Part 1 - Half Wave Rectifier				
Frequency	**Capacitor**	**Ripple Voltage (Hand)**	**Ripple Voltage (Simulated)**	**Ripple Voltage (Measured)**
60	10	6.5	3.2439	3.15
60	100	0.65	0.5852	0.5
60	330	0.197	0.1914	0.145
60	1000	0.065	0.061441	0.07
120	10	3.25	2.15	2.1
120	100	0.325	0.3067	0.225
120	330	0.0985	0.09466	0.078
120	1000	0.0325	0.0316691	0.035
500	10	0.78	0.687	0.56
500	100	0.078	0.0763	0.061
500	330	0.0236	0.02217	0.027
500	1000	0.0078	0.007532	0.016
1000	10	0.39	0.3652	0.29
1000	100	0.039	0.03768	0.038
1000	330	0.0118	0.01141	0.023
1000	1000	0.0039	0.00404455	0.014

Part 2 - Full Wave Rectifier				
Frequency	**Capacitor**	**Ripple Voltage (Hand)**	**Ripple Voltage (Simulated)**	**Ripple Voltage (Measured)**
60	10	2.3333	1.5654	1.393
60	100	0.2333	0.22359	0.174
60	330	0.0707	0.068786	0.052
60	1000	0.0233	0.0224876	0.02
120	10	1.1667	0.9325	0.816
120	100	0.1167	0.11361	0.1
120	330	0.0354	0.032831	0.035
120	1000	0.0117	0.0111169	0.016

500	10	0.28	0.258	0.432
500	100	0.028	0.0242	0.035
500	330	0.0085	0.0082213	0.02
500	1000	0.0028	0.002544	0.012
1000	10	0.14	0.13544	0.387
1000	100	0.014	0.013196	0.04
1000	330	0.0042	0.0039977	0.025
1000	1000	0.0014	0.0012438	0.013

Part 3 / 4 - Zener Regulation						
Load Resistor	**Load Voltage**	**Load / Resistor Current**	**Resistor Voltage**			
98.765	5.986	0.06060851516	6.014		VNL	6.187
327.5	9.2	0.02809160305	2.8			
1007	10.914	0.01083813307	1.086	No Diode		
3840.3	11.604	0.003021638934	0.396			
6152	11.795	0.001917262679	0.205			
9904.3	11.867	0.001198166453	0.133			
Load Resistor	**Load Voltage**	**Load Current**	**Source Current**	**Zener Current**	**LR (%)**	
98.765	5.84	0.05913025869	0.071	0.01186974131	5.94	
327.5	6	0.01832061069	0.069	0.05067938931	3.12	
1007	6.05	0.006007944389	0.069	0.06299205561	2.26	
3840.3	6.13	0.001596229461	0.068	0.06640377054	0.93	
6152	6.14	0.0009980494148	0.068	0.06700195059	0.77	
9904.3	6.15	0.0006209424189	0.068	0.06737905758	0.6	
Delta Vpeak	**Percent**					
0.12	1.0					
0.32	2.7					
0.52	4.3					
0.72	6.0					
0.92	7.7					
1.12	9.3					

1.32	11.0				
1.52	12.7				
1.72	14.3				
1.92	16.0				
2.12	17.7				
2.32	19.3				
2.4	20.0				

Ripple Voltage vs. Capacitance (60 Hz, HWR)

Legend:
- Ripple Voltage (Hand)
- Ripple Voltage (Simulated)
- Ripple Voltage (Measured)
- $-1.98\text{E-}03 \cdot x + 1.68$ $R^2 = 0.366$
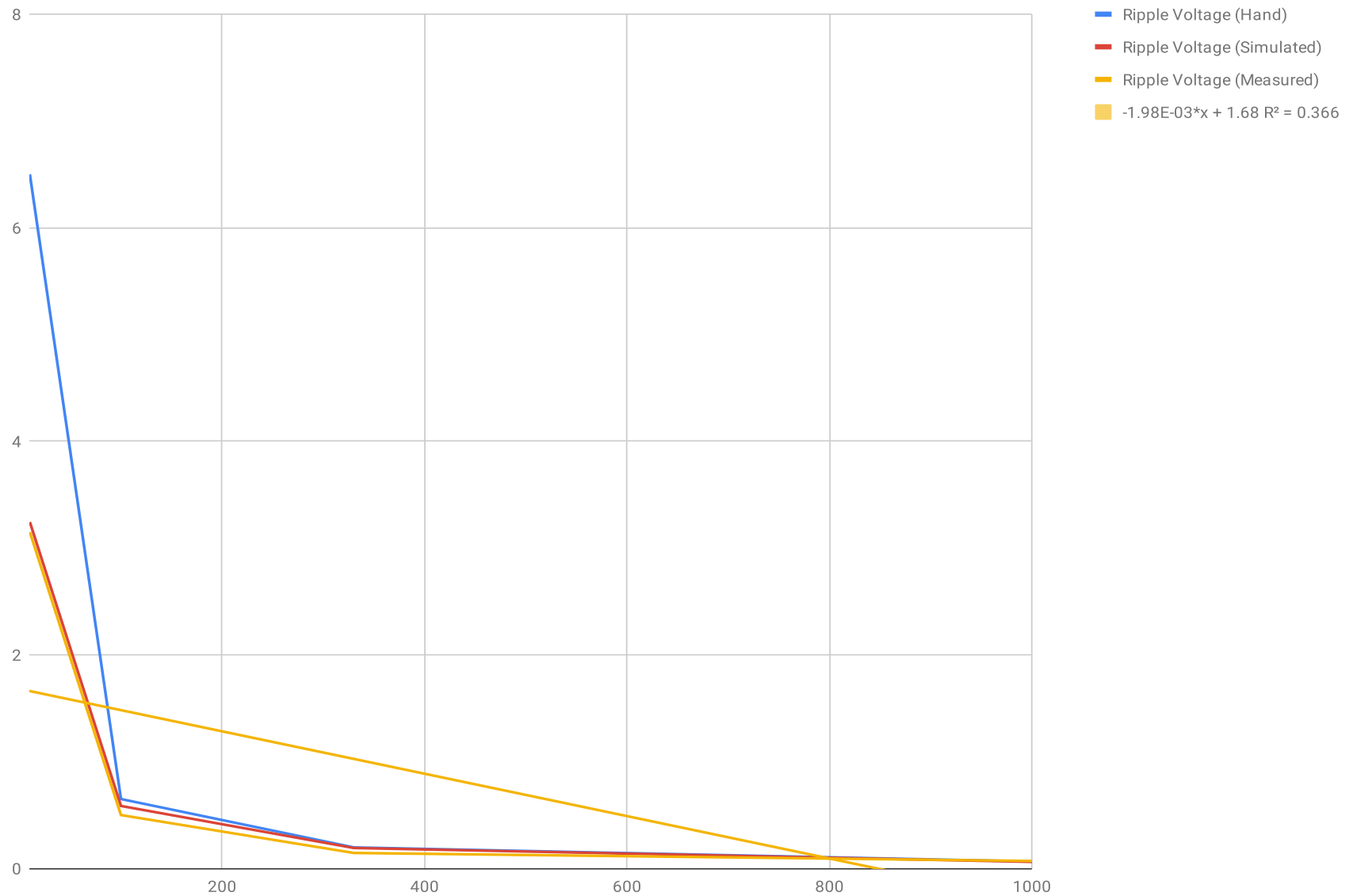
Ripple Voltage vs. Frequency (120Hz, HWR)

Legend:
- Ripple Voltage (Measured)
- -0.96*x + 2.41 R² = 0.712
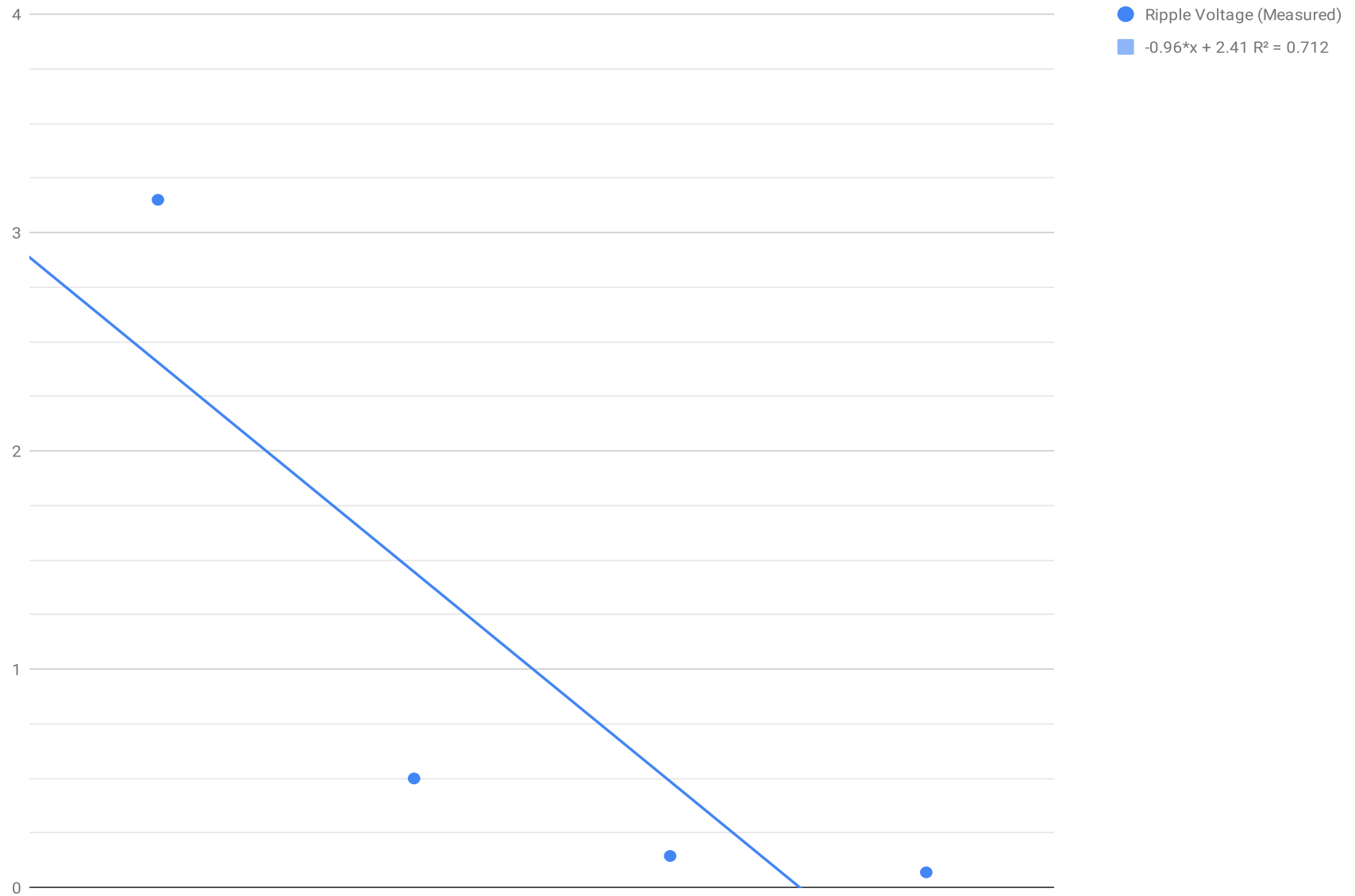
Ripple Voltage vs. Capacitance at 60 Hz (FWR)

Legend:
- Ripple Voltage (Hand)
- Ripple Voltage (Simulated)
- Ripple Voltage (Measured)
- -0.424*x + 1.05 R² = 0.691
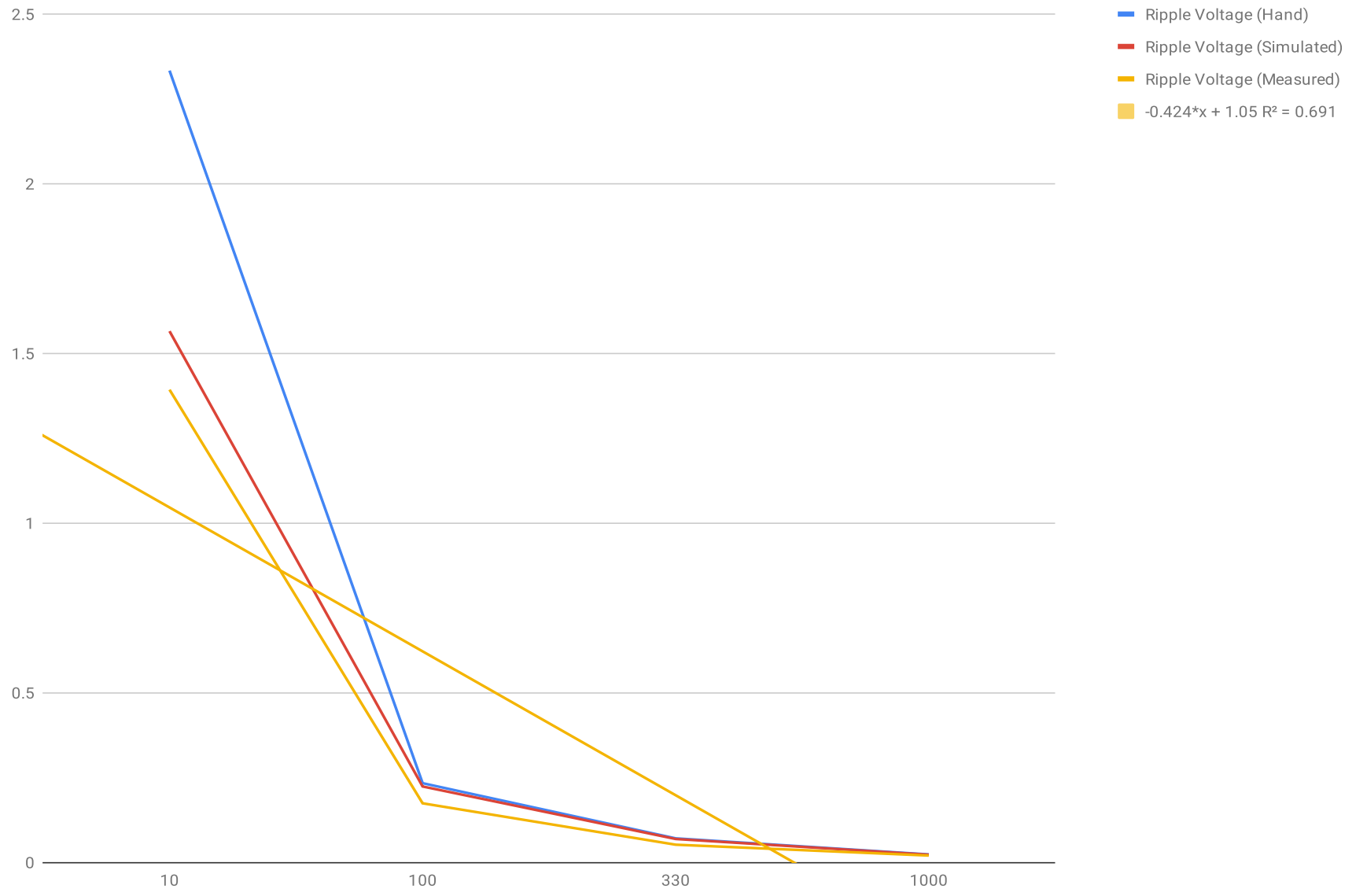
Frequency and Ripple Voltage (Measured, FWR)

Legend:
- Ripple Voltage (Measured)
- $-0.424 \cdot x + 1.05$ $R^2 = 0.691$
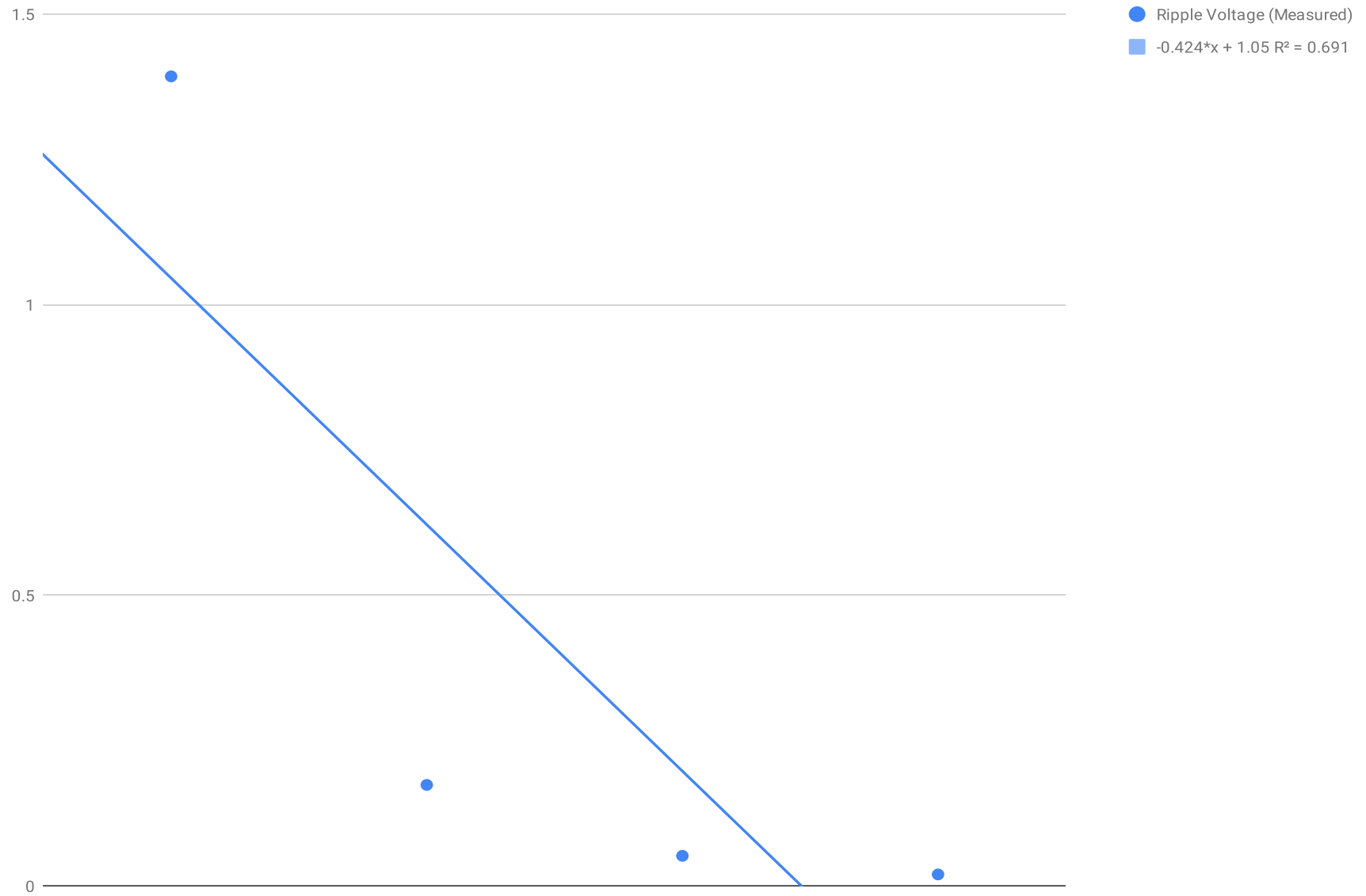
Load Voltage vs. Load Current (Zener Reg.)

Load Current

-0.186*x + 1.14 R² = 0.935
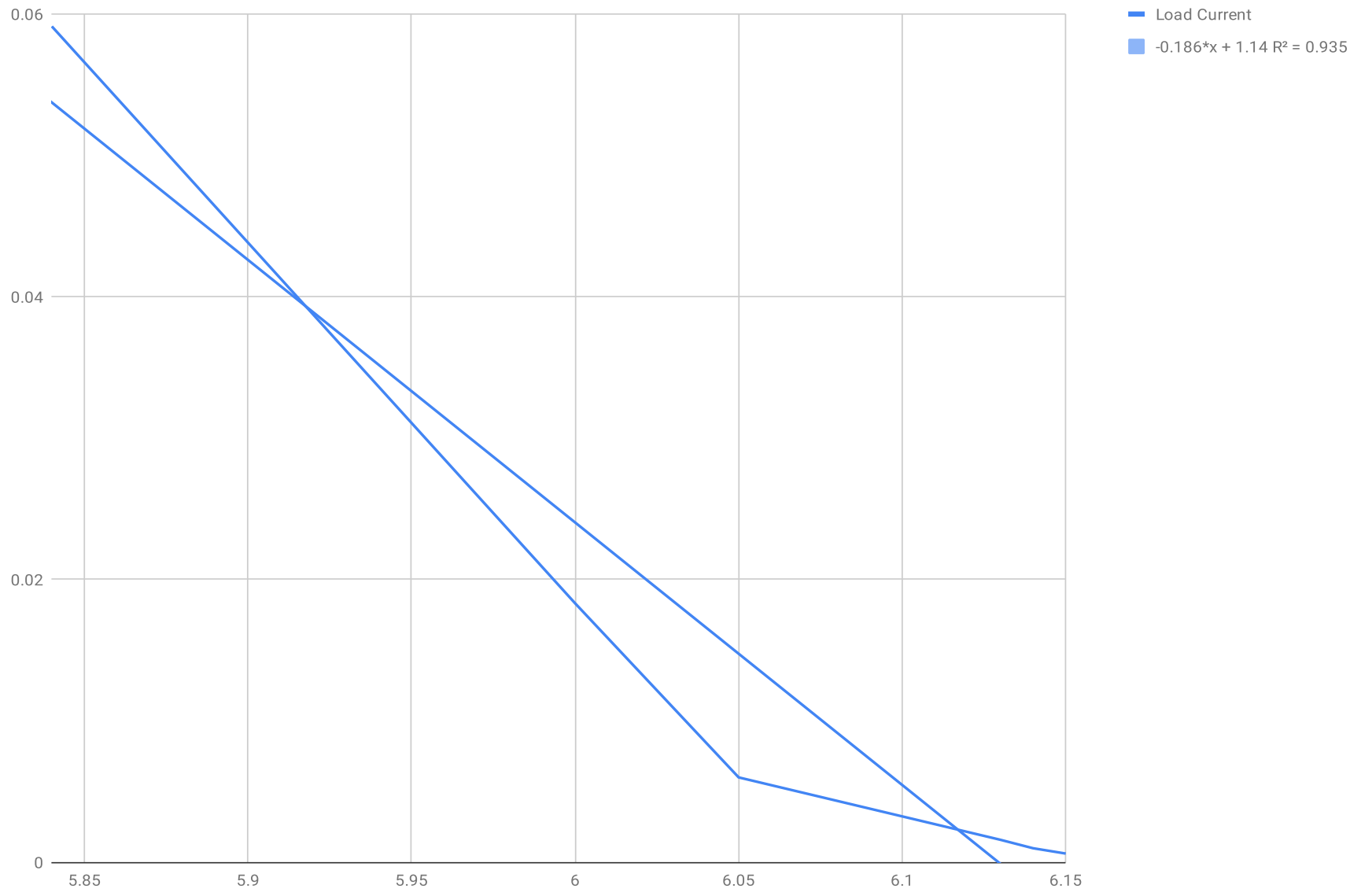
Load Regulation vs. Load Resistance (Zener Reg.)

LR (%)

-3.98E-04*x + 3.69 R² = 0.574
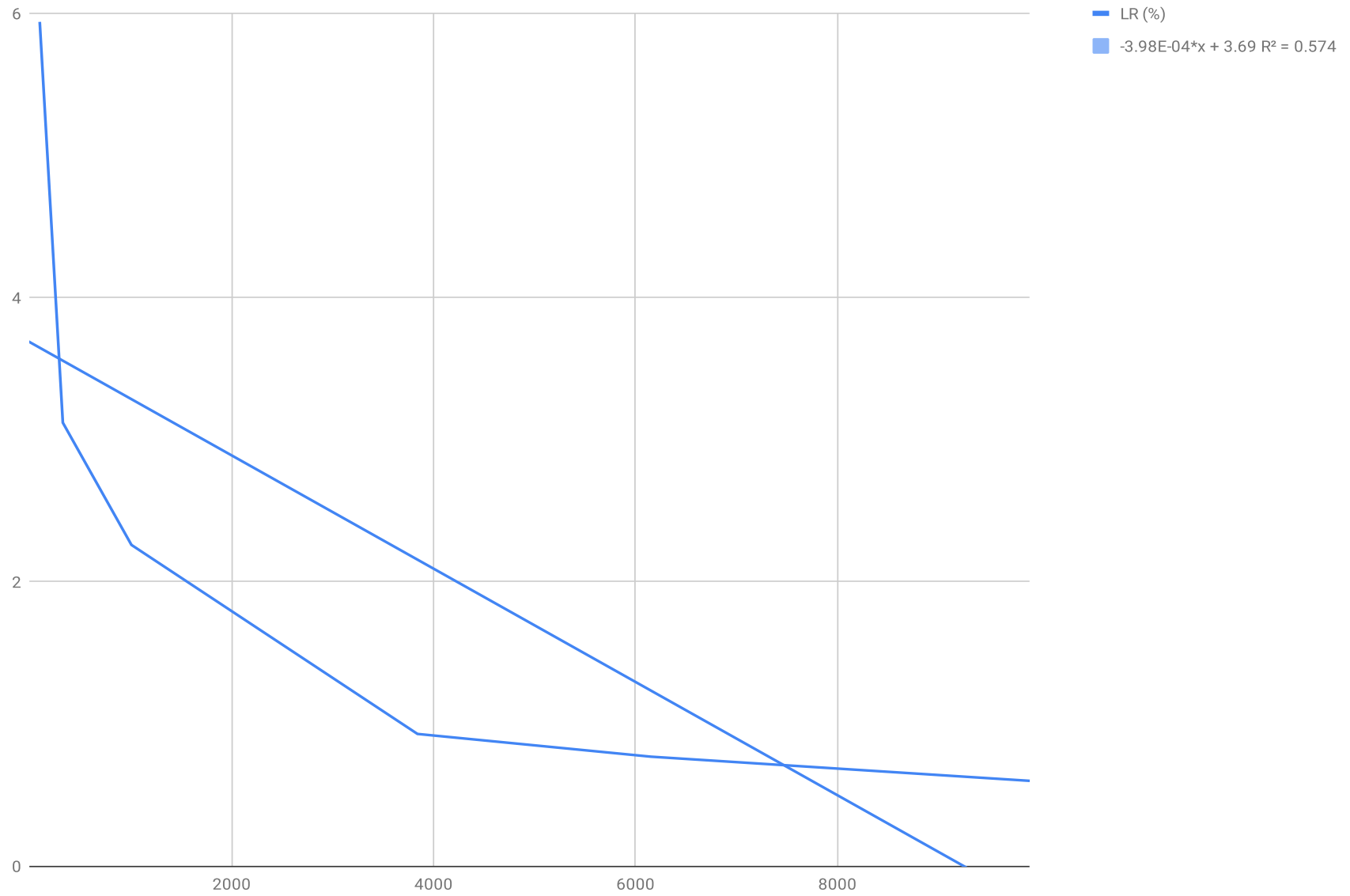
Load Regulation vs. Load Current (Zener Reg.)

Legend:
- LR (%)
- 87*x + 1.01 R² = 0.942