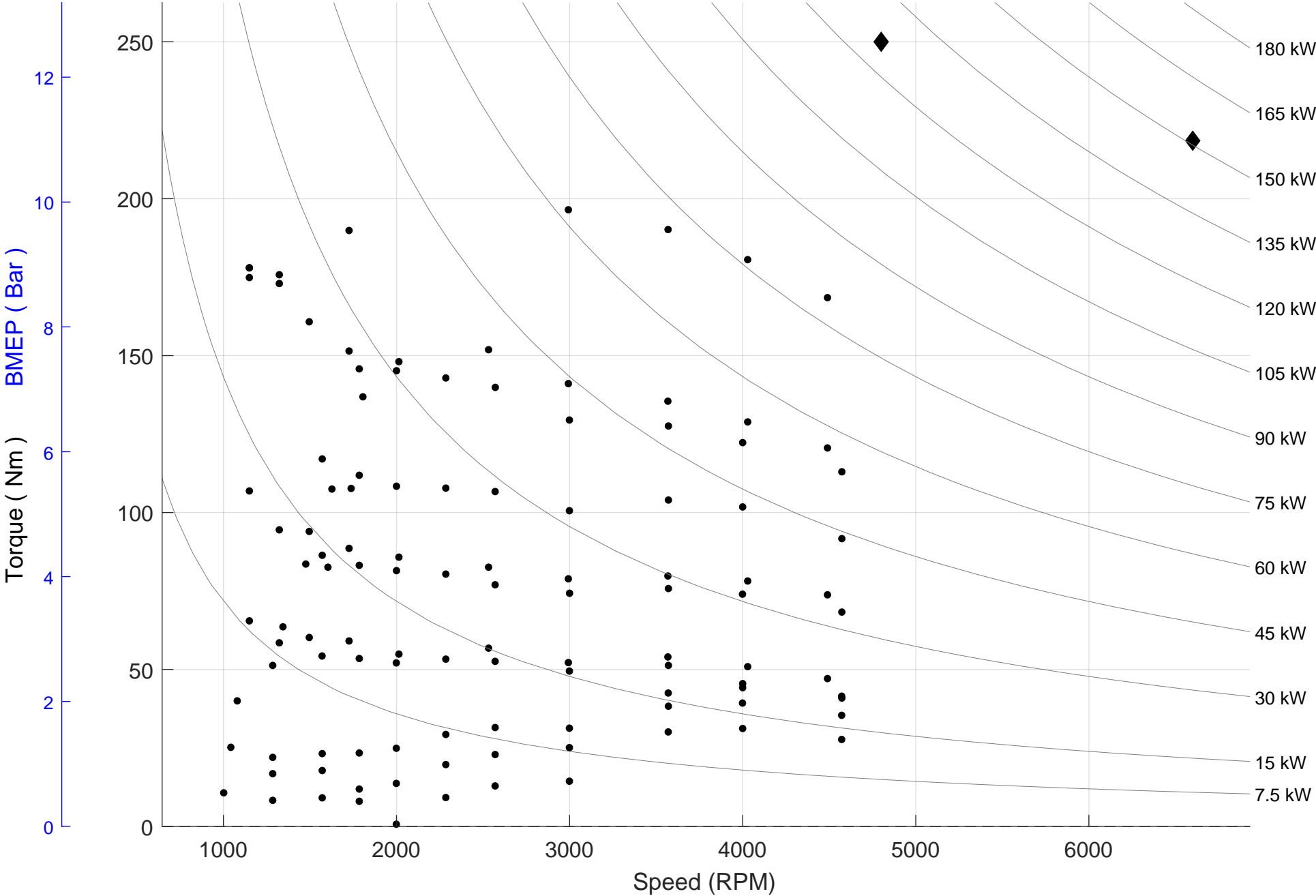
2018 Toyota 2.5L A25A-FKS EGR Measurements - Test Data Plots

SUGGESTED CITATION: 2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Package. Version 2020-07. Ann Arbor, MI: US EPA, National Vehicle and Fuel Emissions Laboratory, National Center for Advanced Technology, 2020.

- ◆ Black diamonds indicate rated torque & power points advertised by the manufacturer
- Black dots indicate speed/load points at which steady state data was acquired
- ✗ Red Xs indicate speed/load points where data was not collected or did not meet quality standards

Note: In these contour plots, individual data points may be ignored or removed, using our best engineering judgment, to correct irregularities in the visual presentation of the contour lines; additional details are contained in the test report.

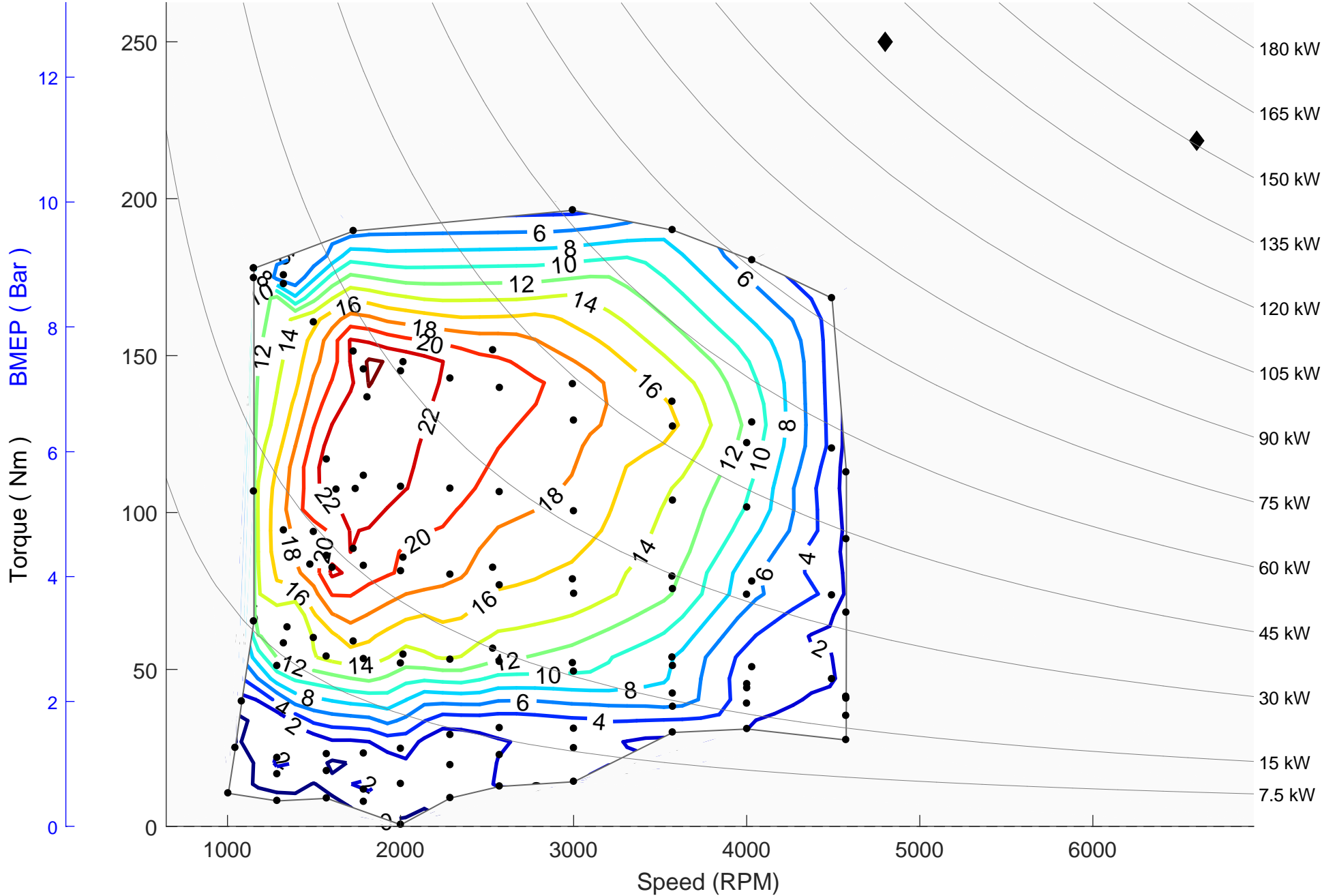
2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots
Test Data Points



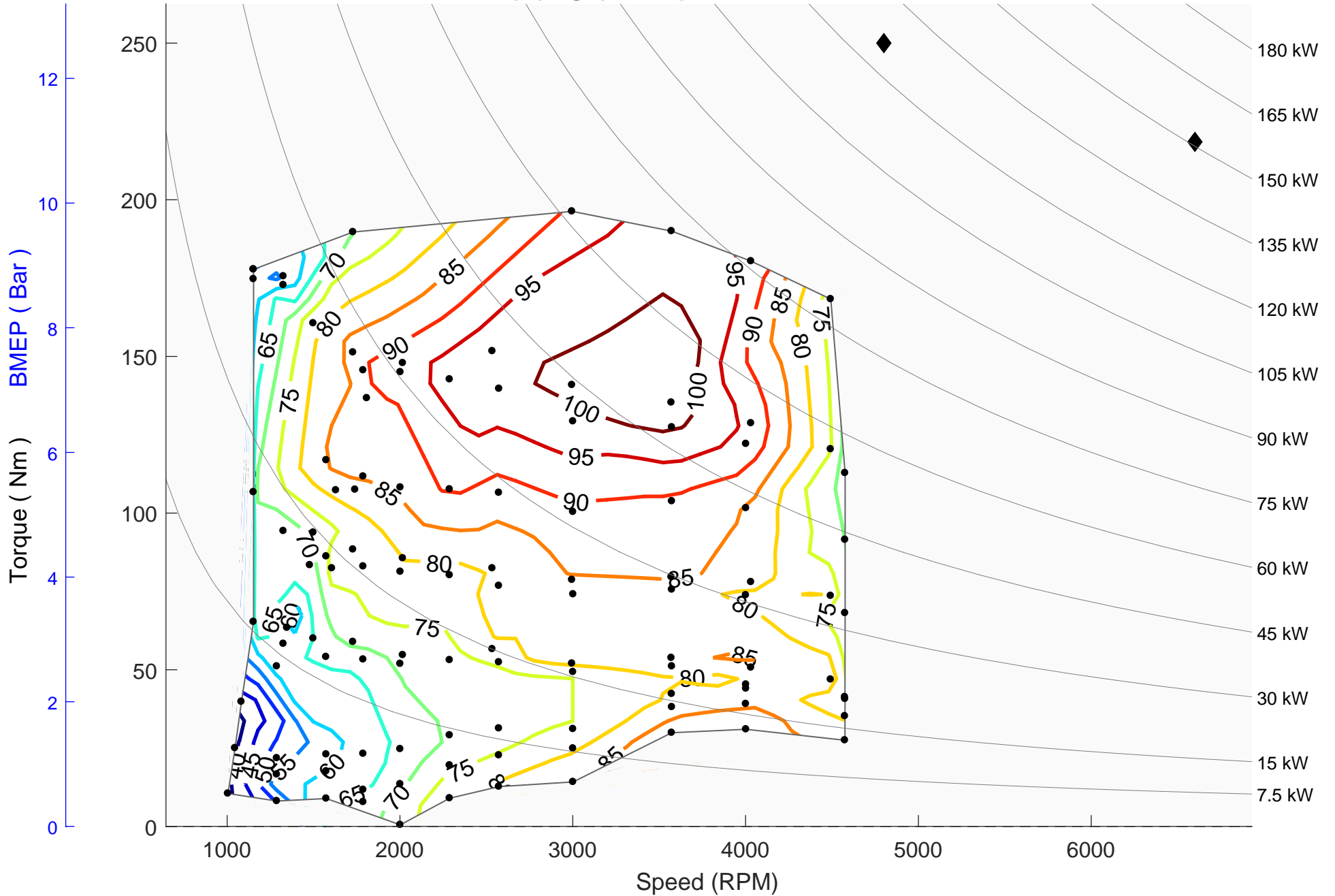
2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots

Steady State

Percent EGR Volume (%) - Calculated % EGR



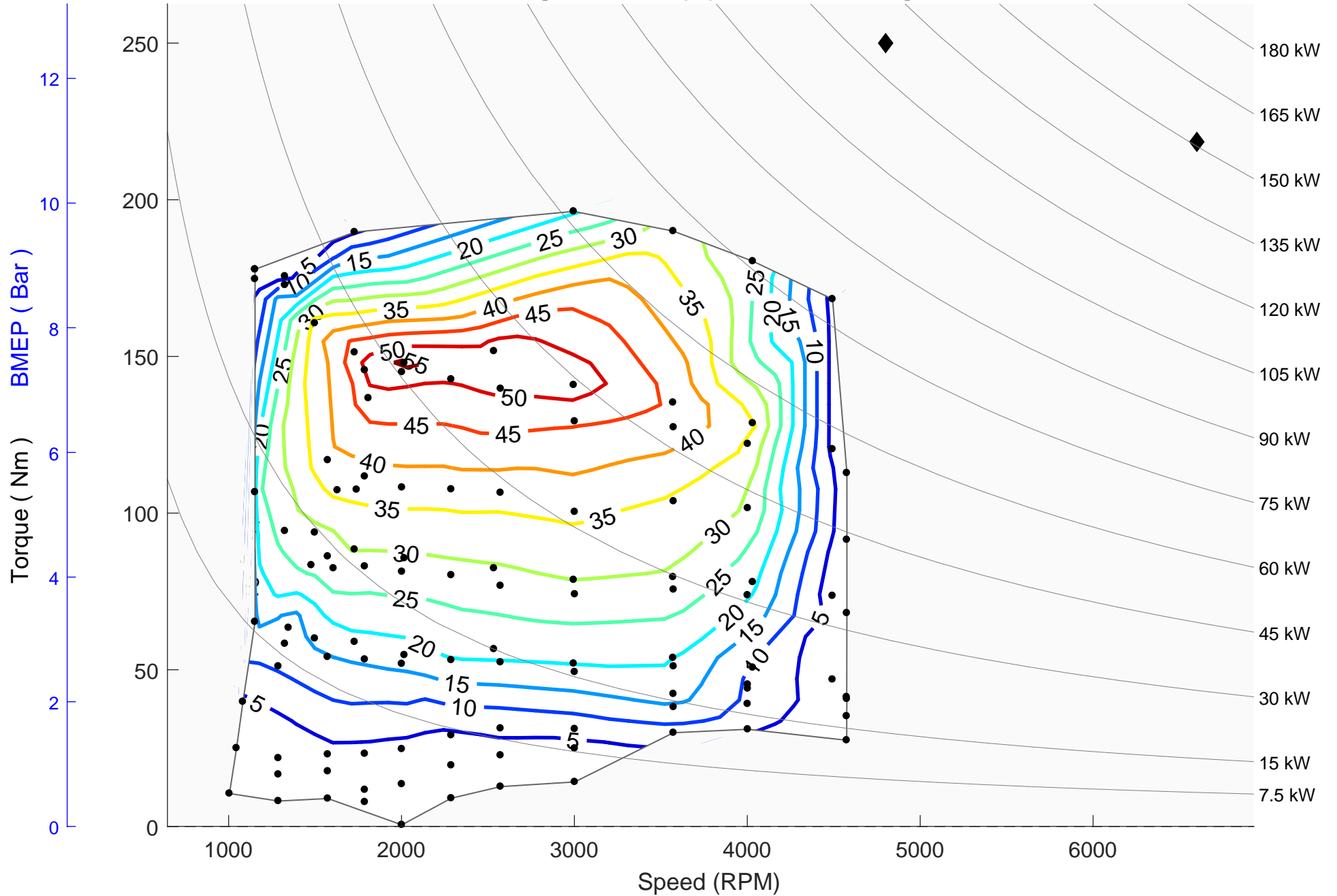
2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots
Steady State
EGR Flowmeter Temp (degC) - Temperature Measured at Flow Meter Outlet



2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots

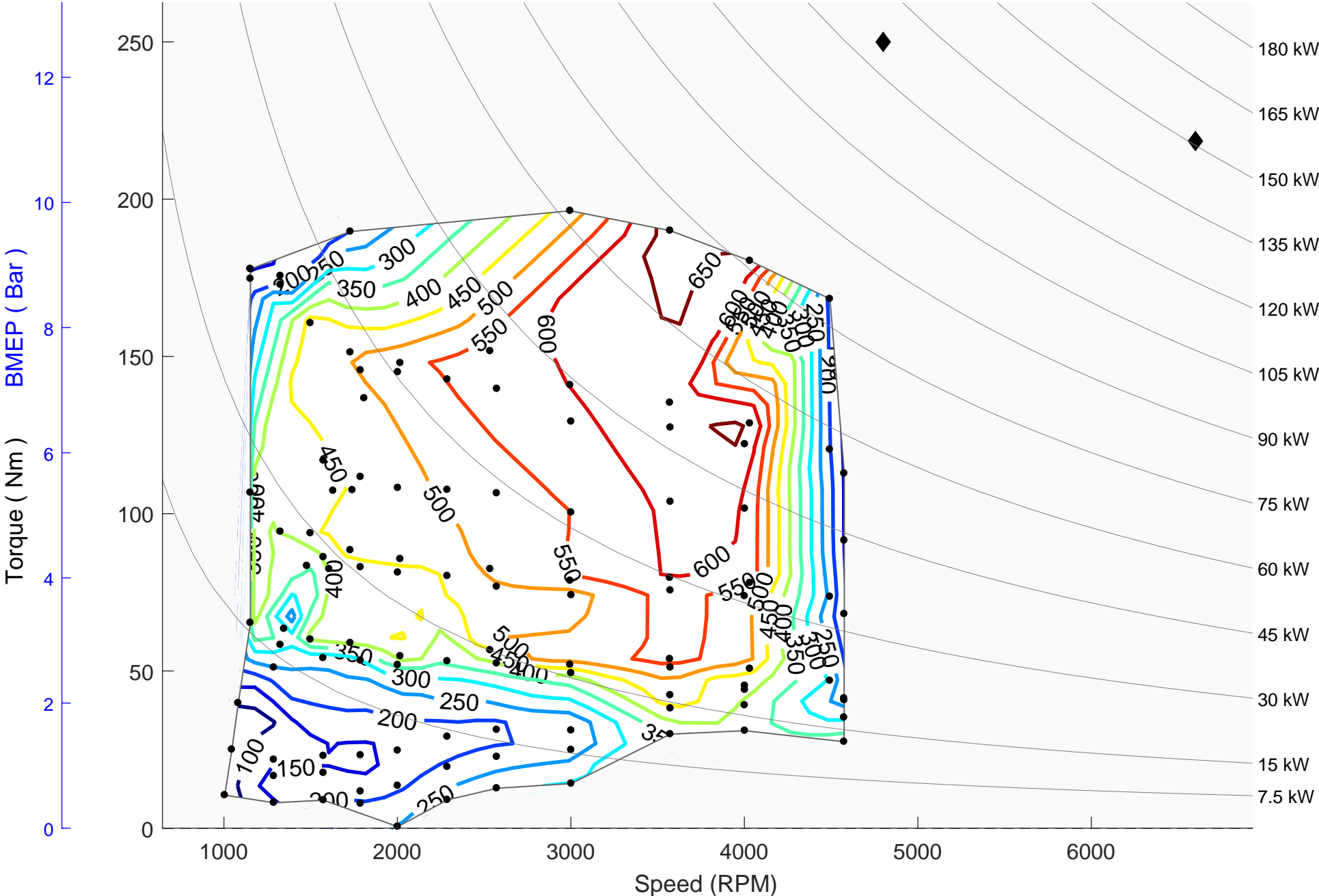
Steady State

EGR Valve Target Position (%) - EGR Valve Target Position



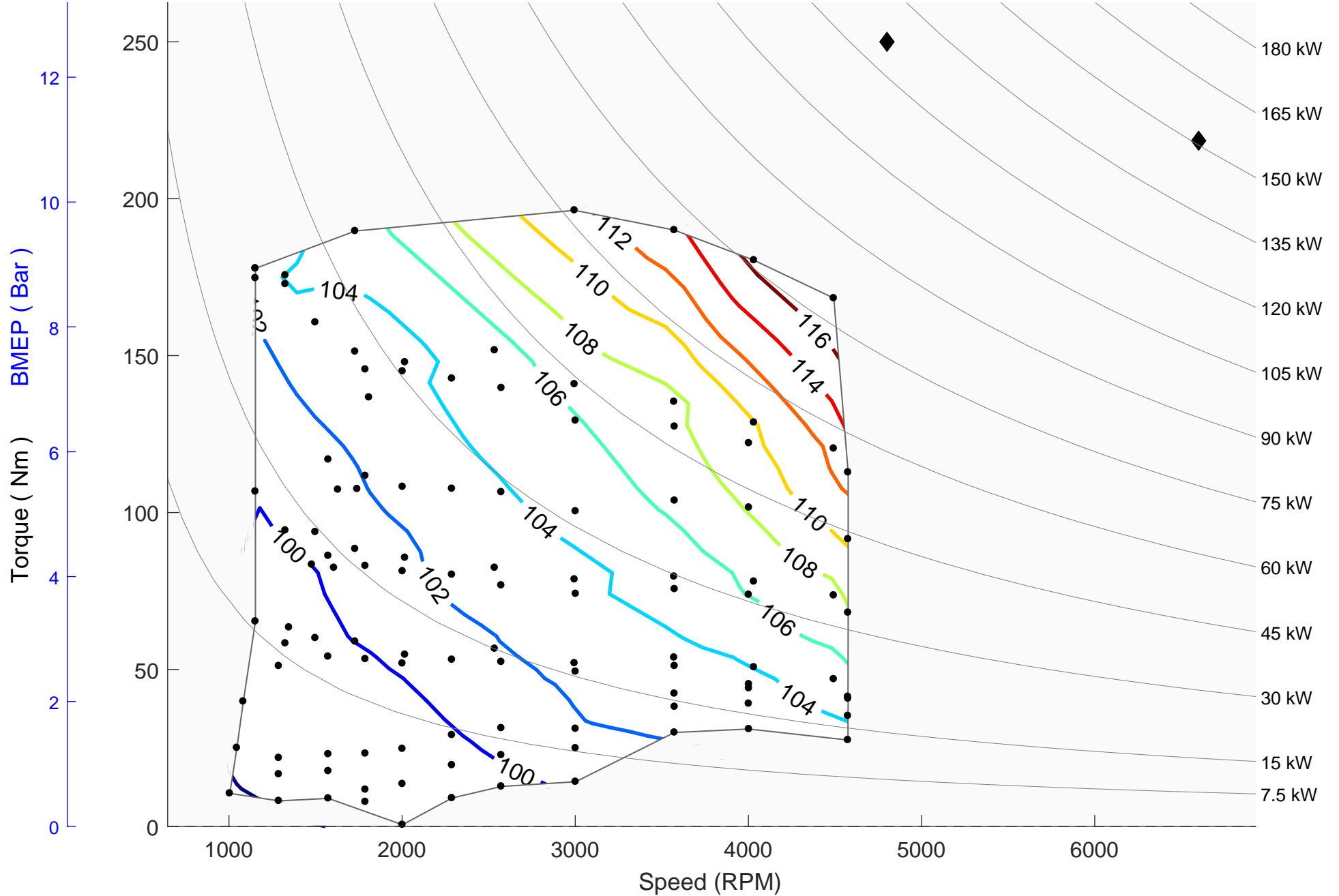
2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots
Steady State

EGR Inlet Temp (degC) - Temperature Measured in Exhaust Manifold EGR Port



2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots
Steady State

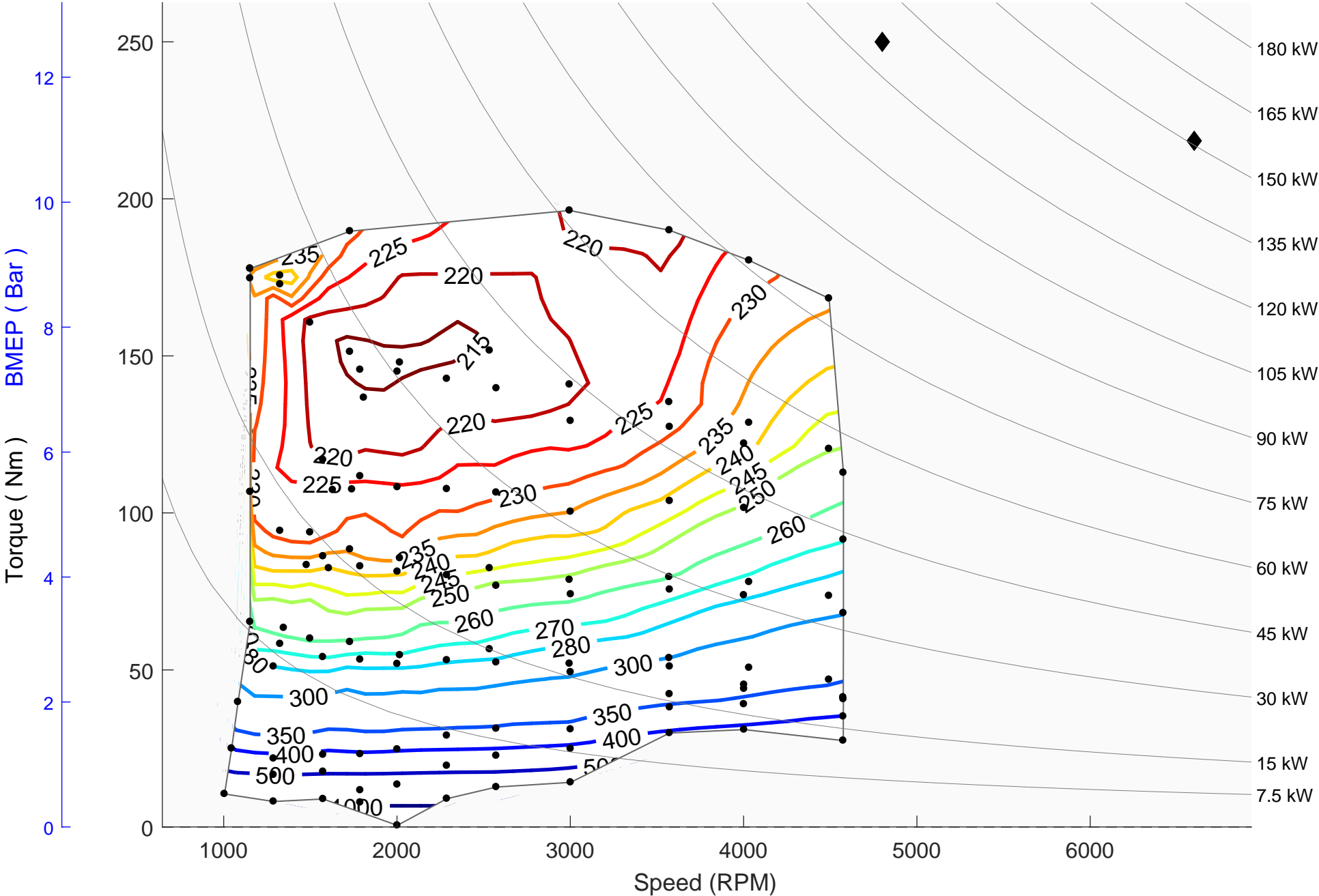
EGR Inlet Press (kPaA) - Pressure Measured in Exhaust Manifold EGR Port



2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots

Steady State

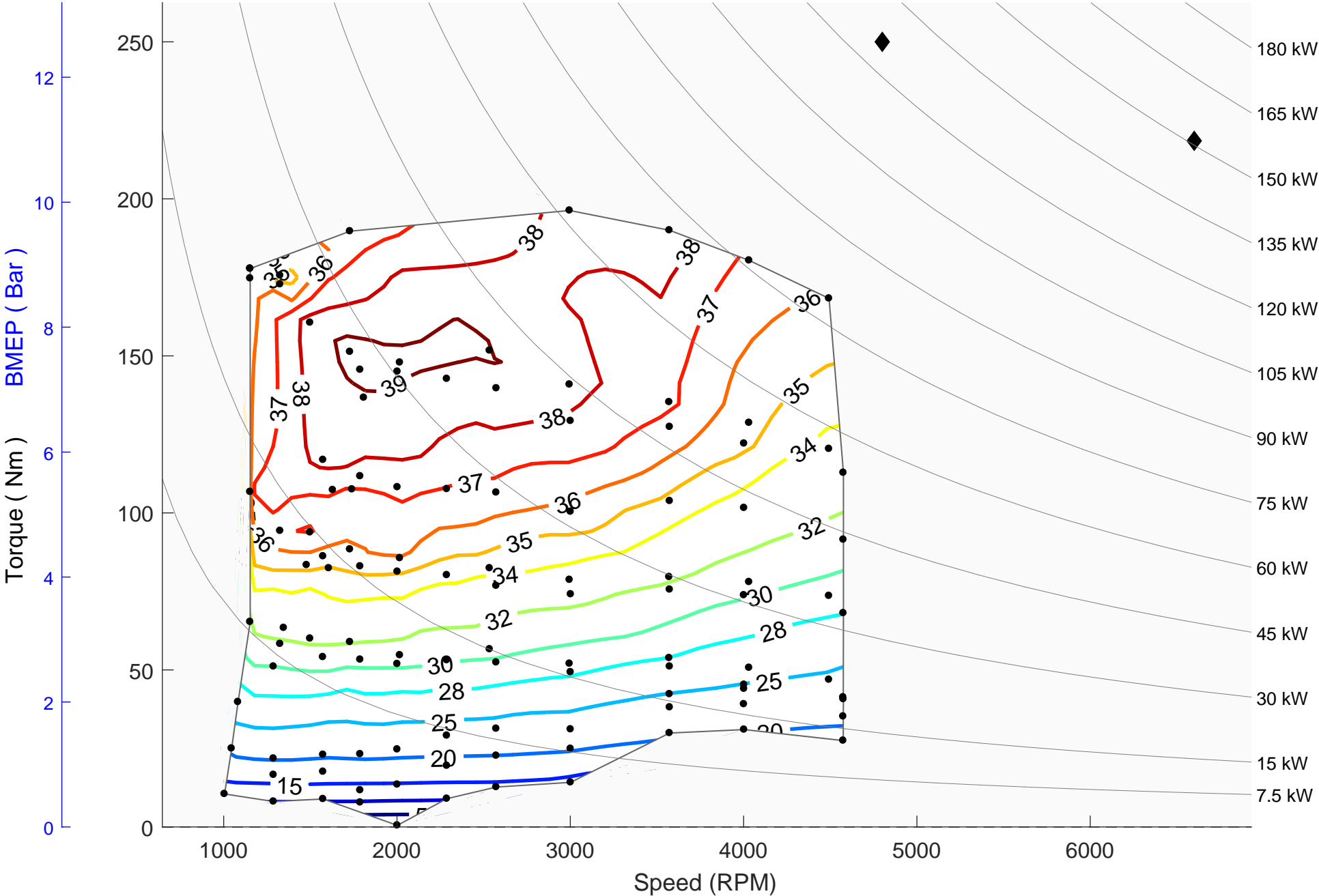
BSFC (g/kW-hr) - Brake Specific Fuel Consumption



2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots

Steady State

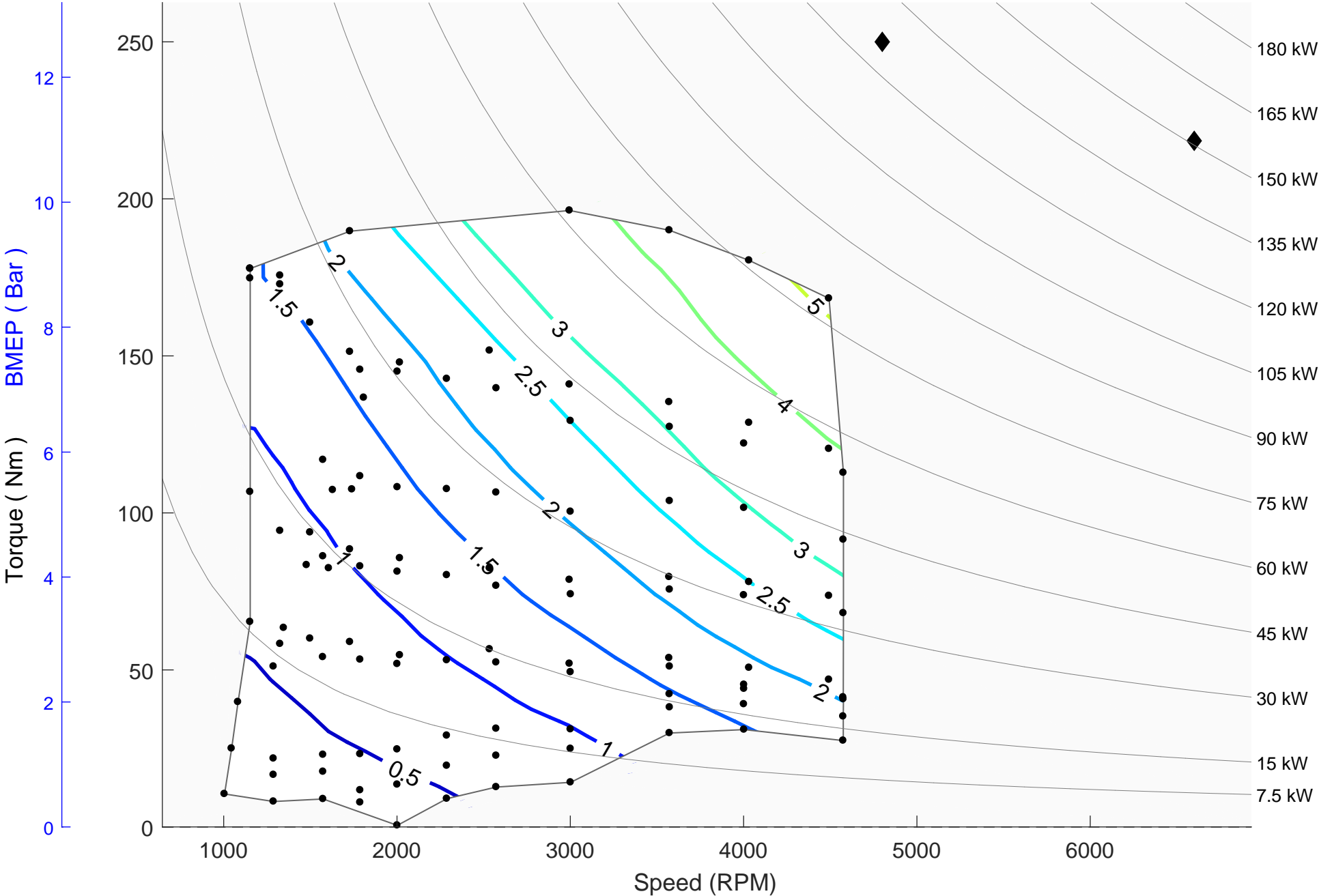
BTE (%) - Brake Thermal Efficiency



2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots

Steady State

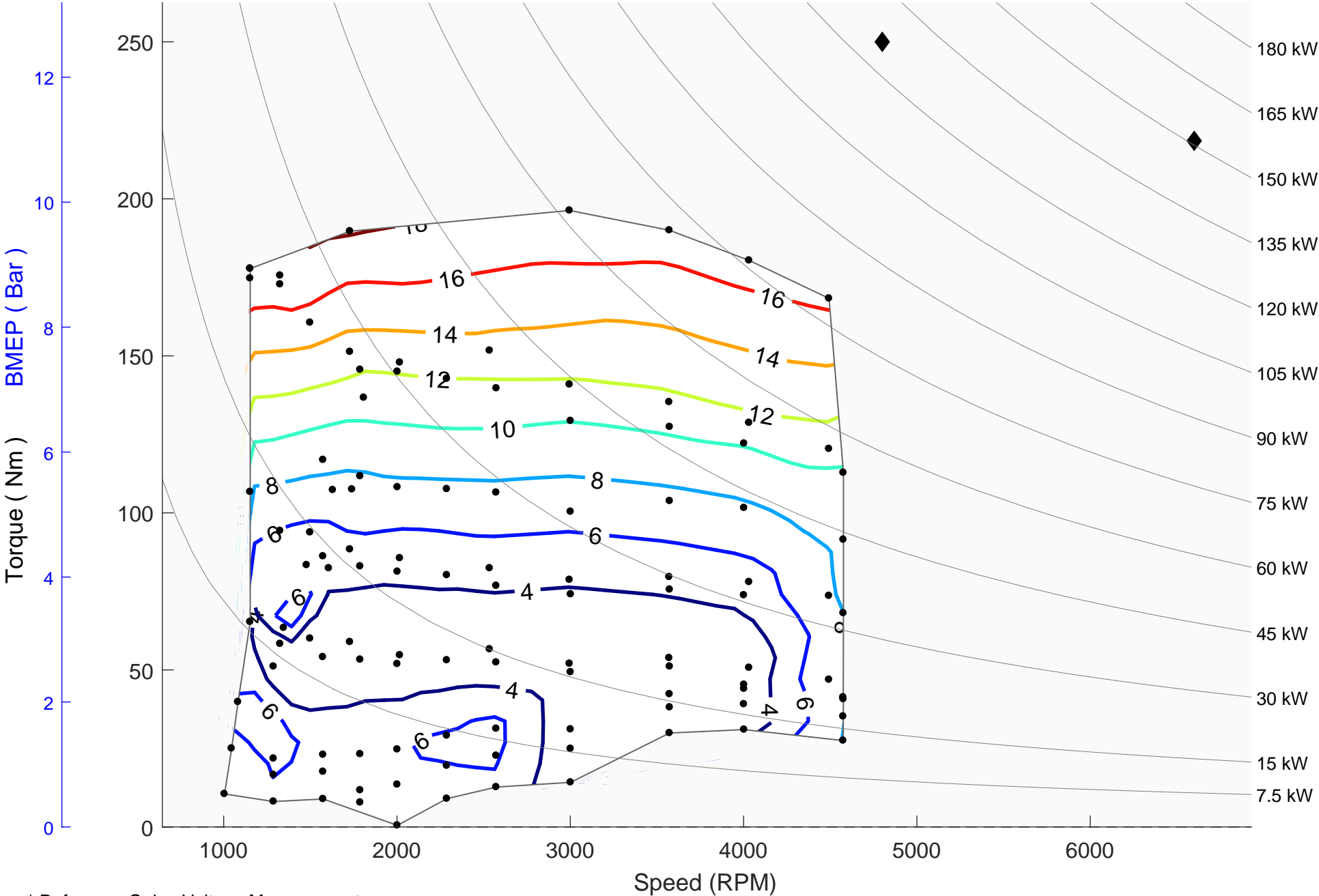
Fuel Meter Flow (g/s) - Fuel Flow Measured with Flow Meter



2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots

Steady State

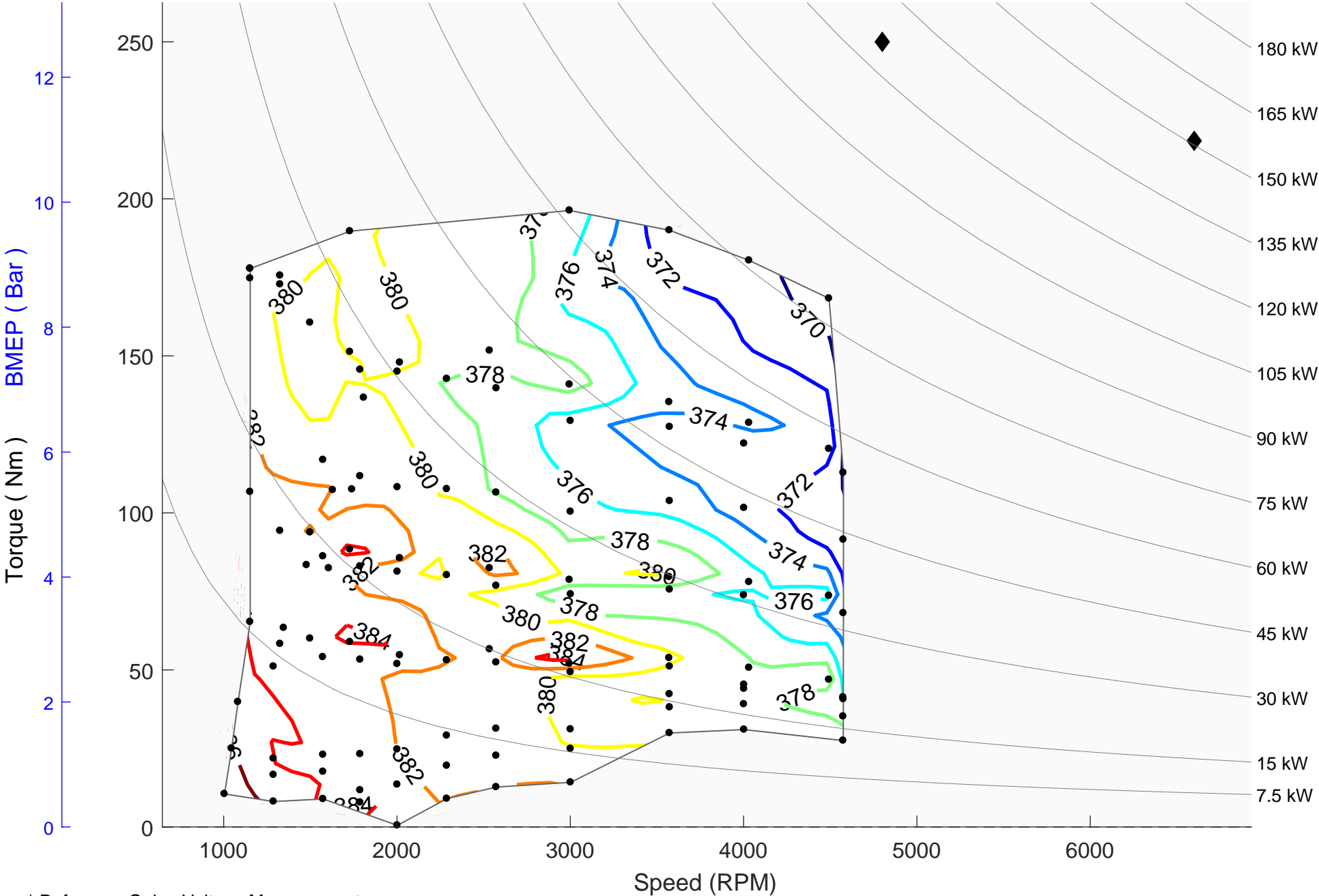
GDI Fuel Rail Press (MPaG) - Fuel Rail Pressure*



2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots

Steady State

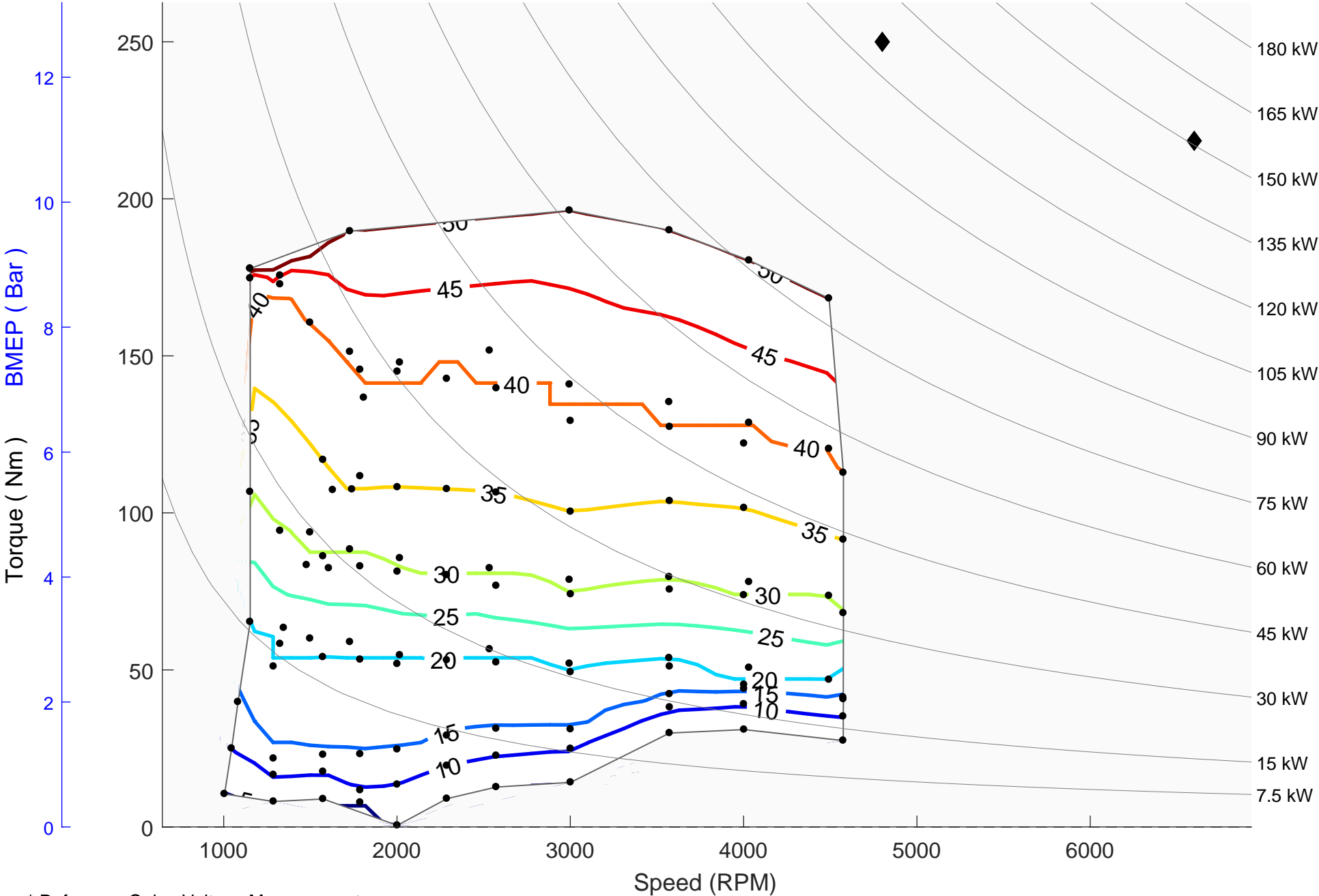
PFI Fuel Rail Press (kPaG) - Fuel Rail Pressure*



2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots

Steady State

Accelerator Pedal (%) - Accelerator Pedal Position*

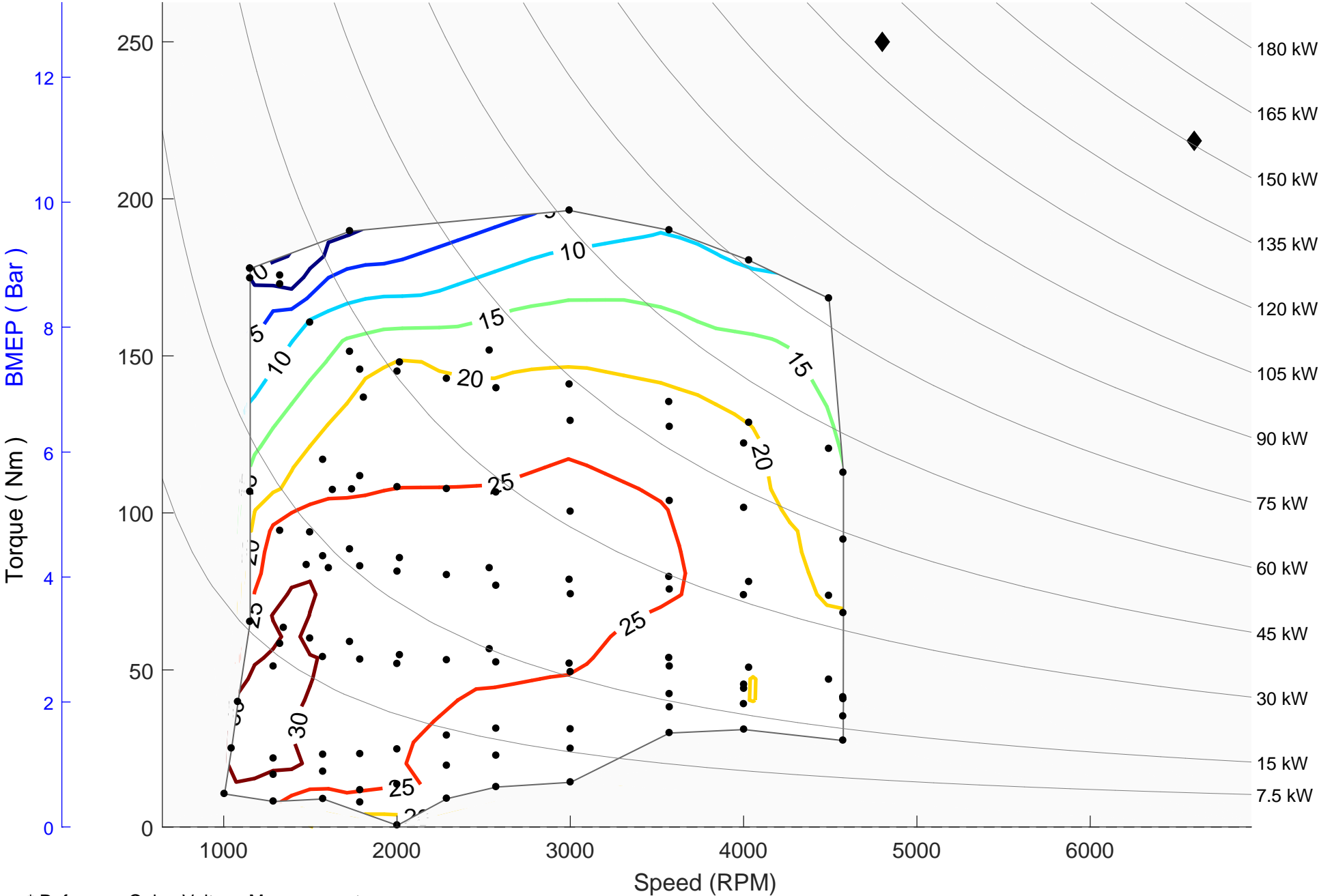


* Reference Only - Voltage Measurement

2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots

Steady State

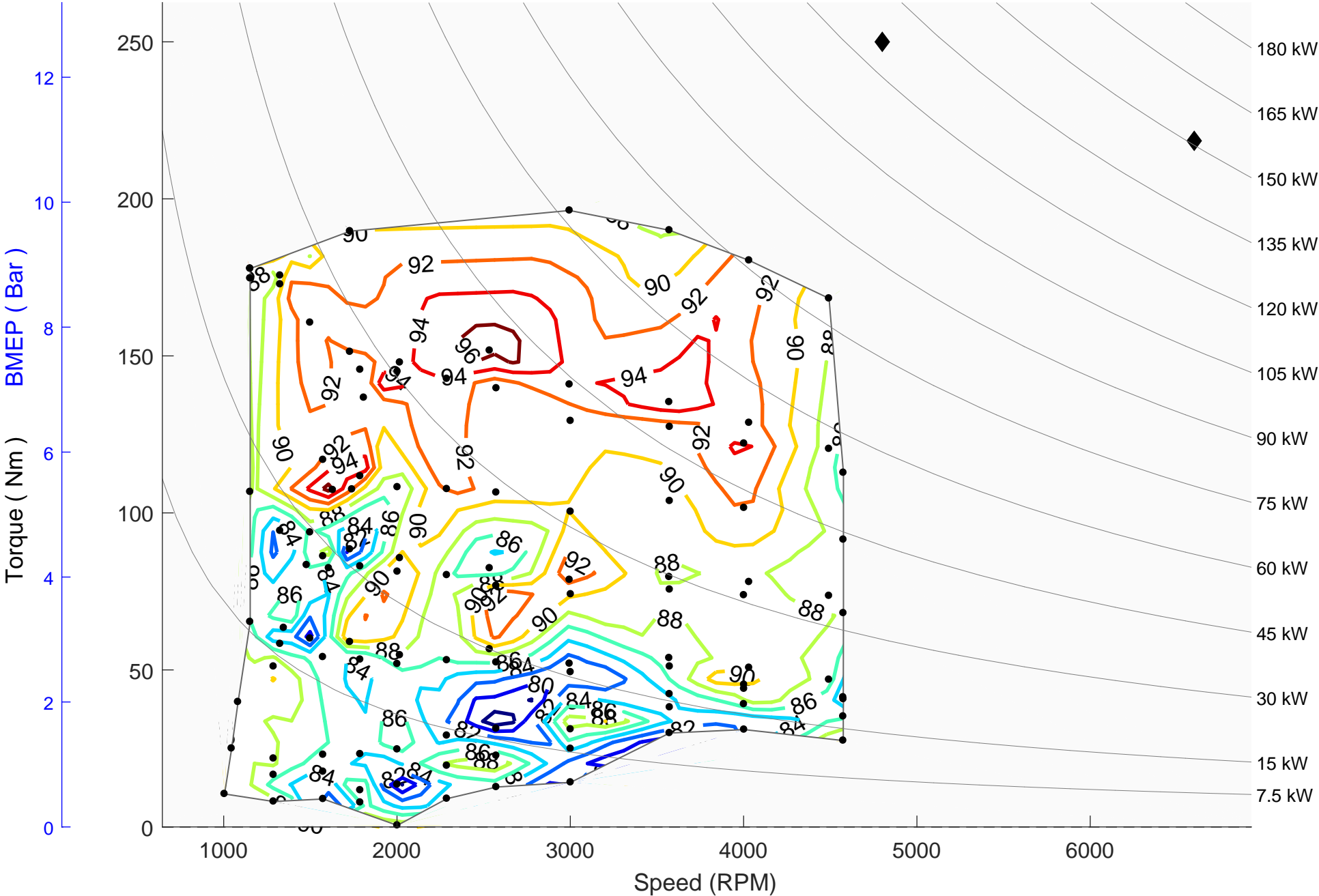
Spark Timing (CAD BTDC) - Average Spark Timing Across all Cylinders*



2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots

Steady State

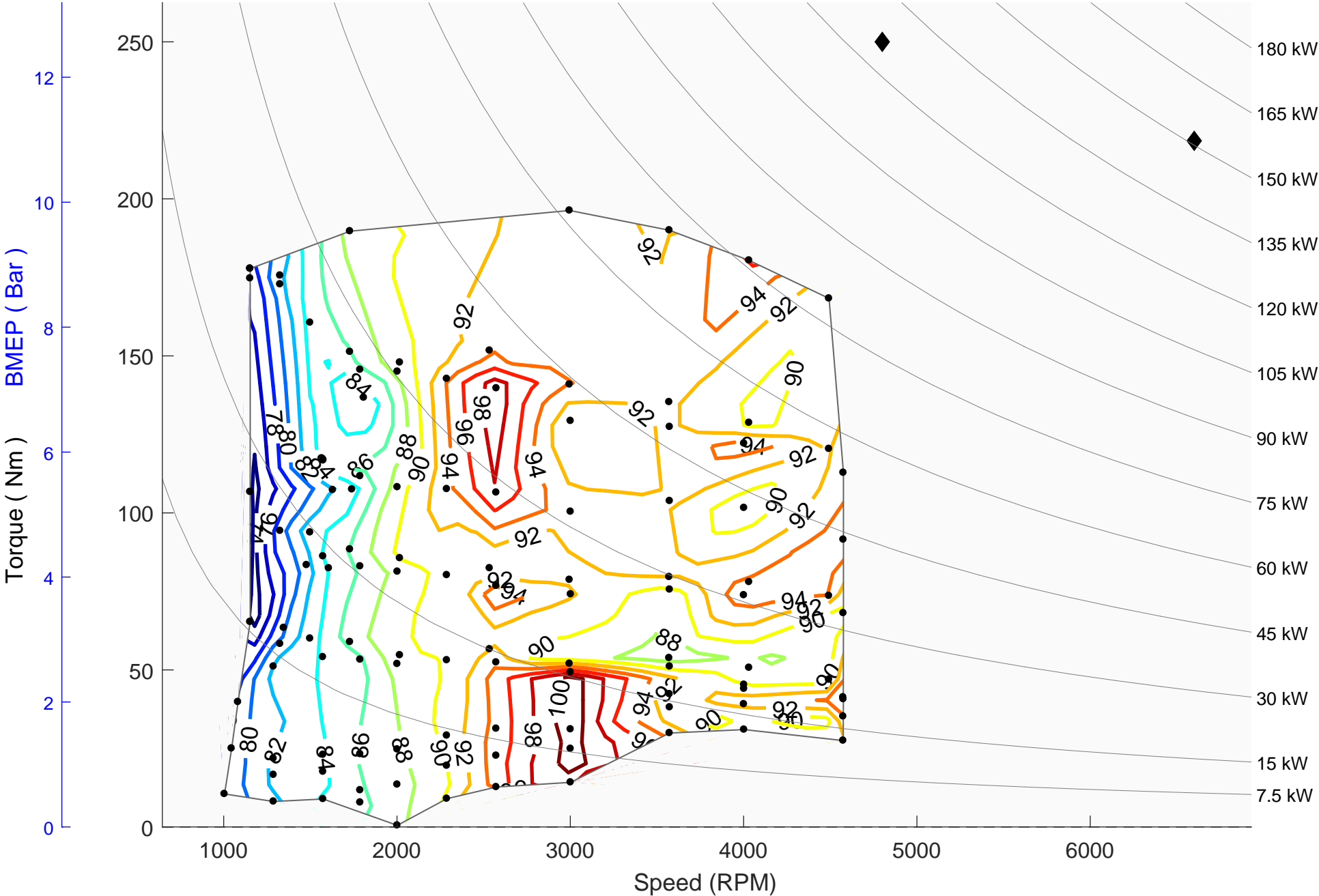
Coolant Temp (degC) - Coolant Temperature



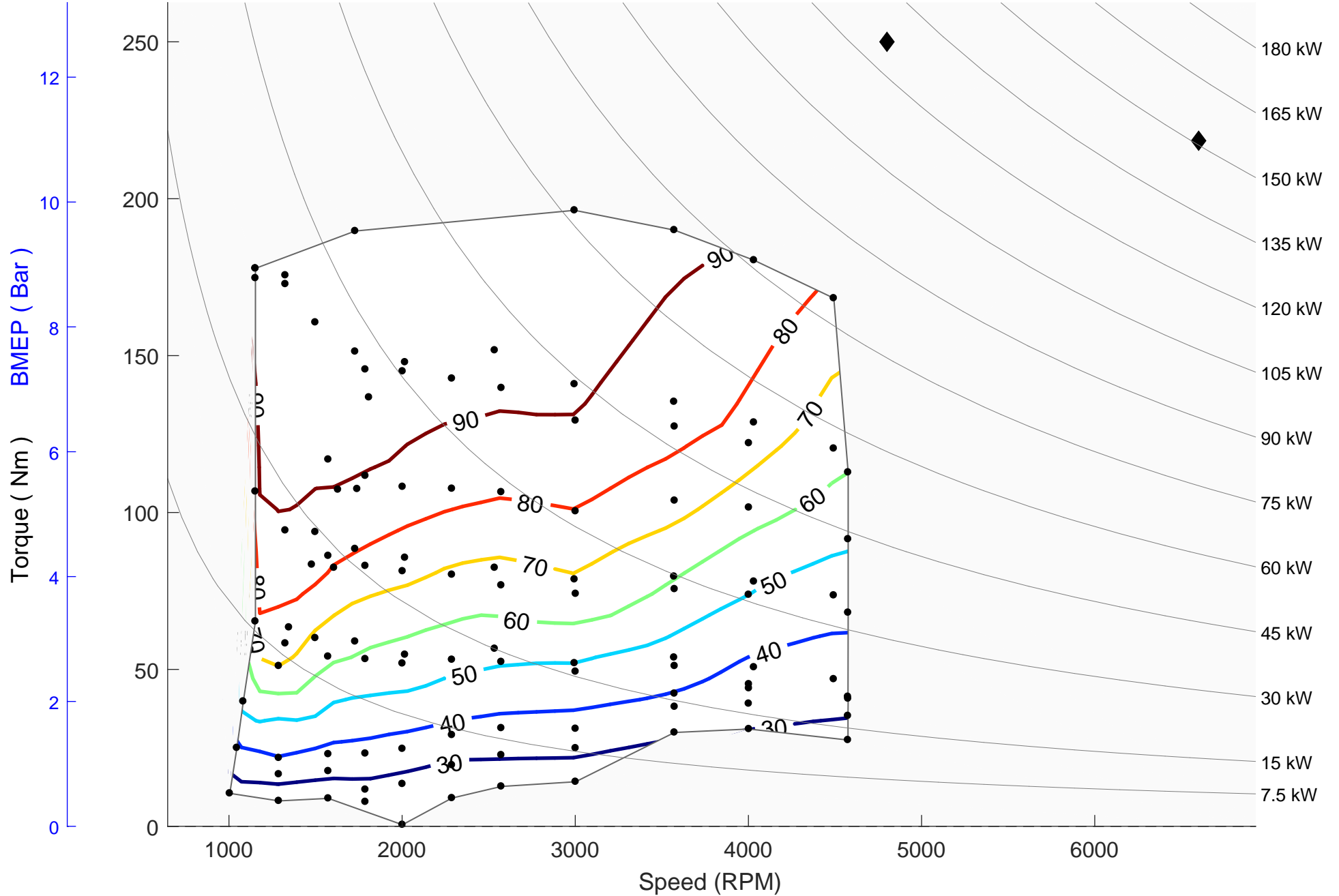
2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots

Steady State

Oil Sump Temp (degC) - Oil Temperature



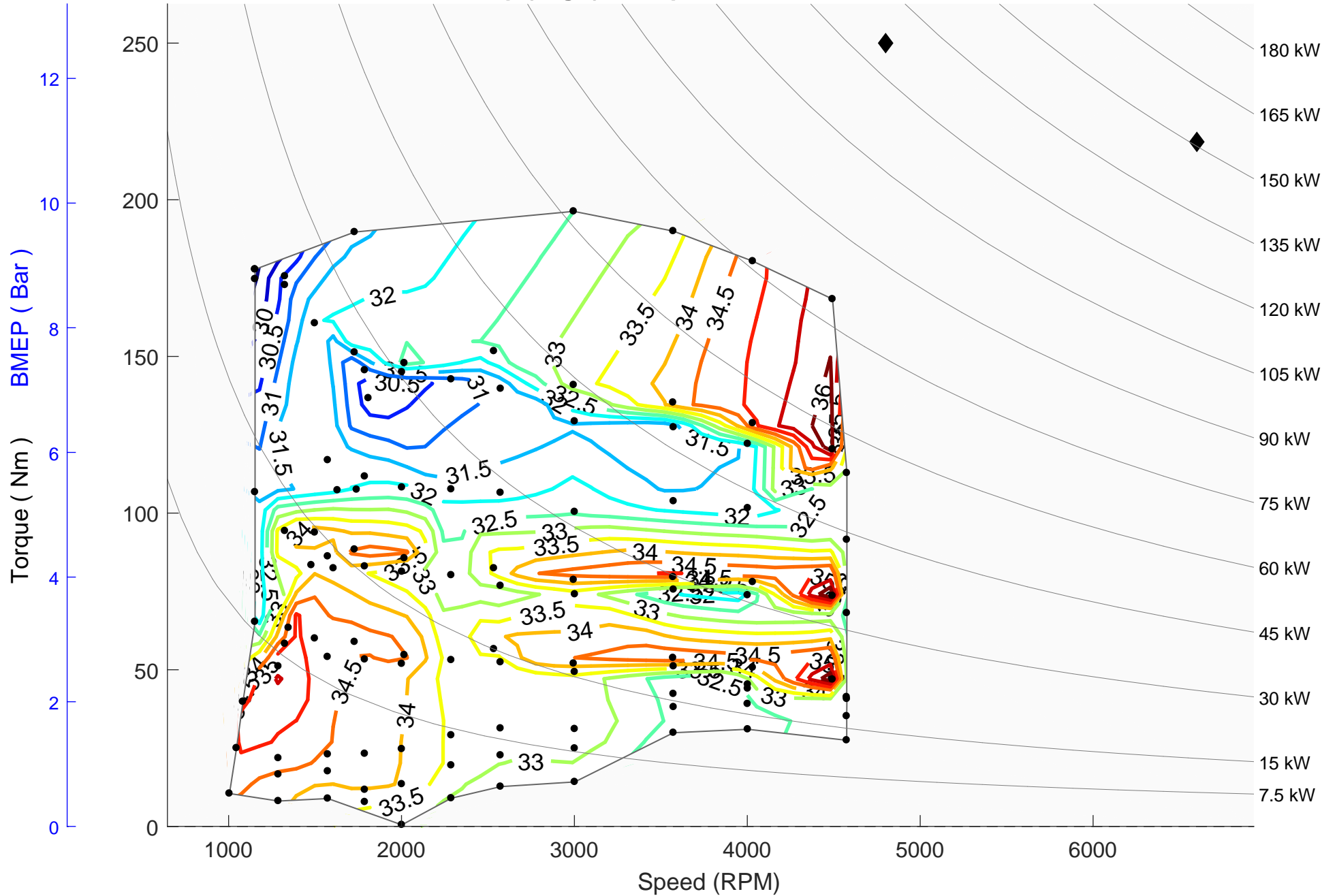
2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots
Steady State
Intake Manifold Press (kPaA) - Pressure Measured in the Intake Manifold



2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots

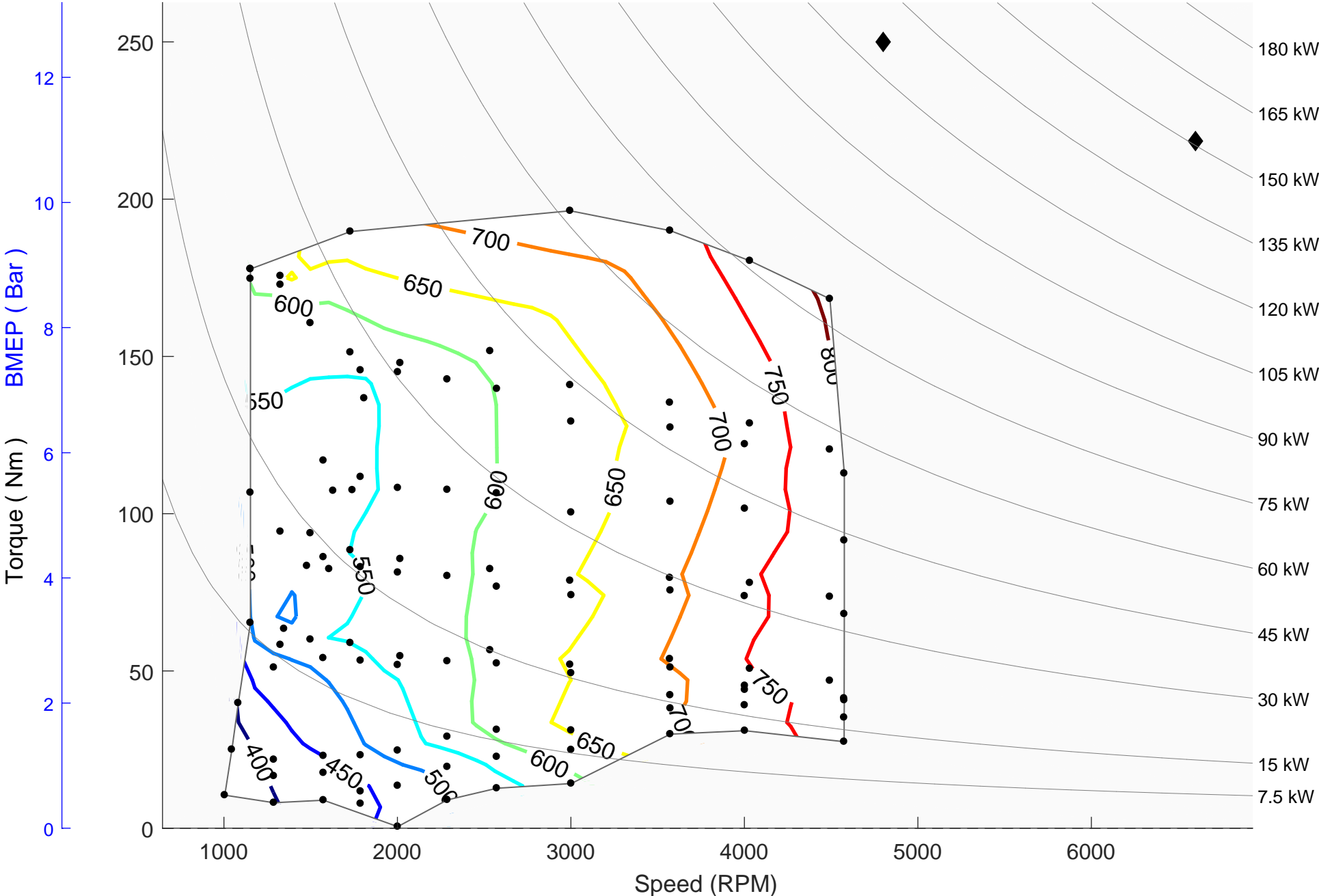
Steady State

Intake Manifold Temp (degC) - Temperature Measured in the Intake Manifold

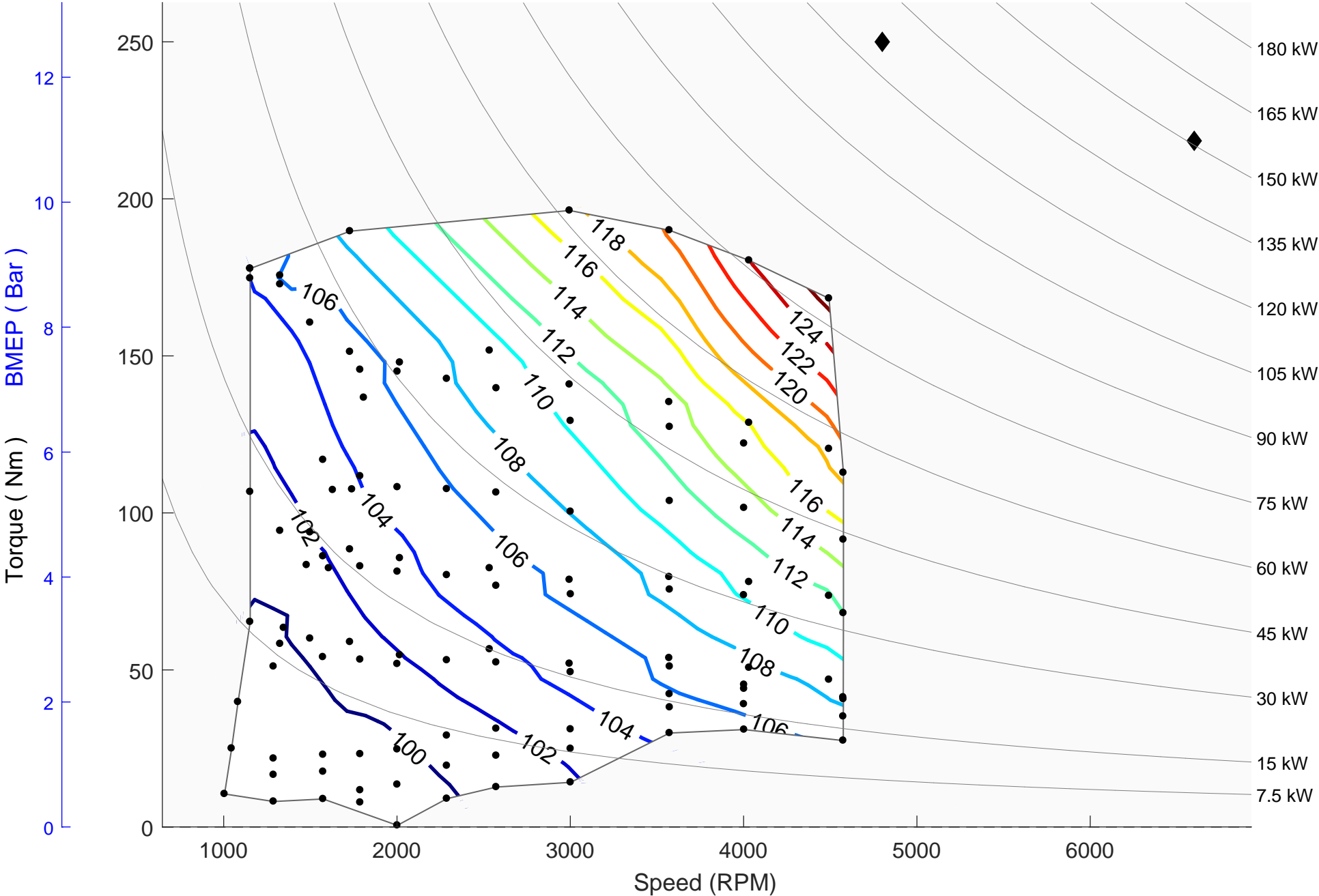


2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots
Steady State

Exhaust Port Temp (degC) - Temperature Measured in Exhaust Manifold Port



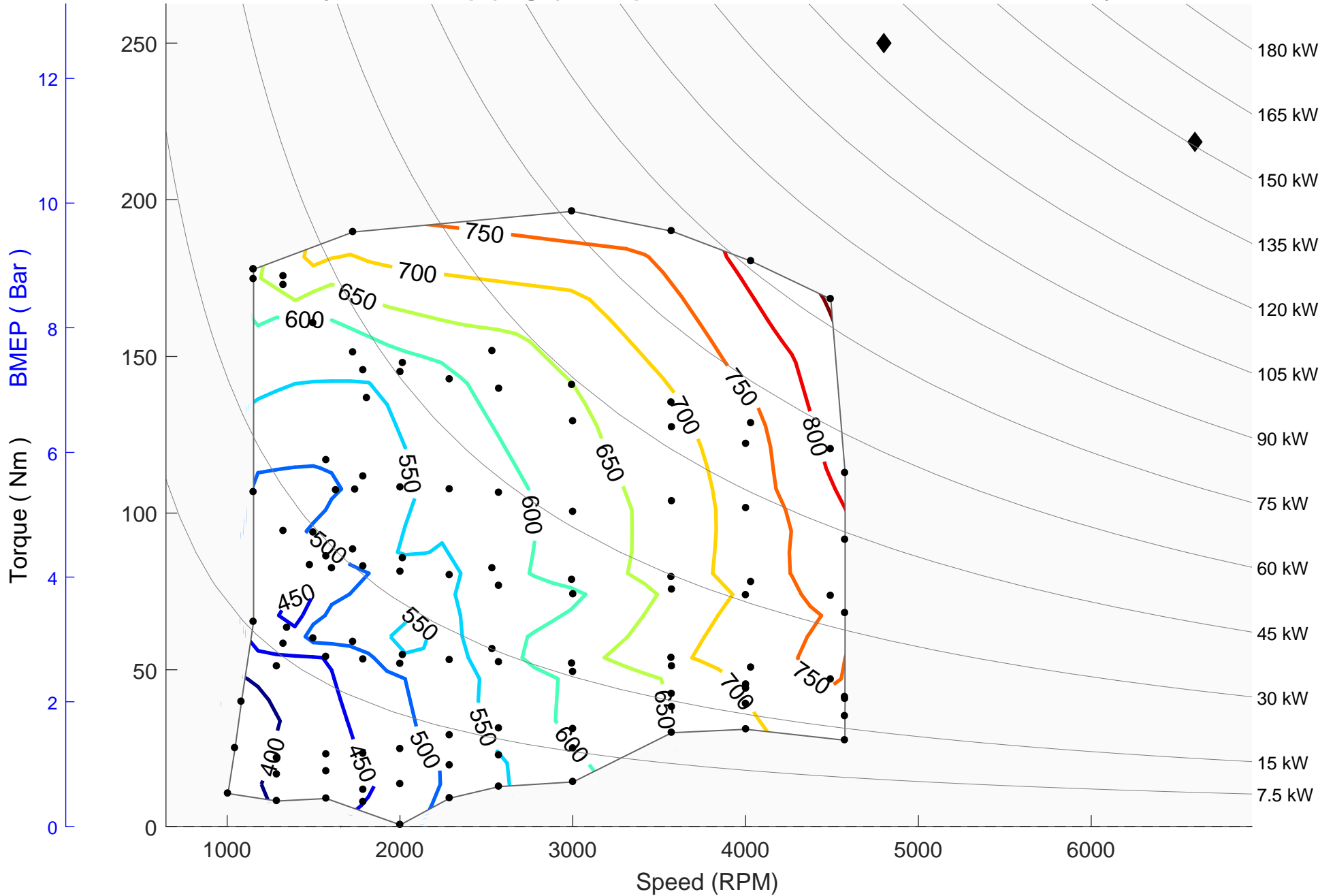
2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots
Steady State
Catalyst Inlet Press (kPaA) - Pressure Measured at the Inlet to the Catalyst



2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots

Steady State

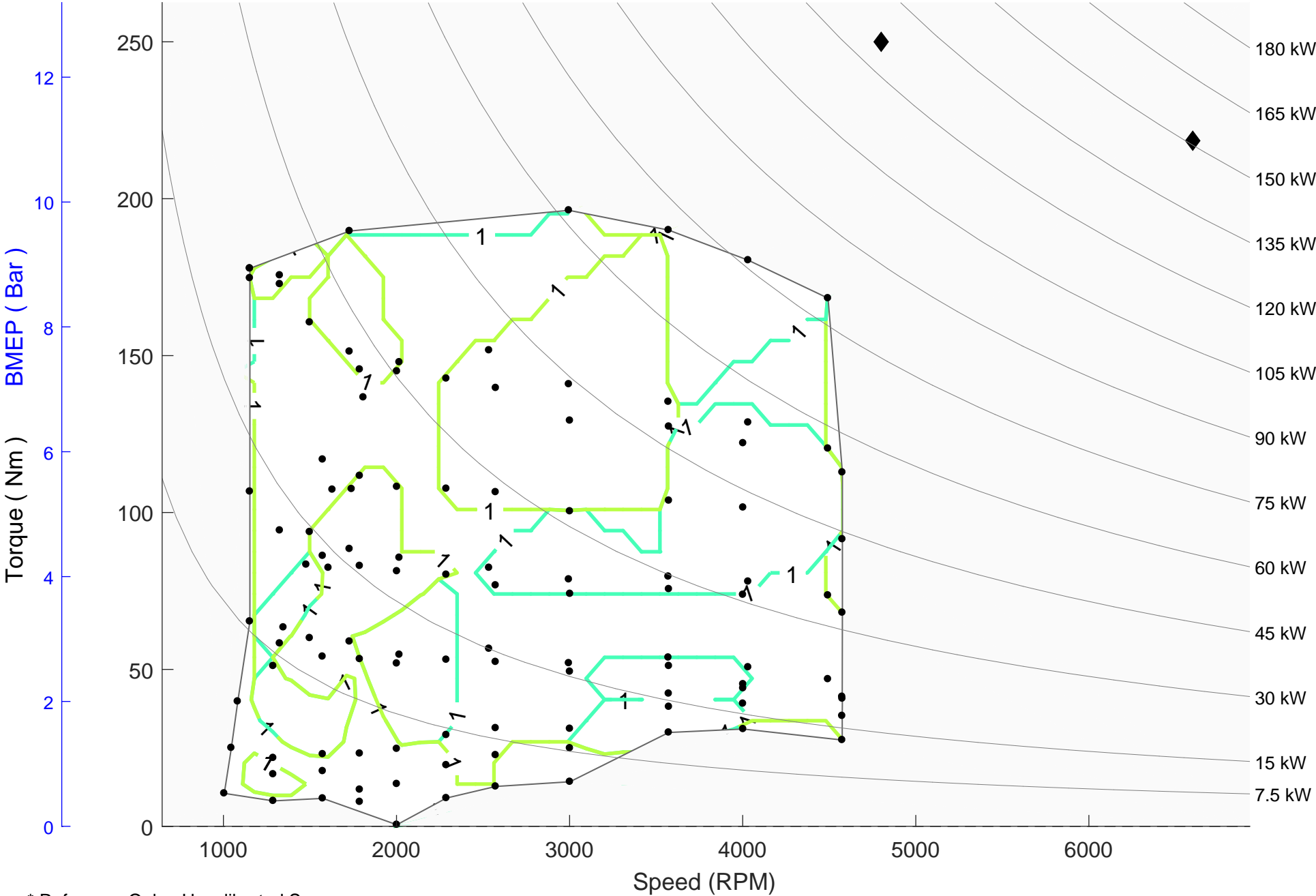
Catalyst Inlet Temp (degC) - Temperature Measured at the Inlet to the Catalyst



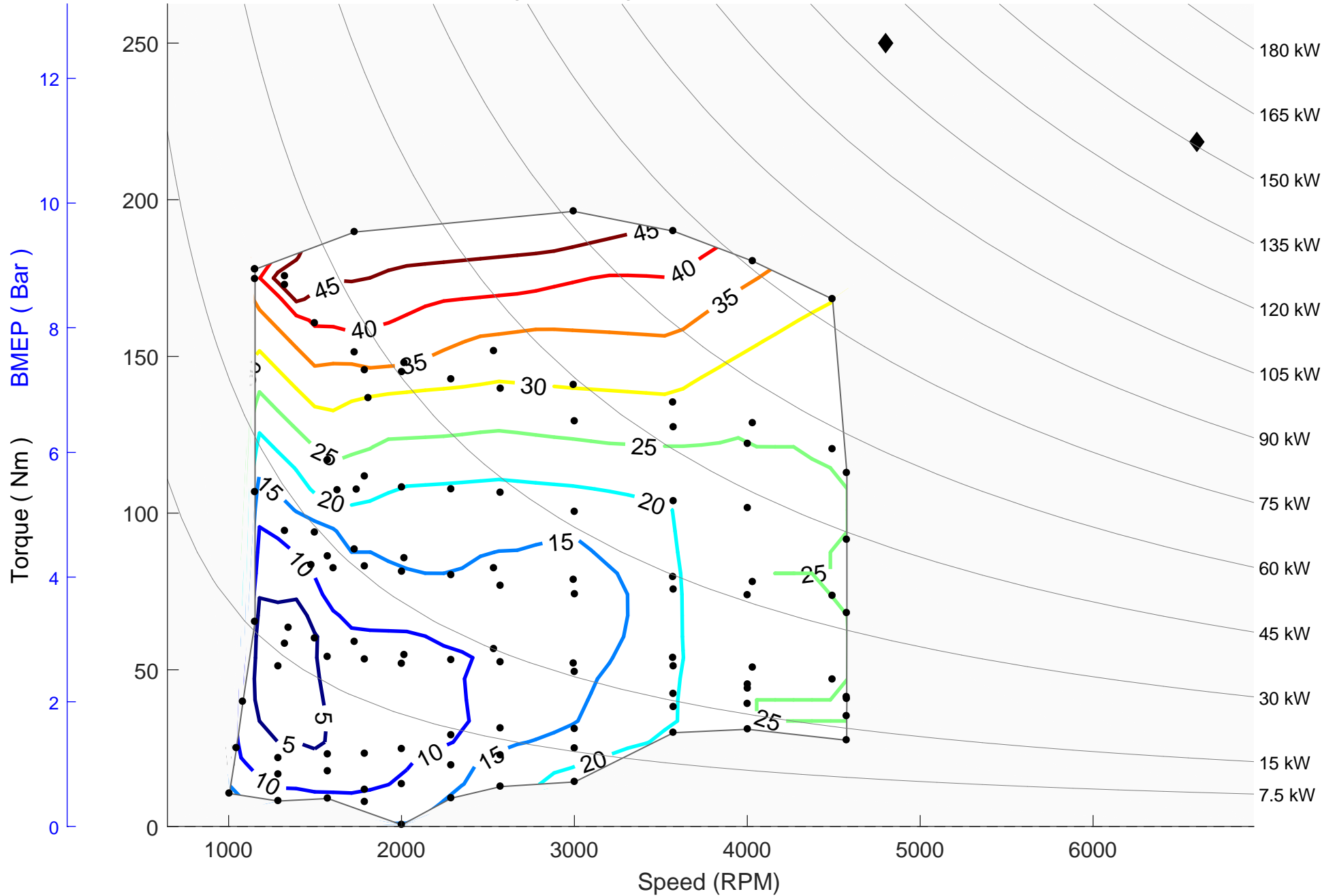
2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots

Steady State

Exhaust Lambda (LAMBDA) - Measured via Wideband Exhaust Oxygen Sensor*



2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots
Steady State
Intake Cam Phase (CAD ADV) - Intake Cam Phaser Advance @ 1mm Lift



2018 Toyota 2.5L A25A-FKS Engine EGR Measurements - Test Data Plots
Steady State
Exhaust Cam Phase (CAD RET) - Exhaust Cam Phaser Retard @ 1mm Lift

