

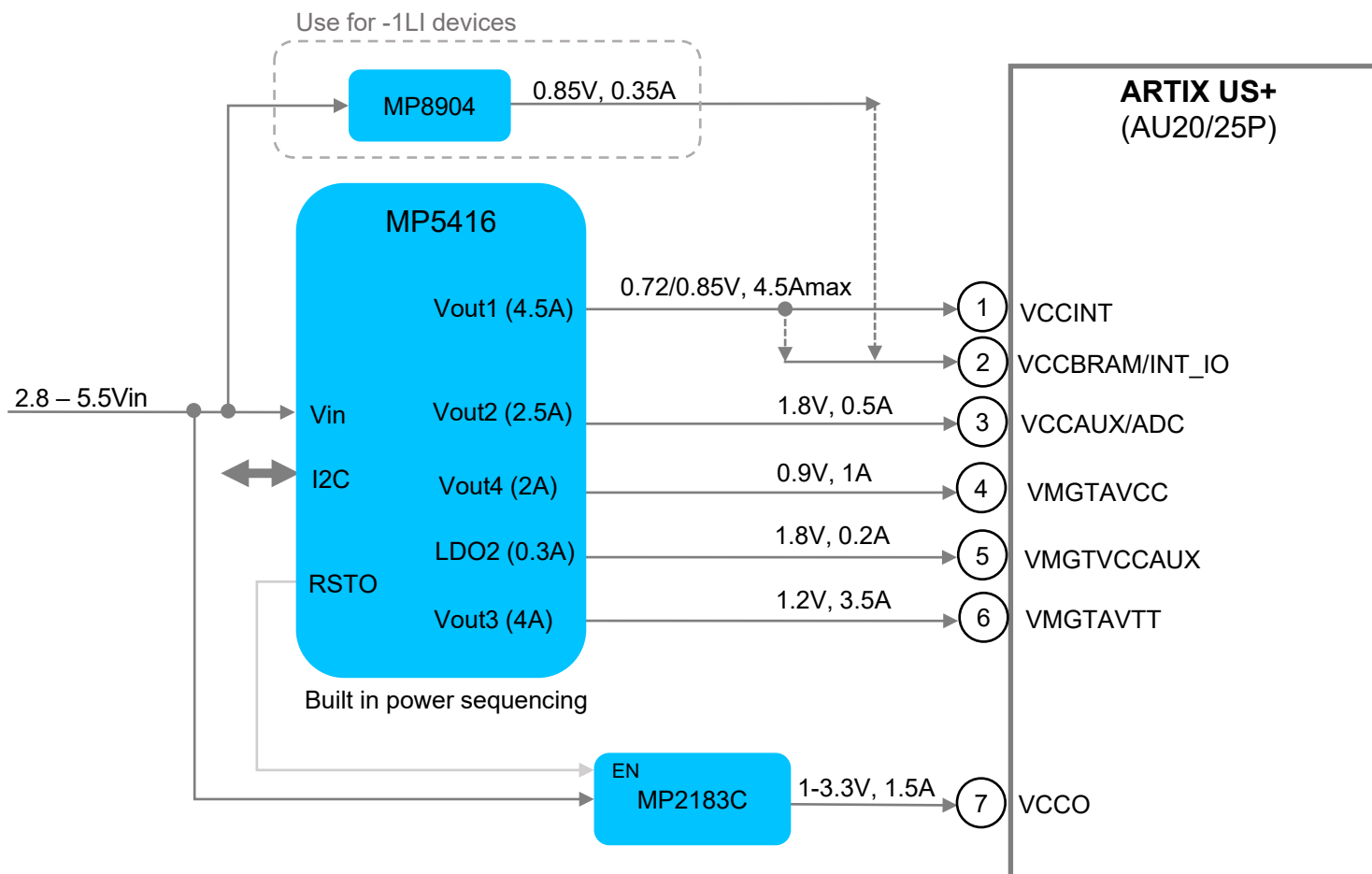
# Artix UltraScale+ Test Report

Cost Optimized

AU20P/25P

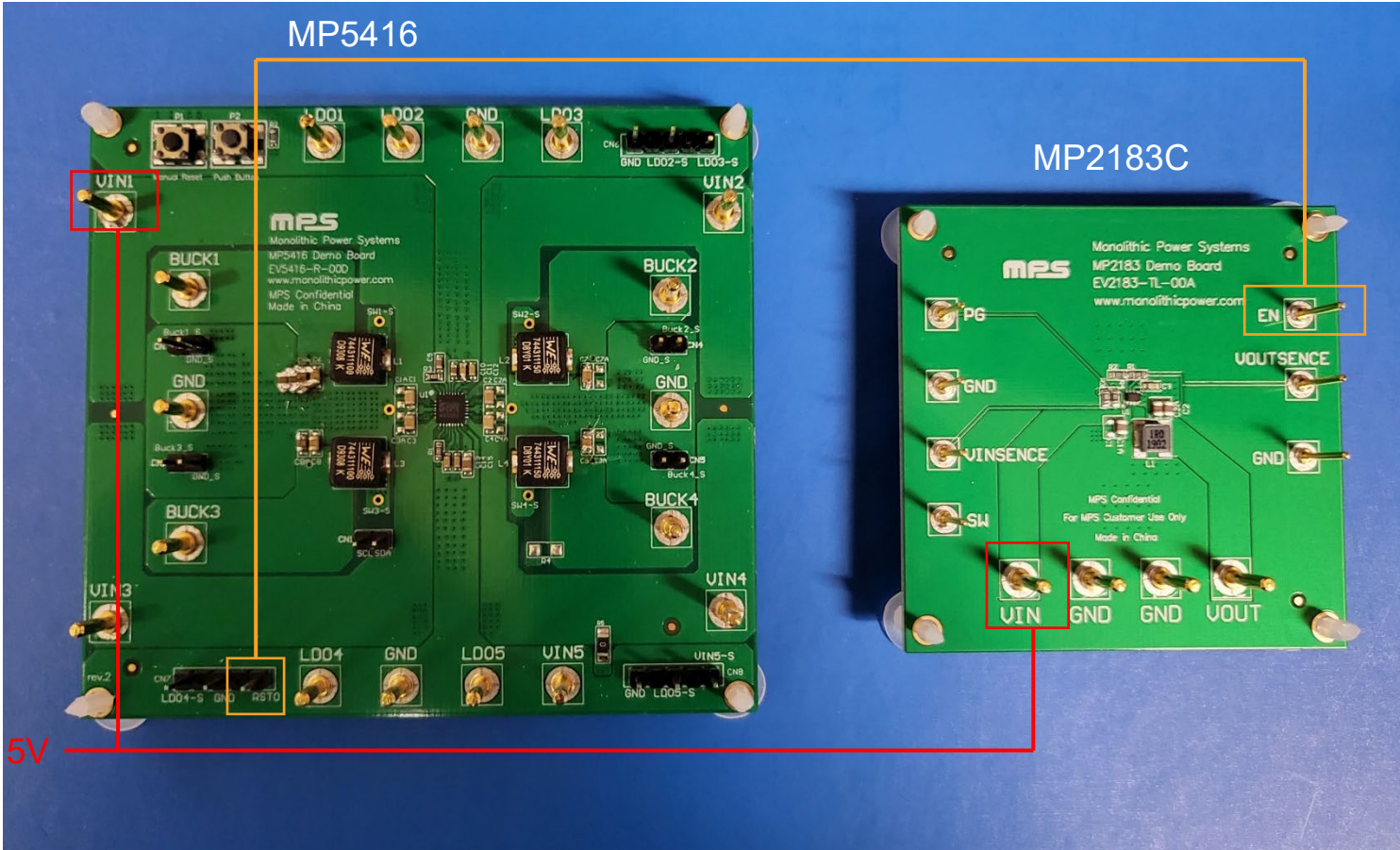
Updated  
1/25/2024

# Artix US+ AU20P/25P Solution – Cost Optimized



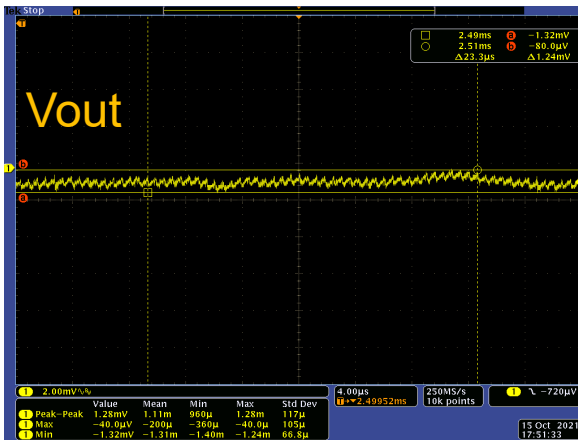
# Power on sequence

# AU20P/AU25P (MP5416 PMIC) EVB Connection

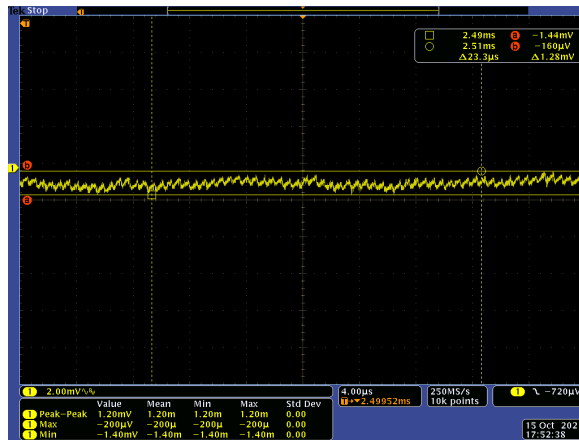


# AU20P/AU25P VCCINT Ripple (MP5416 PMIC)

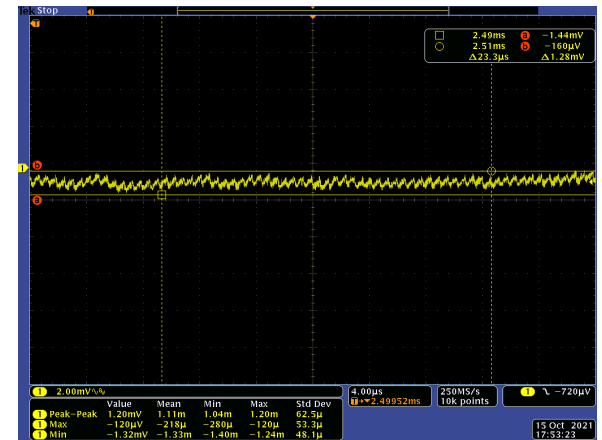
Standby



Half Load



Max Load



- ❑ 1.2 mV peak-peak ripple at Standby
- ❑ 1.2 mV peak-peak ripple at Half load
- ❑ 1.2 mV peak-peak ripple at Max load

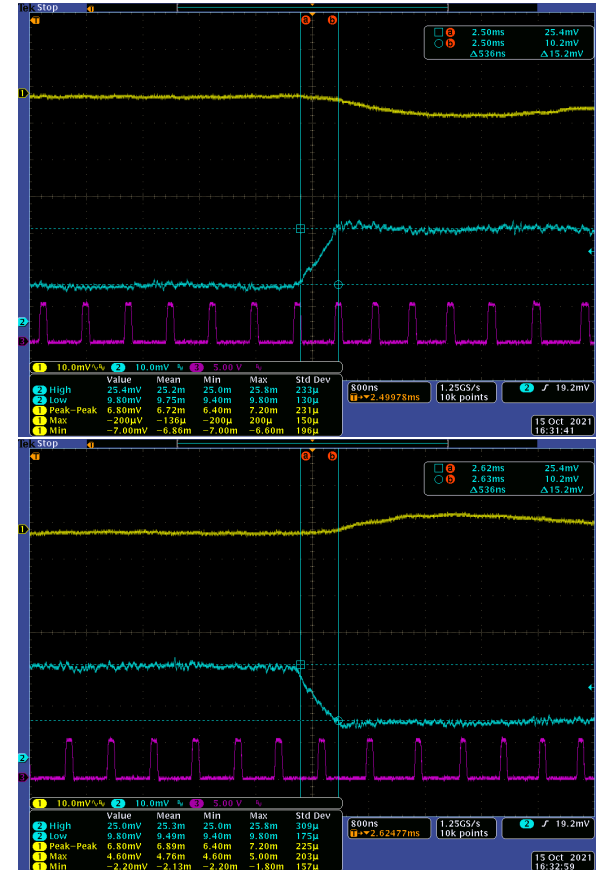
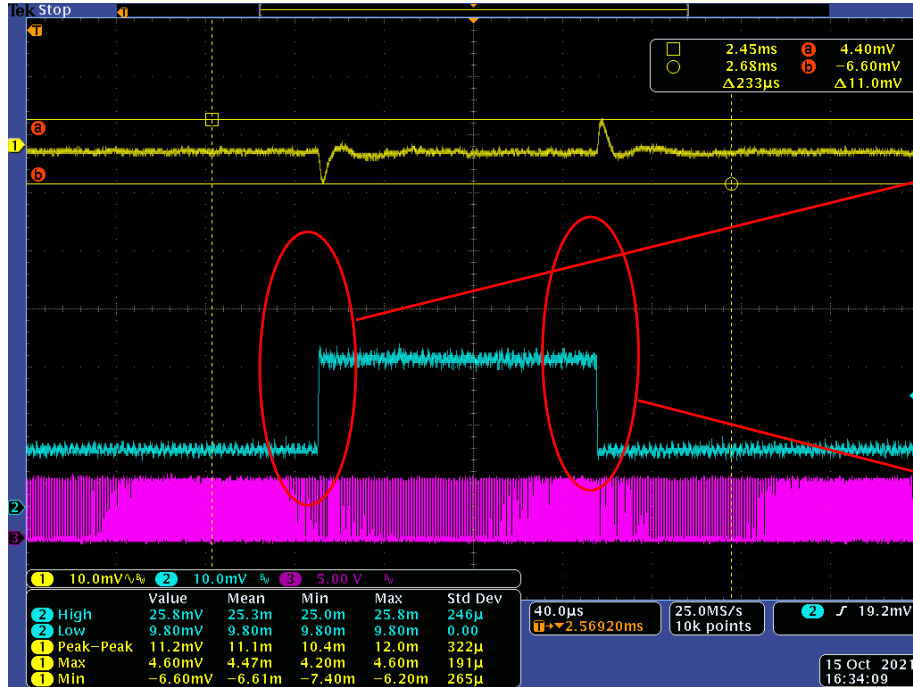
# AU20P/AU25P VCCINT Transient (MP5416 PMIC)

Step Load 0.35A → 0.9A → 0.35A, 10A/us

Vout

Io

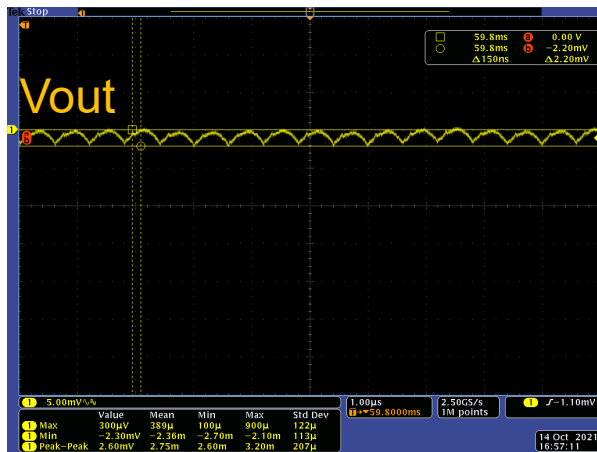
SW



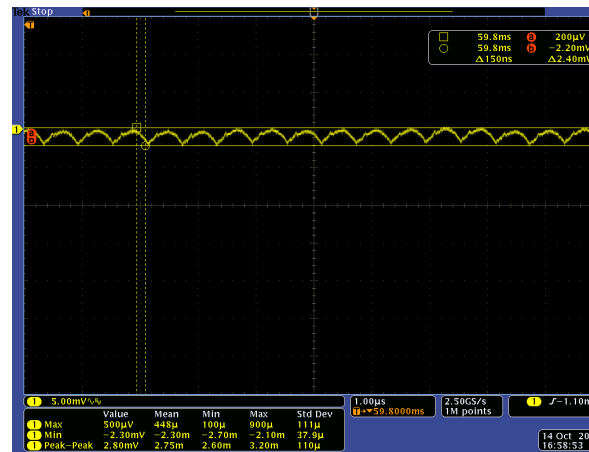
Vout ripple -0.78% (-6.6mV) to +0.5% (4.6mV) with load transient

# AU10P/AU15P/AU20P/AU25P VMGAVTT Ripple (MP5416 PMIC)

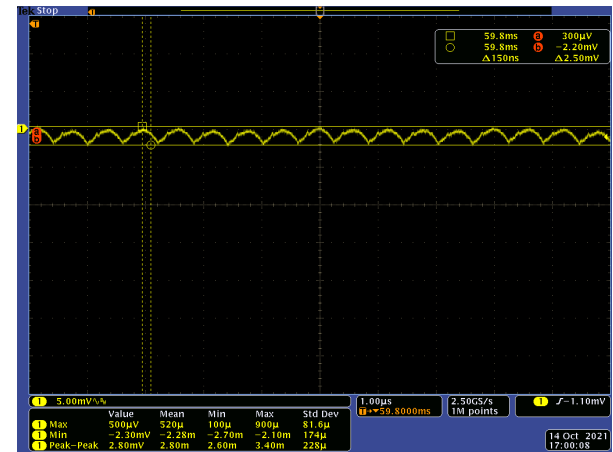
Standby



Half Load



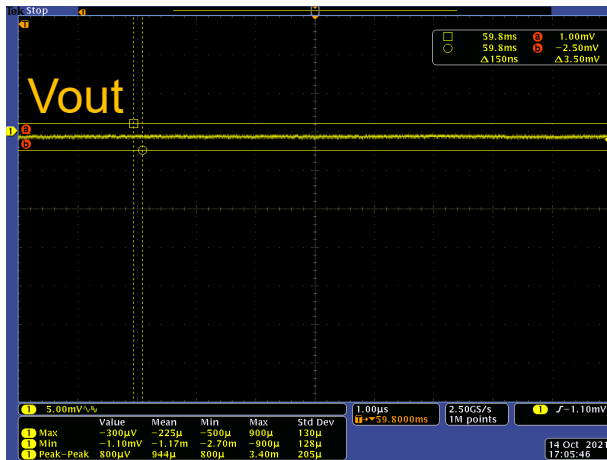
Max Load



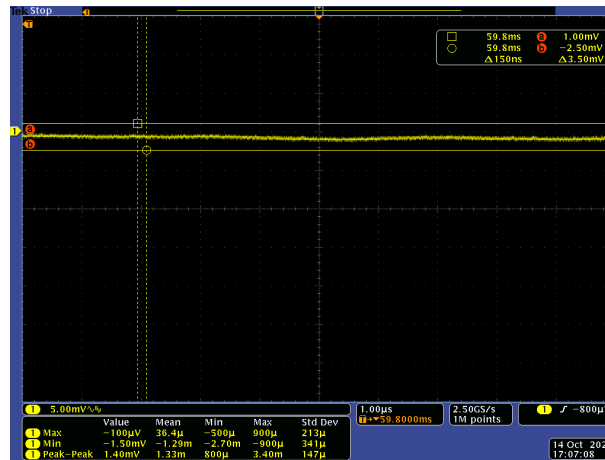
- ❑ 2.6 mV peak-peak ripple at Standby
- ❑ 2.8 mV peak-peak ripple at Half load
- ❑ 2.8 mV peak-peak ripple at Max load

# AU20P/AU25P VMGTVCCAUX Ripple (MP5416 PMIC)

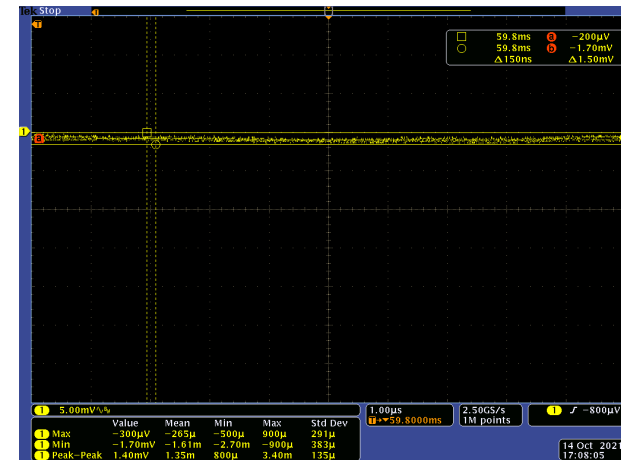
Standby



Half Load



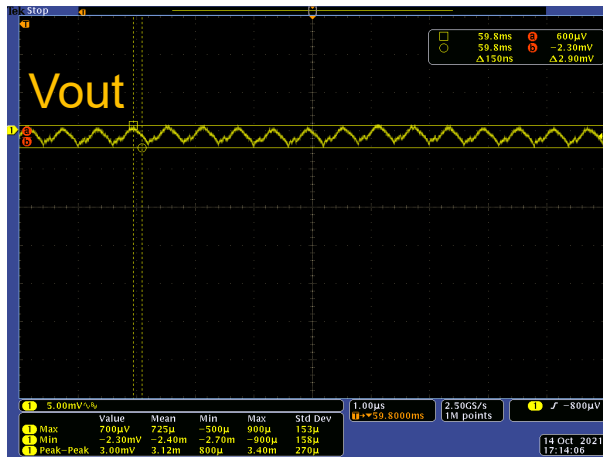
Max Load



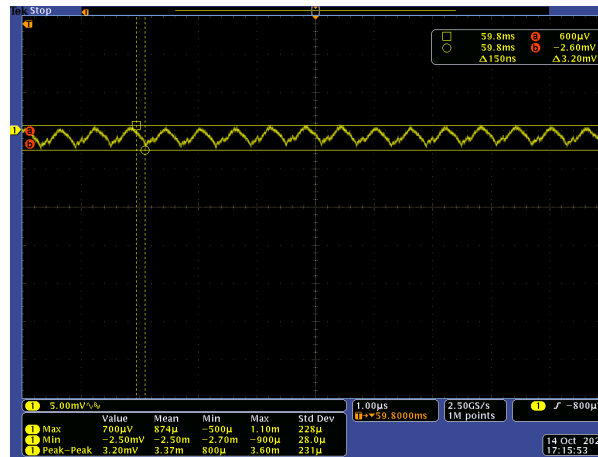
- ❑ 0.8 mV peak-peak ripple at Standby
- ❑ 1.4 mV peak-peak ripple at Half load
- ❑ 1.4 mV peak-peak ripple at Max load

# AU20P/AU25P VMGTYAVCC Ripple (MP5416 PMIC)

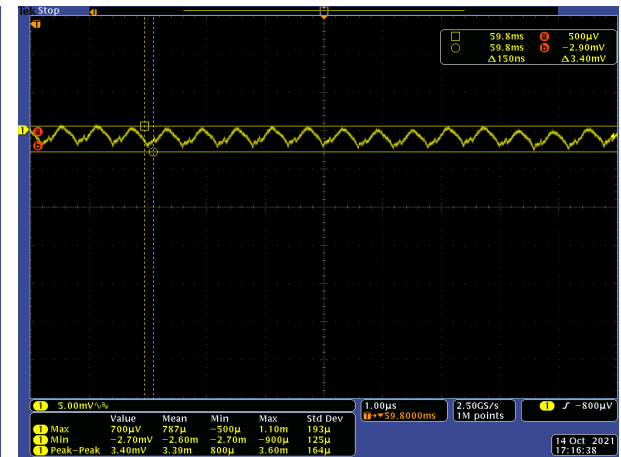
Standby



Half Load



Max Load



- 3.0 mV peak-peak ripple at Standby
- 3.2 mV peak-peak ripple at Half load
- 3.4 mV peak-peak ripple at Max load



# AU20P/AU25P (MP5416 PMIC)

	Vo	Ripple No load	Ripple Half load	Ripple Full load	Pwr ON Seq
MP5416-Buck1	0.85V	1.2mVpp	1.2mVpp	1.2mVpp	1 (0 ms)
MP5416-Buck2	1.8V	3.2mVpp	3.24mVpp	3.56mVpp	2 (2.0mS)
MP5416-Buck3	1.2V	2.6mVpp	2.8mVpp	2.8mVpp	3 (4.0mS)
MP5416-LDO2	1.8V	0.8mVpp	1.4mVpp	1.44mVpp	4 (6.0mS)
MP5416-Buck4	0.9V	3mVpp	3.2mVpp	3.44mVpp	5 (8.0mS)
MP2183C	3.3V	6mVpp	6.4mVpp	6.8mVpp	6 (120mS)