

PMP40312 Test Results

1. Efficiency

Test at USB type-C board end with dual channels

Vin=9V Vo=5V

Vin(V)	Iin(A)	Vo1(V)	Vo2(V)	Iout1(A)	Iout2(A)	Pin(W)	Pout(W)	Efficiency
8.999	0.641	4.968	4.960	0.499	0.502	5.768	4.969	86.14%
9.002	1.215	4.956	4.947	0.998	1.000	10.937	9.893	90.45%
9.008	1.800	4.940	4.921	1.499	1.508	16.214	14.826	91.44%
9.006	2.383	4.923	4.910	1.999	2.003	21.461	19.676	91.68%
9.015	2.971	4.901	4.889	2.498	2.501	26.784	24.470	91.36%
9.030	3.574	4.882	4.867	2.999	3.006	32.273	29.271	90.70%

Vin=12V Vo=5V

Vin(V)	Iin(A)	Vo1(V)	Vo2(V)	Iout1(A)	Iout2(A)	Pin(W)	Pout(W)	Efficiency
12.012	0.506	4.970	4.950	0.499	0.505	6.078	4.980	81.93%
11.993	0.935	4.951	4.941	0.998	1.003	11.213	9.897	88.26%
12.034	1.373	4.933	4.923	1.499	1.504	16.523	14.799	89.57%
12.023	1.814	4.913	4.905	1.999	2.001	21.810	19.636	90.03%
11.993	2.260	4.896	4.886	2.498	2.500	27.104	24.445	90.19%
12.016	2.710	4.877	4.866	2.999	3.005	32.563	29.248	89.82%

Vin=14.5V Vo=5V

Vin(V)	Iin(A)	Vo1(V)	Vo2(V)	Iout1(A)	Iout2(A)	Pin(W)	Pout(W)	Efficiency
14.500	0.431	4.967	4.952	0.499	0.506	6.250	4.984	79.75%
14.509	0.791	4.951	4.938	0.998	1.002	11.477	9.889	86.17%
14.510	1.159	4.935	4.920	1.499	1.511	16.817	14.832	88.19%
14.520	1.522	4.915	4.902	1.999	2.002	22.099	19.639	88.87%
14.503	1.890	4.895	4.888	2.498	2.501	27.411	24.453	89.21%
14.458	2.274	4.876	4.874	2.999	3.004	32.877	29.265	89.01%

Vin=9V Vo=9V

Vin(V)	Iin(A)	Vo1(V)	Vo2(V)	Iout1(A)	Iout2(A)	Pin(W)	Pout(W)	Efficiency
9.002	1.096	8.990	8.965	0.499	0.502	9.866	8.986	91.08%
9.002	2.116	8.970	8.960	0.998	1.000	19.048	17.912	94.04%
9.033	3.156	8.946	8.945	1.499	1.510	28.508	26.917	94.42%
8.996	4.221	8.950	8.926	1.999	2.000	37.972	35.743	94.13%
9.003	5.269	8.873	8.903	2.498	2.500	47.437	44.422	93.65%

9.016	6.361	8.863	8.863	2.999	3.007	57.351	53.231	92.82%
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Vin=12V Vo=9V

Vin(V)	Iin(A)	Vo1(V)	Vo2(V)	Iout1(A)	Iout2(A)	Pin(W)	Pout(W)	Efficiency
12.003	0.843	8.967	8.960	0.499	0.506	10.119	9.008	89.03%
12.000	1.611	8.952	8.946	0.998	1.005	19.332	17.925	92.72%
12.009	2.390	8.935	8.926	1.499	1.509	28.702	26.863	93.59%
11.991	3.176	8.920	8.912	1.999	2.004	38.083	35.691	93.72%
12.004	3.960	8.898	8.895	2.498	2.503	47.536	44.491	93.60%
12.052	4.746	8.870	8.867	2.999	3.003	57.199	53.229	93.06%

Vin=14.5V Vo=9V

Vin(V)	Iin(A)	Vo1(V)	Vo2(V)	Iout1(A)	Iout2(A)	Pin(W)	Pout(W)	Efficiency
14.531	0.712	8.970	8.960	0.499	0.503	10.346	8.983	86.82%
14.496	1.355	8.950	8.950	0.998	1.002	19.642	17.900	91.13%
14.502	2.004	8.927	8.922	1.499	1.510	29.062	26.854	92.40%
14.513	2.645	8.916	8.910	1.998	2.004	38.387	35.670	92.92%
14.495	3.298	8.884	8.880	2.498	2.503	47.805	44.419	92.92%
14.502	3.960	8.866	8.870	2.999	3.004	57.428	53.235	92.70%

Vin=9V Vo=12V

Vin(V)	Iin(A)	Vo1(V)	Vo2(V)	Iout1(A)	Iout2(A)	Pin(W)	Pout(W)	Efficiency
9.000	1.486	12.043	12.117	0.498	0.498	13.374	12.029	89.95%
9.002	2.870	12.028	12.094	0.993	0.999	25.836	24.023	92.98%
8.940	4.340	12.006	12.078	1.502	1.499	38.800	36.137	93.14%
9.000	5.754	11.985	12.055	1.996	2.000	51.786	48.031	92.75%
8.962	7.270	11.960	12.023	2.490	2.501	65.154	59.844	91.85%
9.000	7.880	11.933	12.008	2.698	2.702	70.920	64.636	91.14%

Vin=12V Vo=12V

Vin(V)	Iin(A)	Vo1(V)	Vo2(V)	Iout1(A)	Iout2(A)	Pin(W)	Pout(W)	Efficiency
11.952	1.110	12.036	12.109	0.498	0.498	13.267	12.022	90.62%
12.009	2.127	12.019	12.086	0.992	0.999	25.543	23.994	93.94%
11.964	3.192	12.000	12.070	1.501	1.499	38.189	36.109	94.55%
11.998	4.221	11.980	12.030	1.995	2.000	50.644	47.959	94.70%
12.002	5.267	11.960	11.945	2.490	2.501	63.215	59.649	94.36%
11.996	5.710	11.938	11.898	2.698	2.701	68.497	64.350	93.95%

Vin=14.5V Vo=12V

Vin(V)	Iin(A)	Vo1(V)	Vo2(V)	Iout1(A)	Iout2(A)	Pin(W)	Pout(W)	Efficiency
14.480	0.929	12.013	12.078	0.497	0.498	13.449	11.984	89.11%
14.494	1.780	11.996	12.070	0.992	0.999	25.799	23.957	92.86%
14.496	2.647	11.980	12.055	1.501	1.499	38.371	36.051	93.95%

14.489	3.509	11.960	12.030	1.995	2.000	50.843	47.919	94.25%
14.470	4.382	11.944	12.016	2.490	2.500	63.408	59.784	94.29%
14.500	4.738	11.913	11.984	2.699	2.701	68.701	64.527	93.92%

Vin=9V Vo=15V

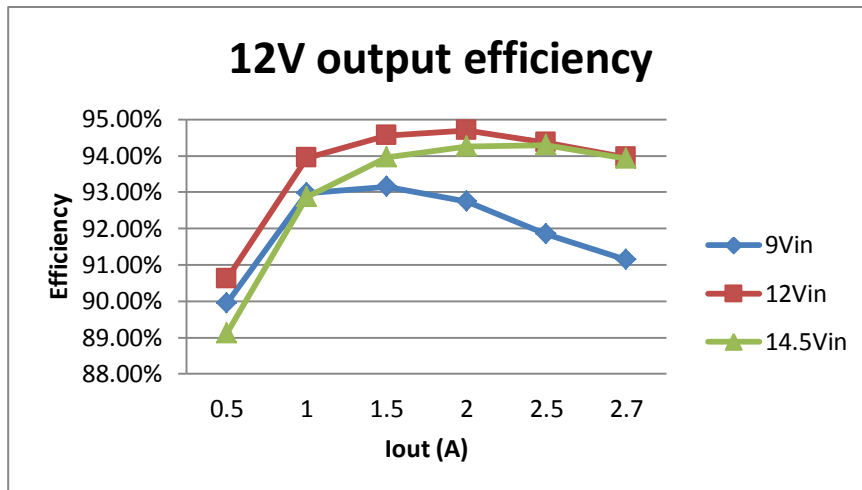
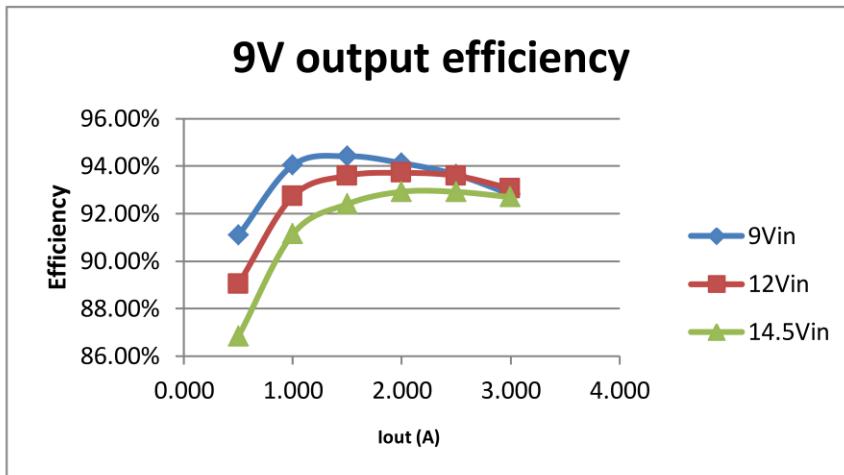
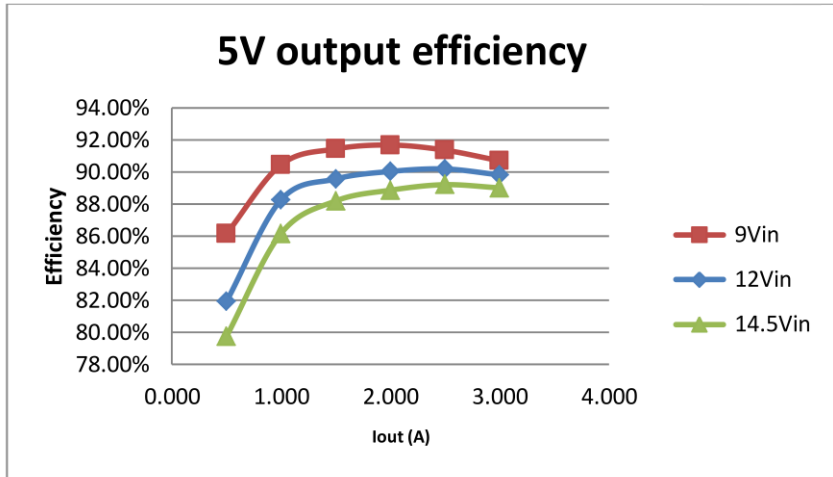
Vin(V)	Iin(A)	Vo1(V)	Vo2(V)	Iout1(A)	Iout2(A)	Pin(W)	Pout(W)	Efficiency
8.995	1.522	15.010	15.010	0.399	0.397	13.690	11.948	87.27%
9.025	3.295	14.991	14.999	0.899	0.911	29.737	27.145	91.28%
9.034	4.359	14.979	14.980	1.199	1.209	39.379	36.071	91.60%
9.022	5.800	14.955	14.958	1.598	1.602	52.328	47.861	91.46%
8.905	7.368	14.941	14.953	1.989	2.000	65.612	59.624	90.87%
8.993	7.960	14.950	15.023	2.158	2.171	71.584	64.882	90.64%

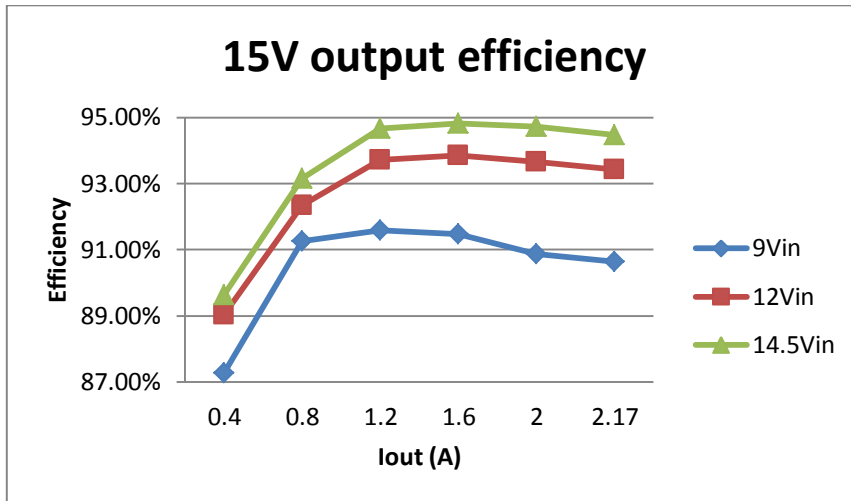
Vin=12V Vo=15V

Vin(V)	Iin(A)	Vo1(V)	Vo2(V)	Iout1(A)	Iout2(A)	Pin(W)	Pout(W)	Efficiency
11.974	1.125	15.013	15.010	0.399	0.400	13.471	11.994	89.04%
12.006	2.166	14.999	14.998	0.799	0.802	26.005	24.013	92.34%
12.095	3.188	14.980	14.980	1.199	1.213	38.559	36.132	93.71%
12.015	4.243	14.963	14.960	1.598	1.600	50.980	47.847	93.85%
12.024	5.305	14.944	14.945	1.998	2.000	63.787	59.748	93.67%
12.002	5.784	14.940	15.016	2.159	2.171	69.420	64.857	93.43%

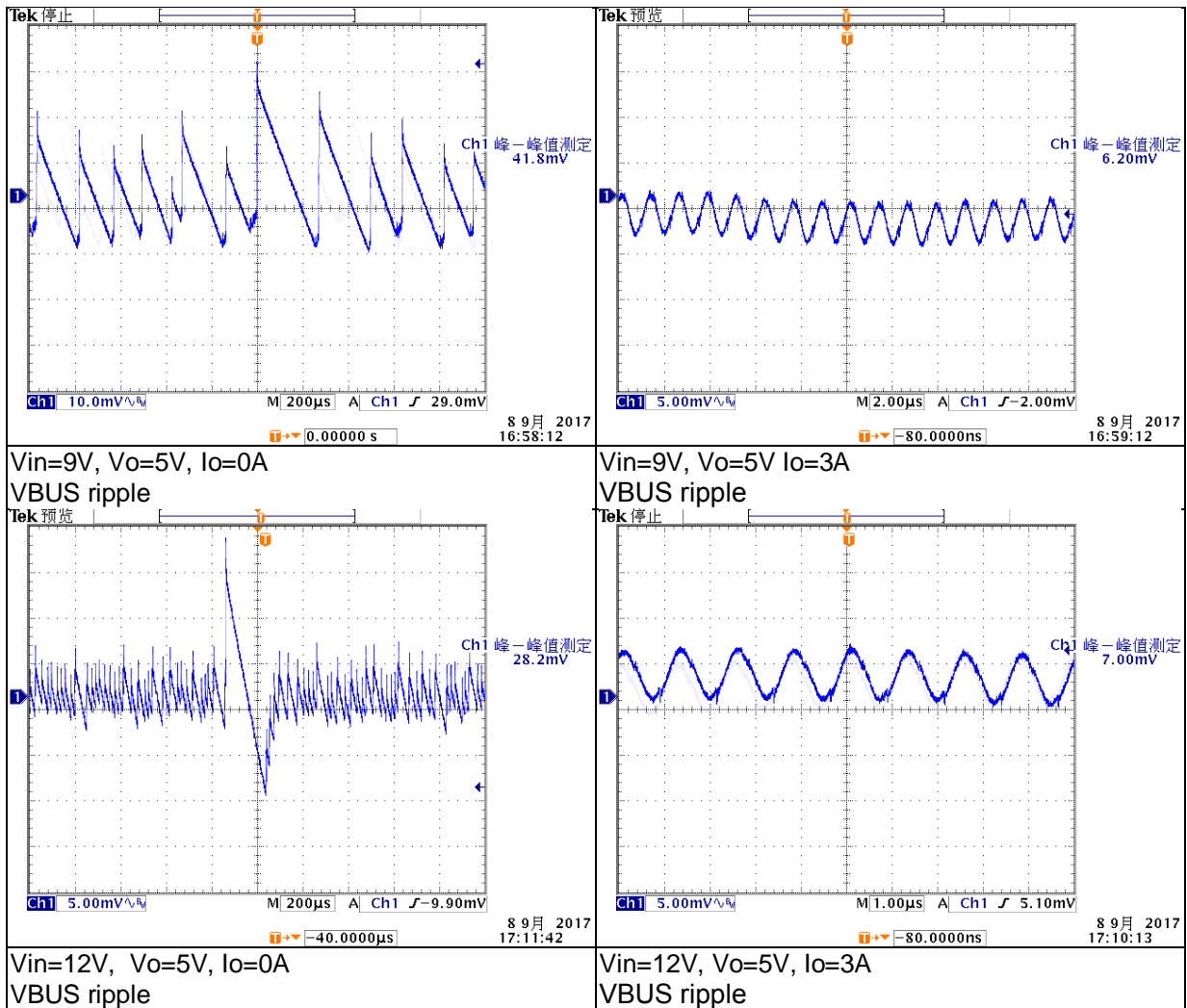
Vin=14.5V Vo=15V

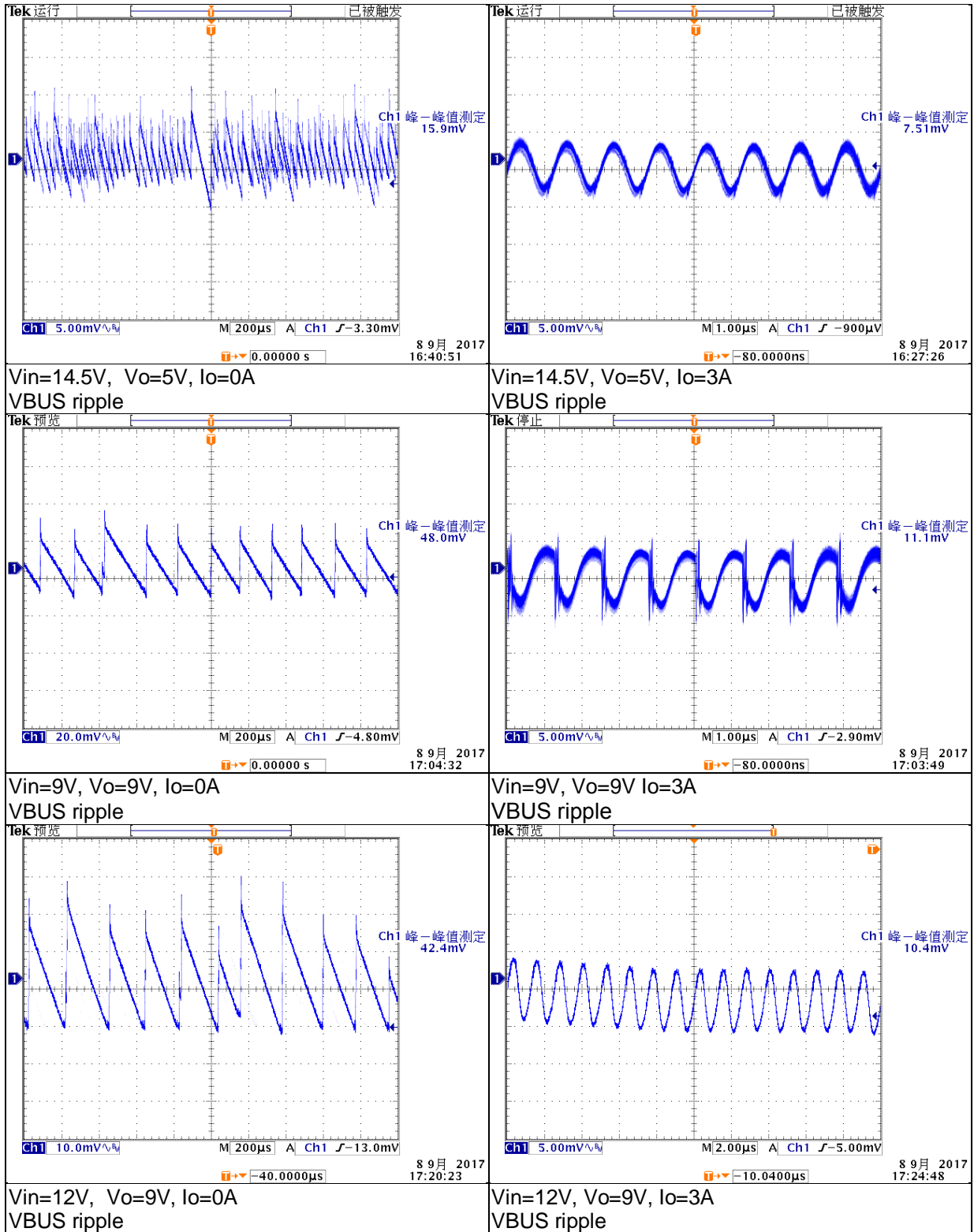
Vin(V)	Iin(A)	Vo1(V)	Vo2(V)	Iout1(A)	Iout2(A)	Pin(W)	Pout(W)	Efficiency
14.497	0.925	15.003	15.008	0.399	0.402	13.410	12.019	89.63%
14.990	1.722	14.983	14.999	0.799	0.805	25.813	24.046	93.15%
14.500	2.630	14.969	14.979	1.199	1.212	38.135	36.102	94.67%
14.492	3.481	14.951	14.949	1.598	1.602	50.447	47.840	94.83%
14.508	4.349	14.933	14.933	1.998	2.004	63.095	59.762	94.72%
14.999	4.570	14.933	14.984	2.158	2.171	68.545	64.756	94.47%

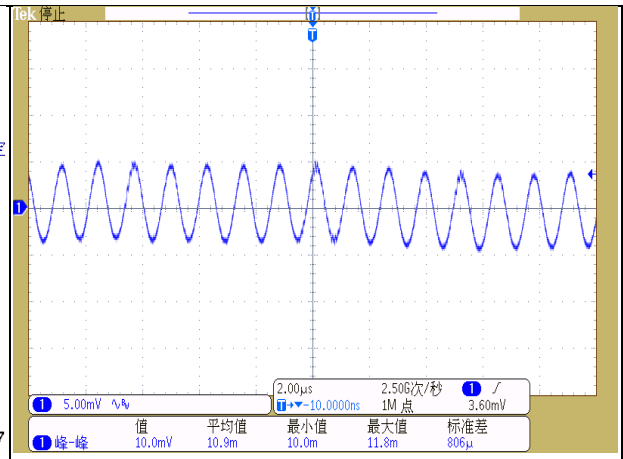
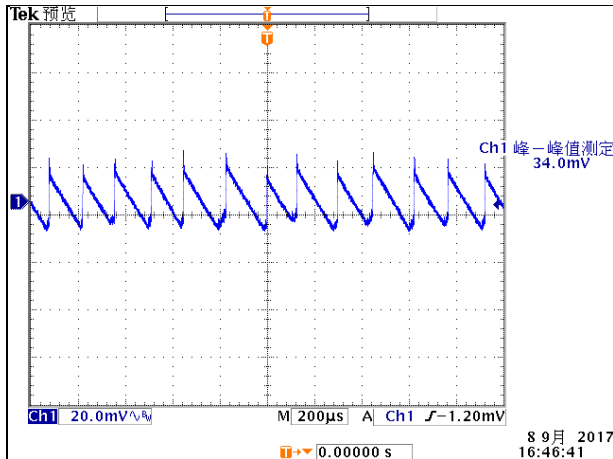




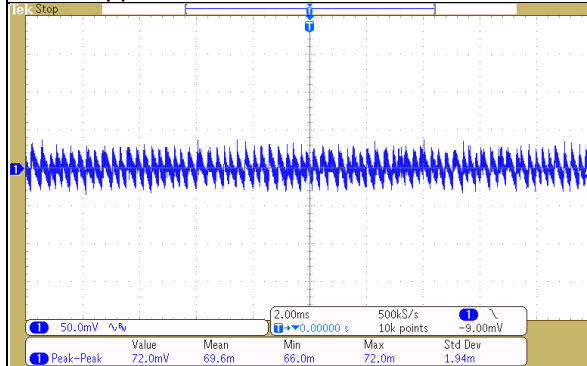
2. Ripple and noise



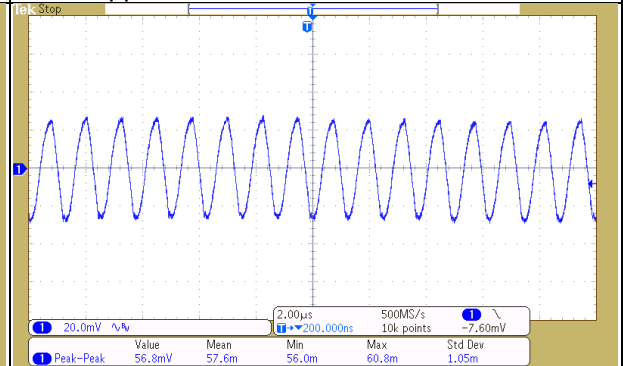




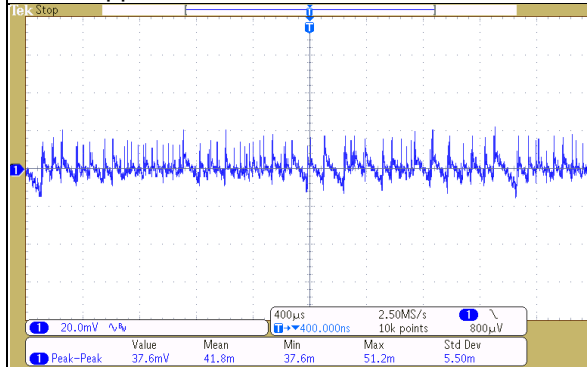
Vin=14.5V, Vo=9V, Io=0A
VBUS ripple



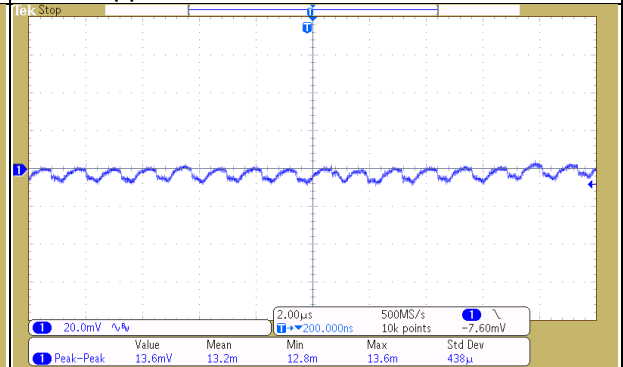
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VBUS ripple



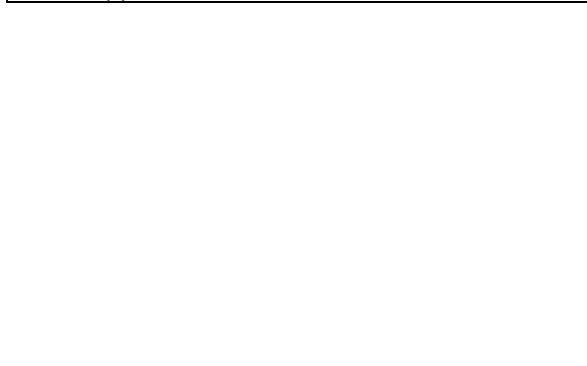
Vin=9V, Vo=12V, Io=0A
VBUS ripple



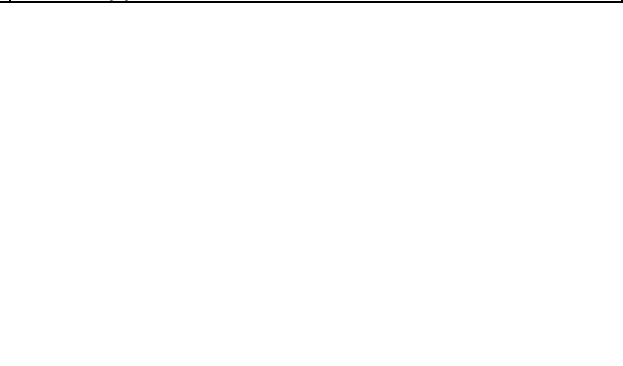
Vin=9V, Vo=12V Io=2.7A
VBUS ripple

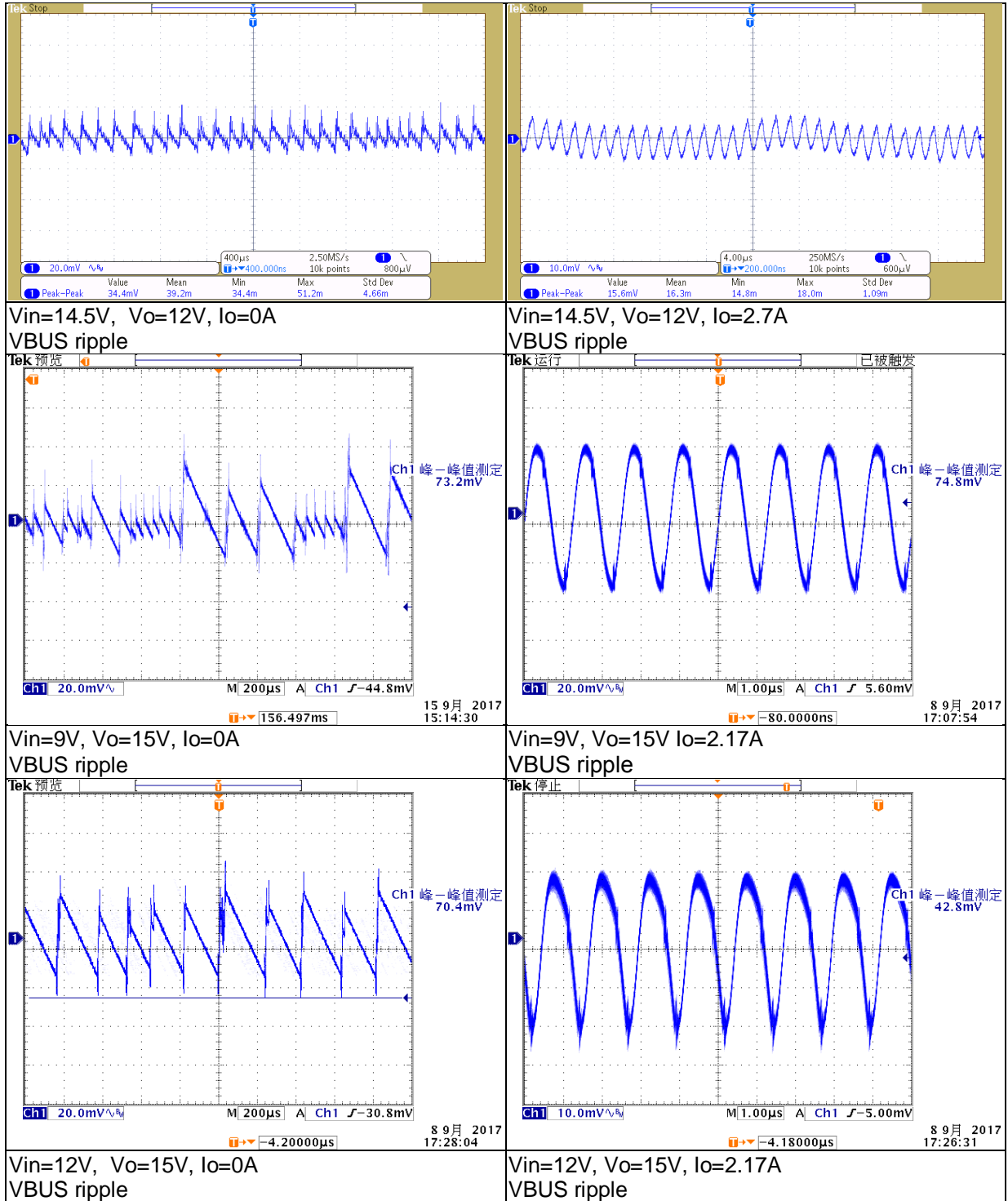


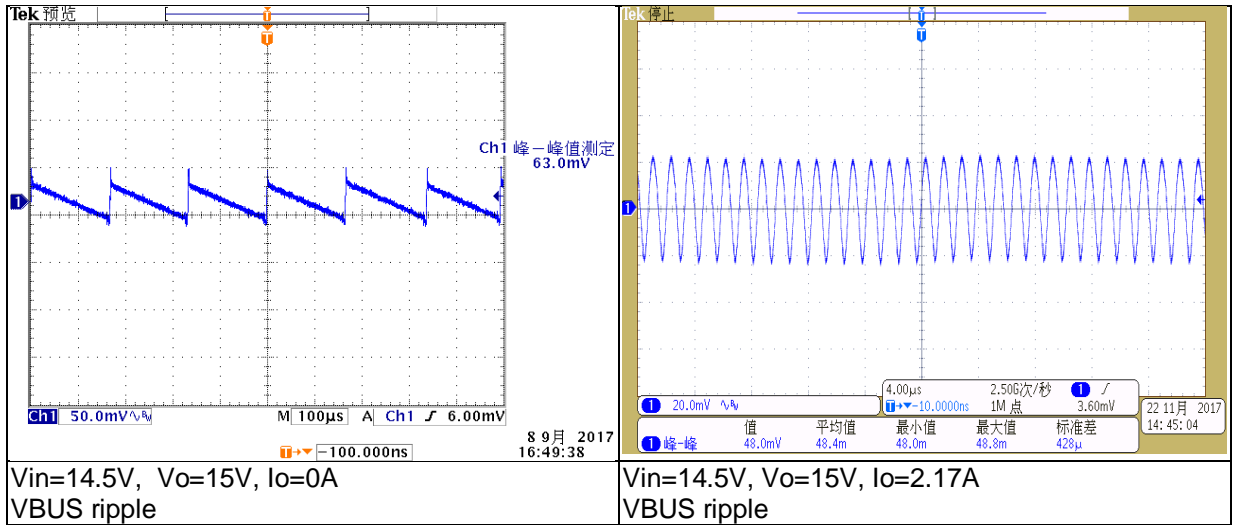
Vin=12V, Vo=12V, Io=0A
VBUS ripple



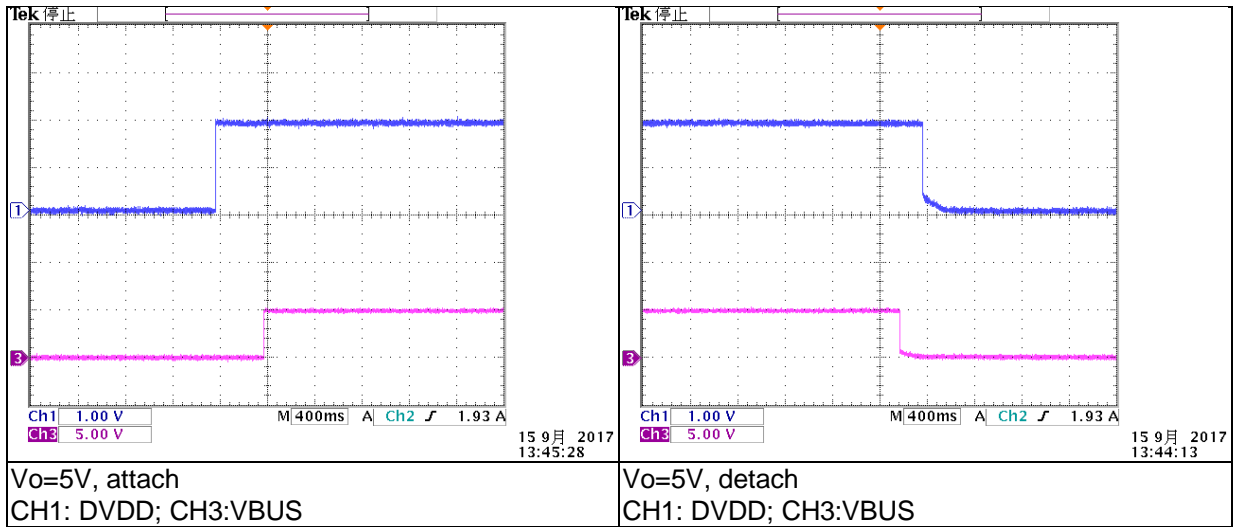
Vin=12V, Vo=12V, Io=2.7A
VBUS ripple

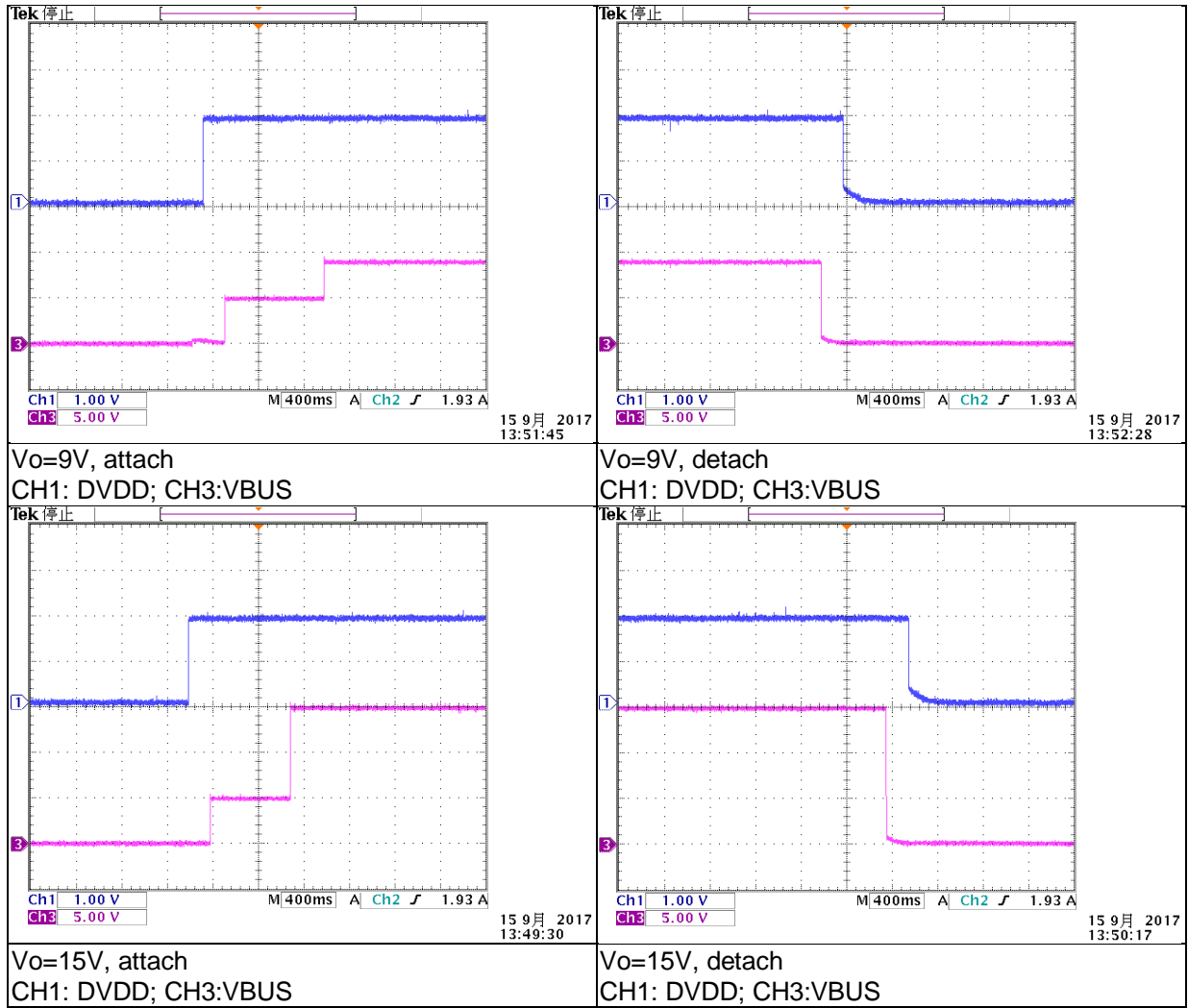




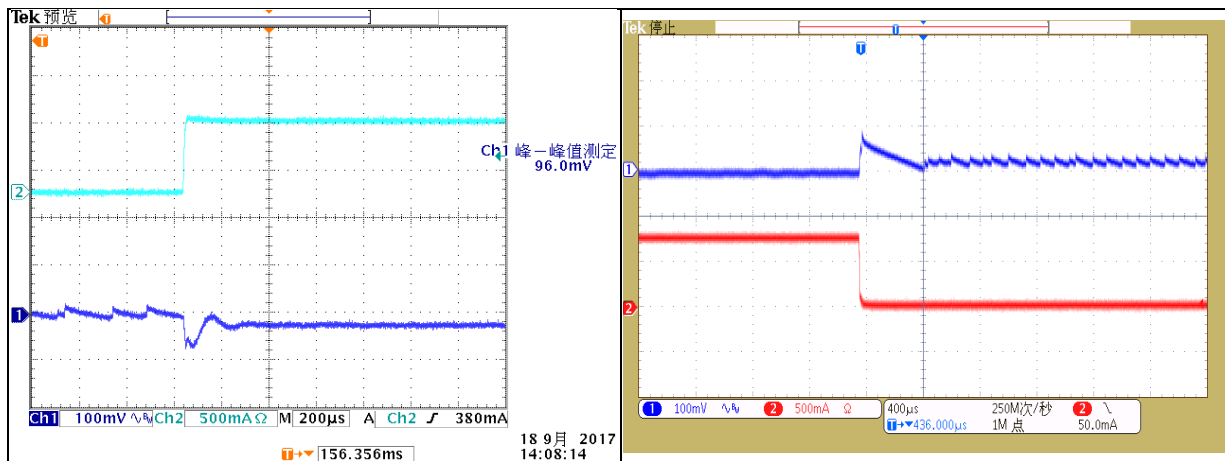


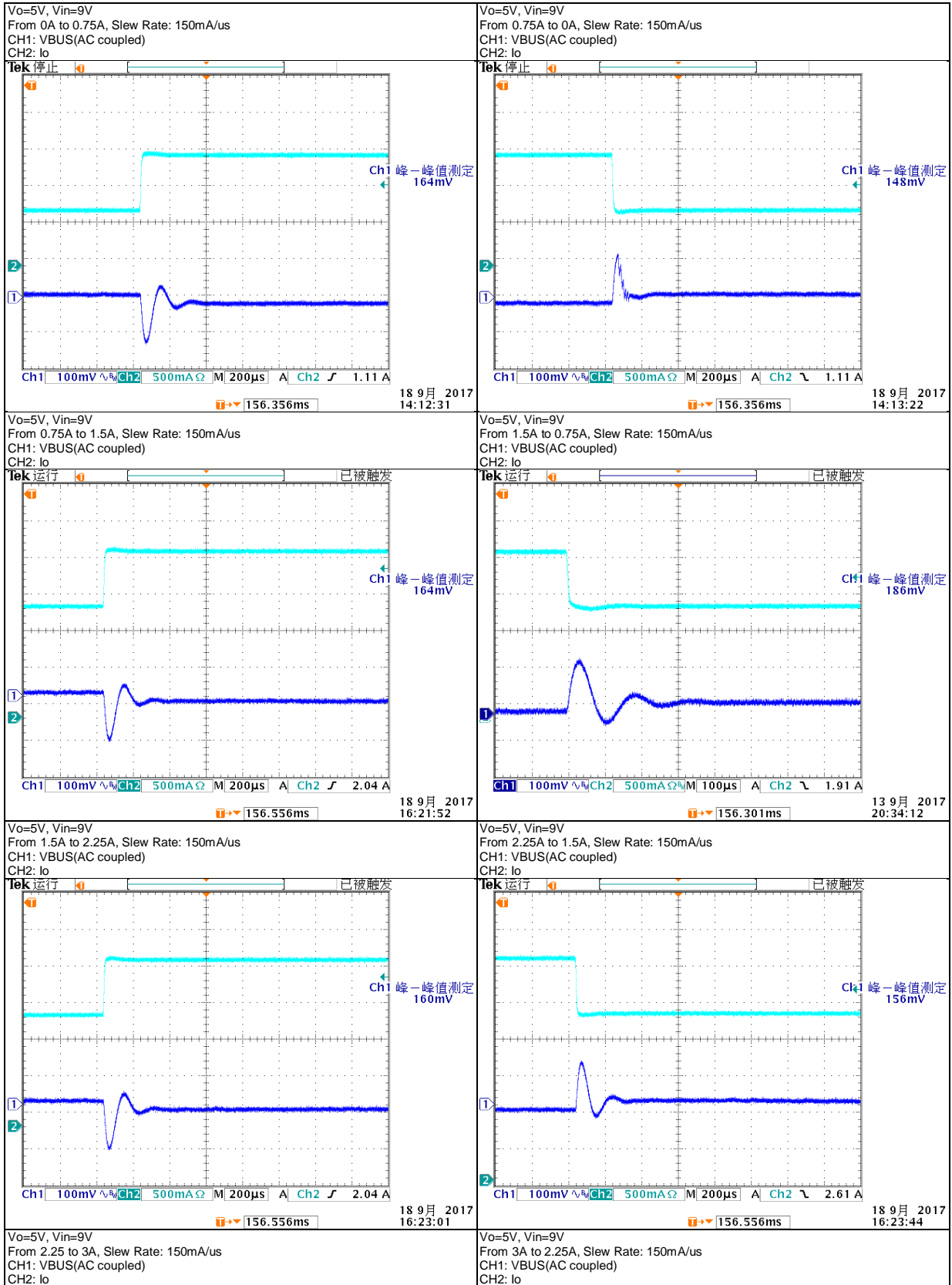
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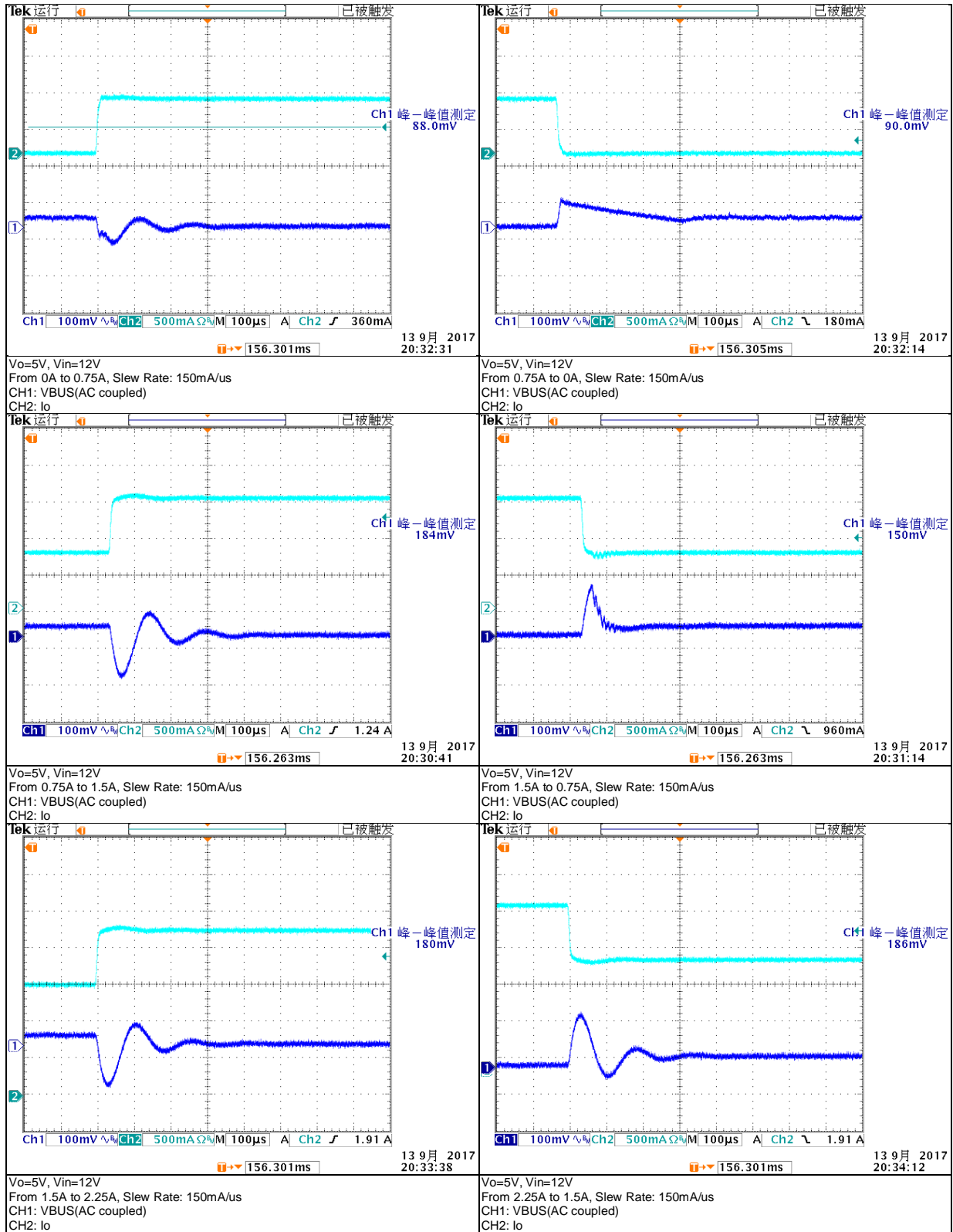


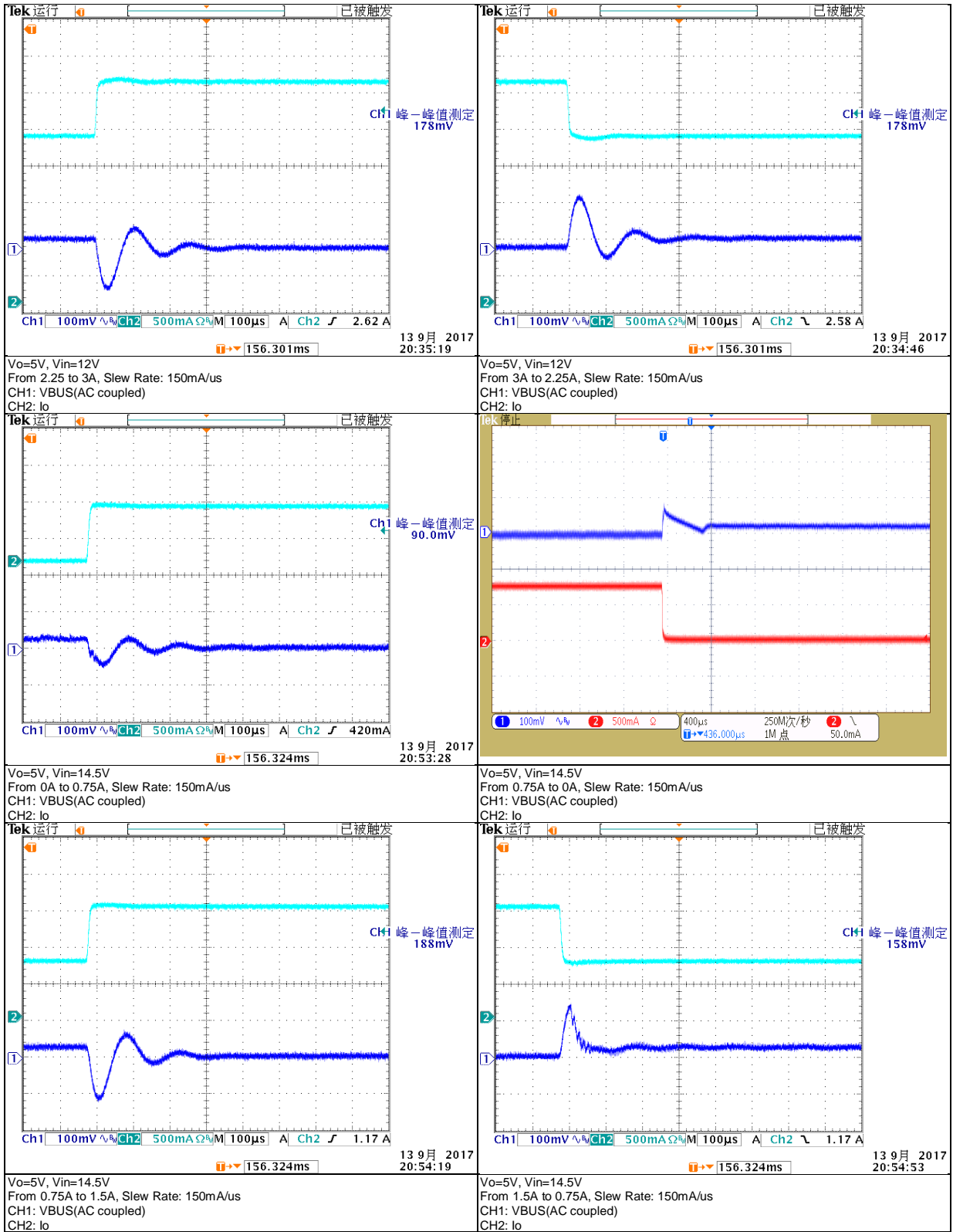


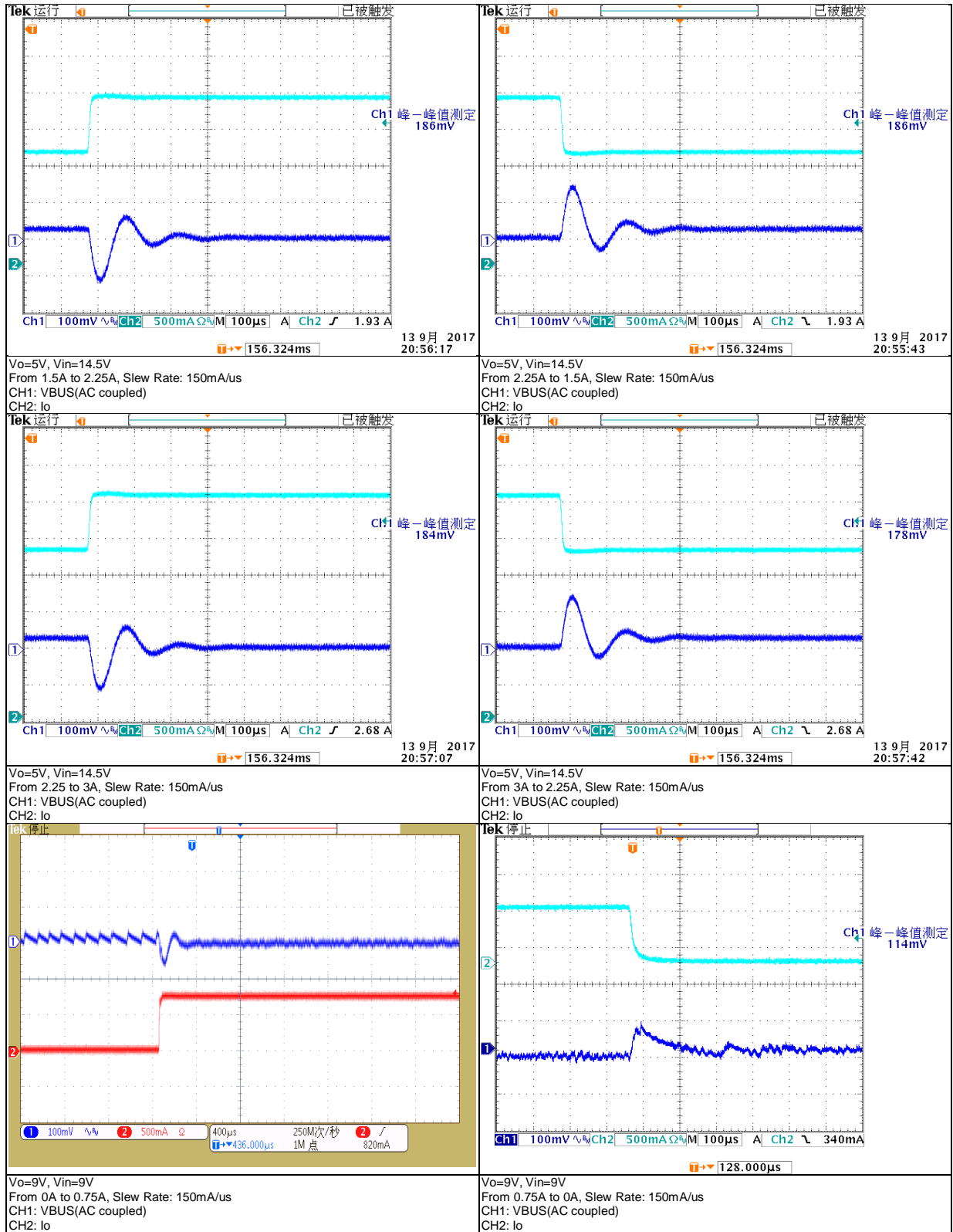
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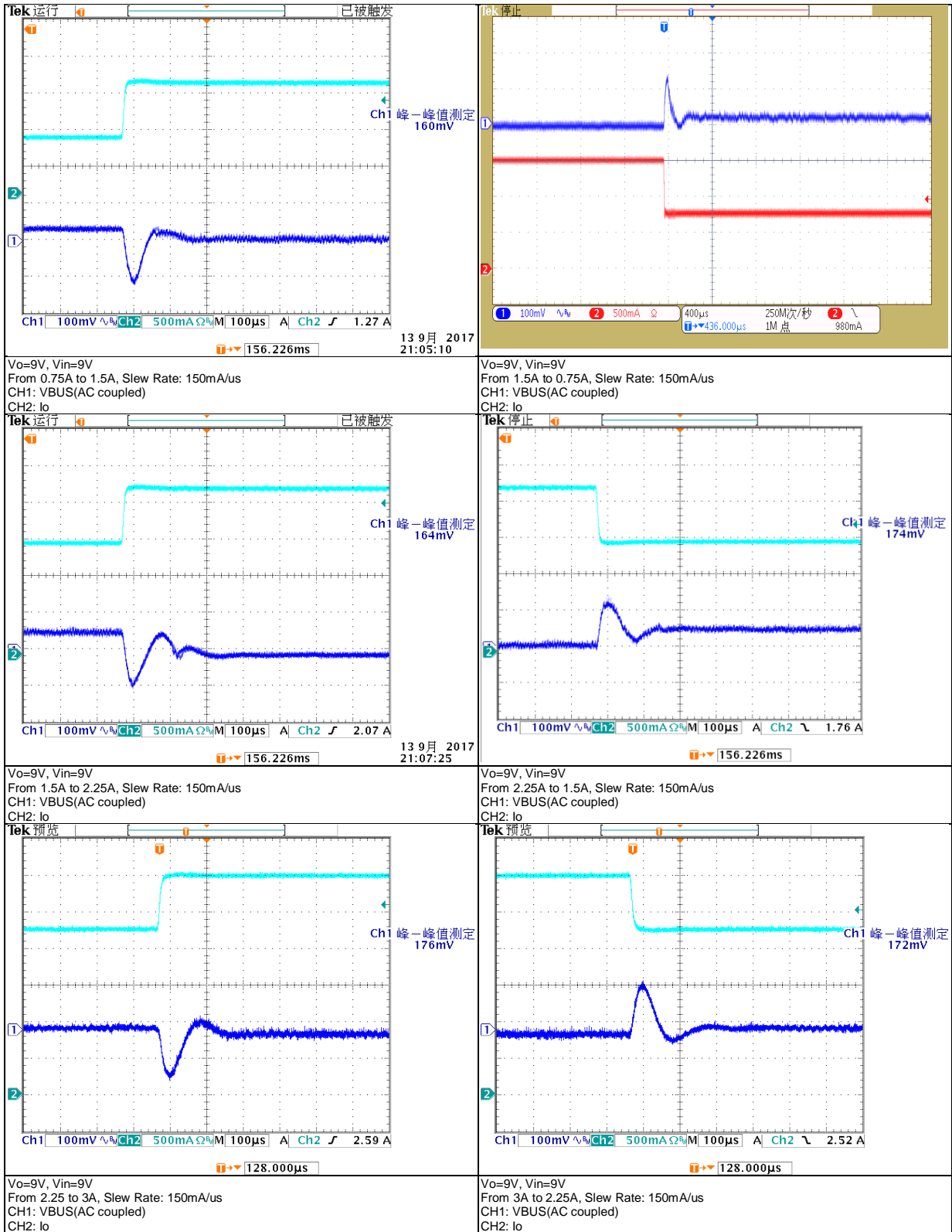


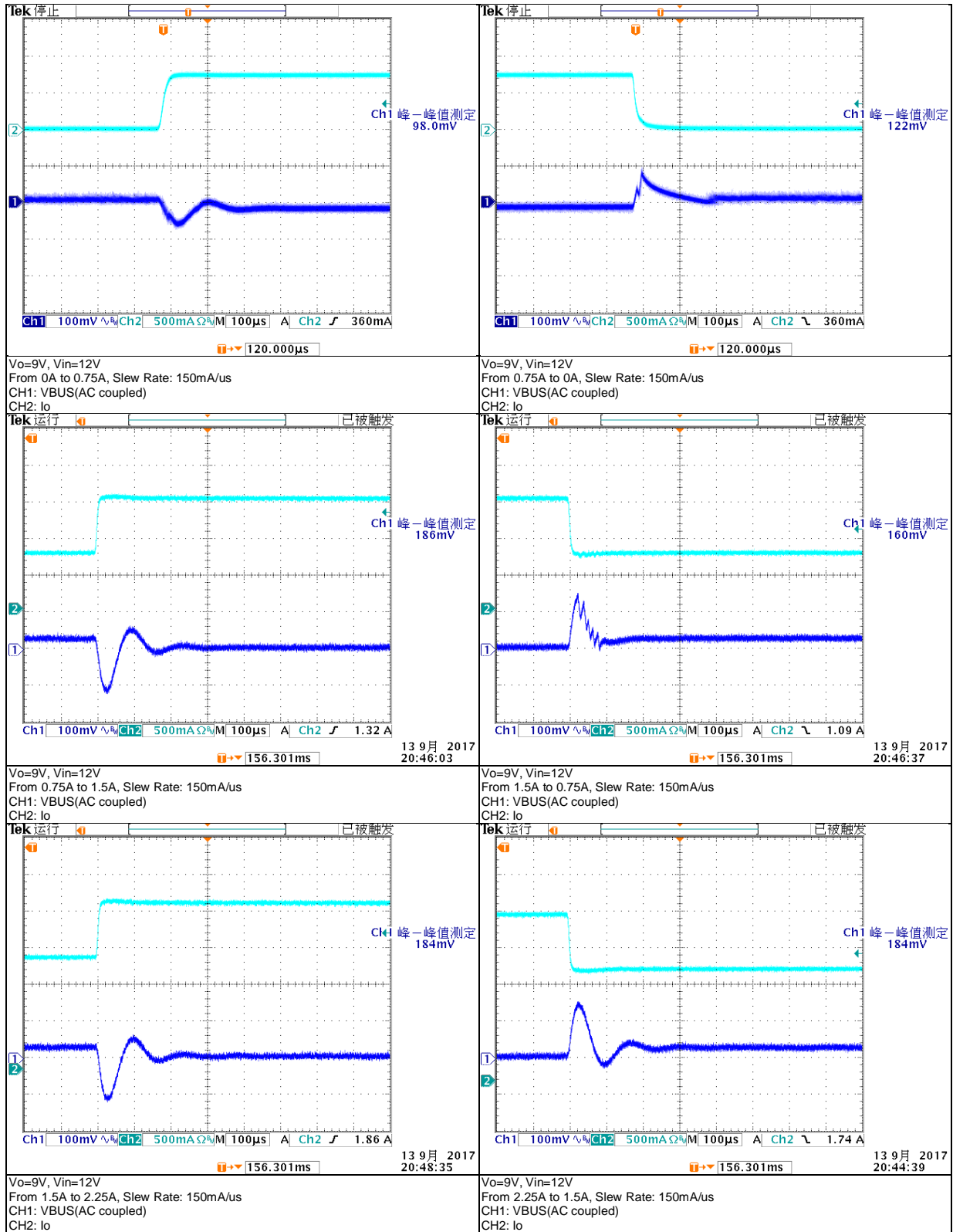


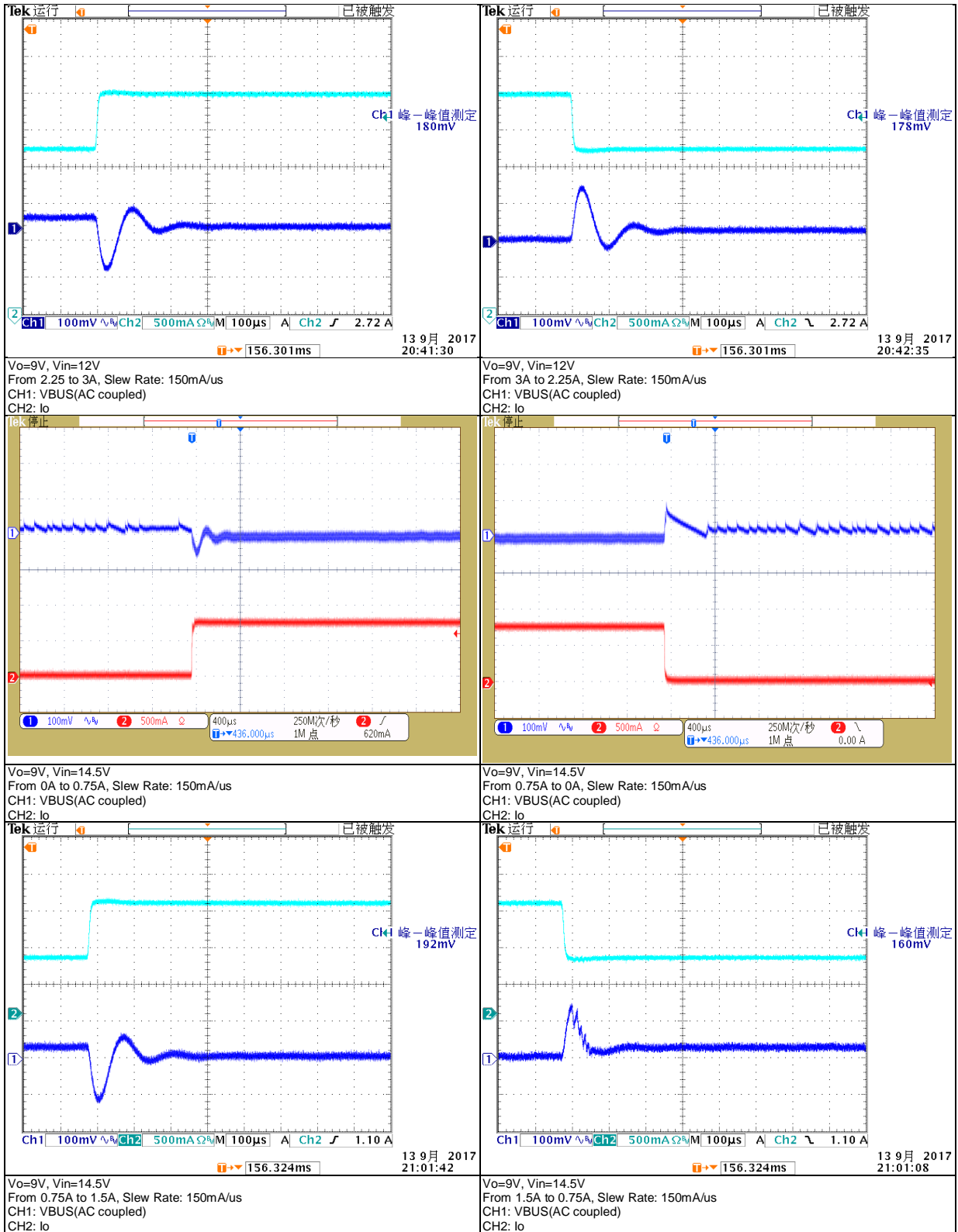


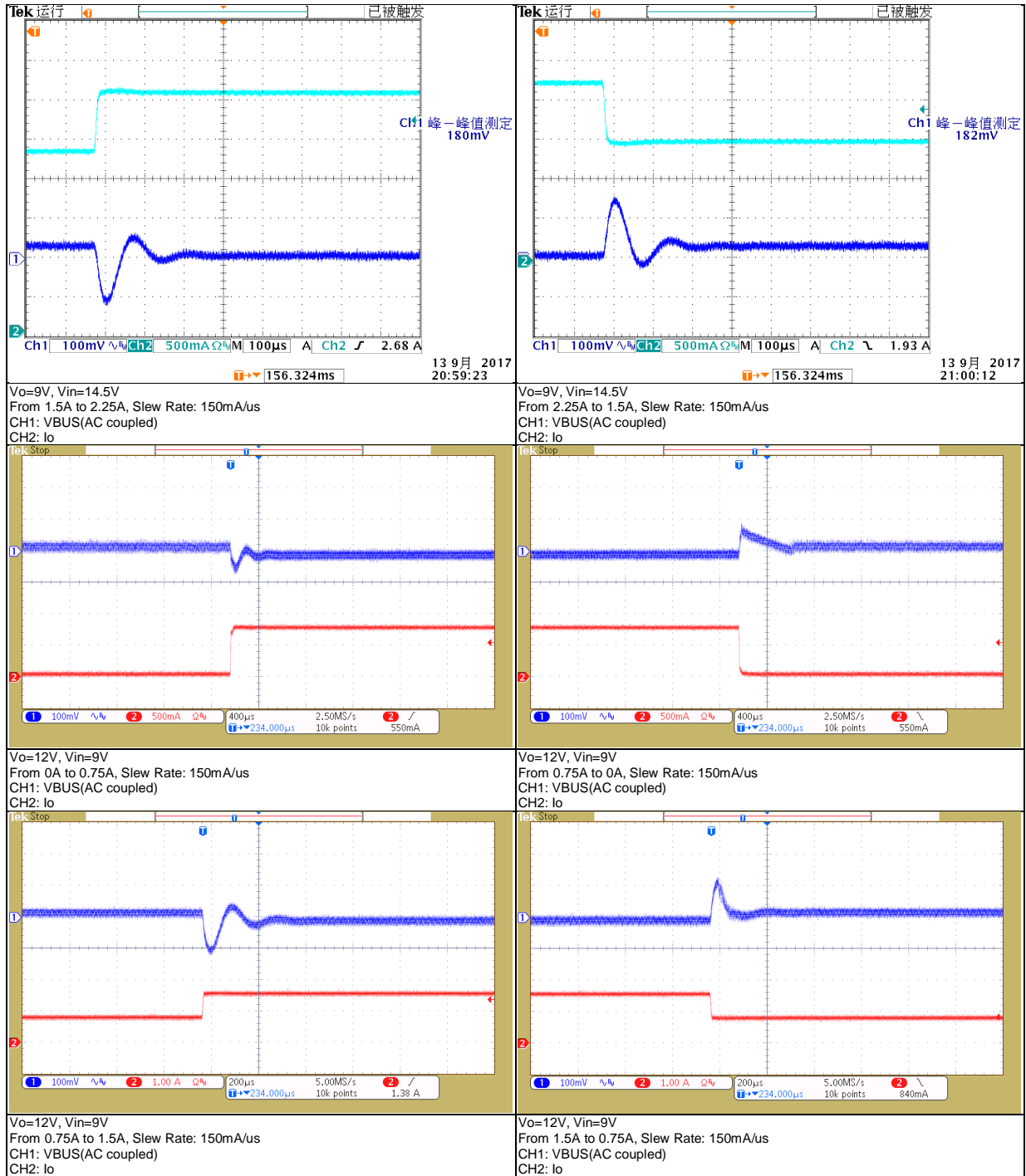


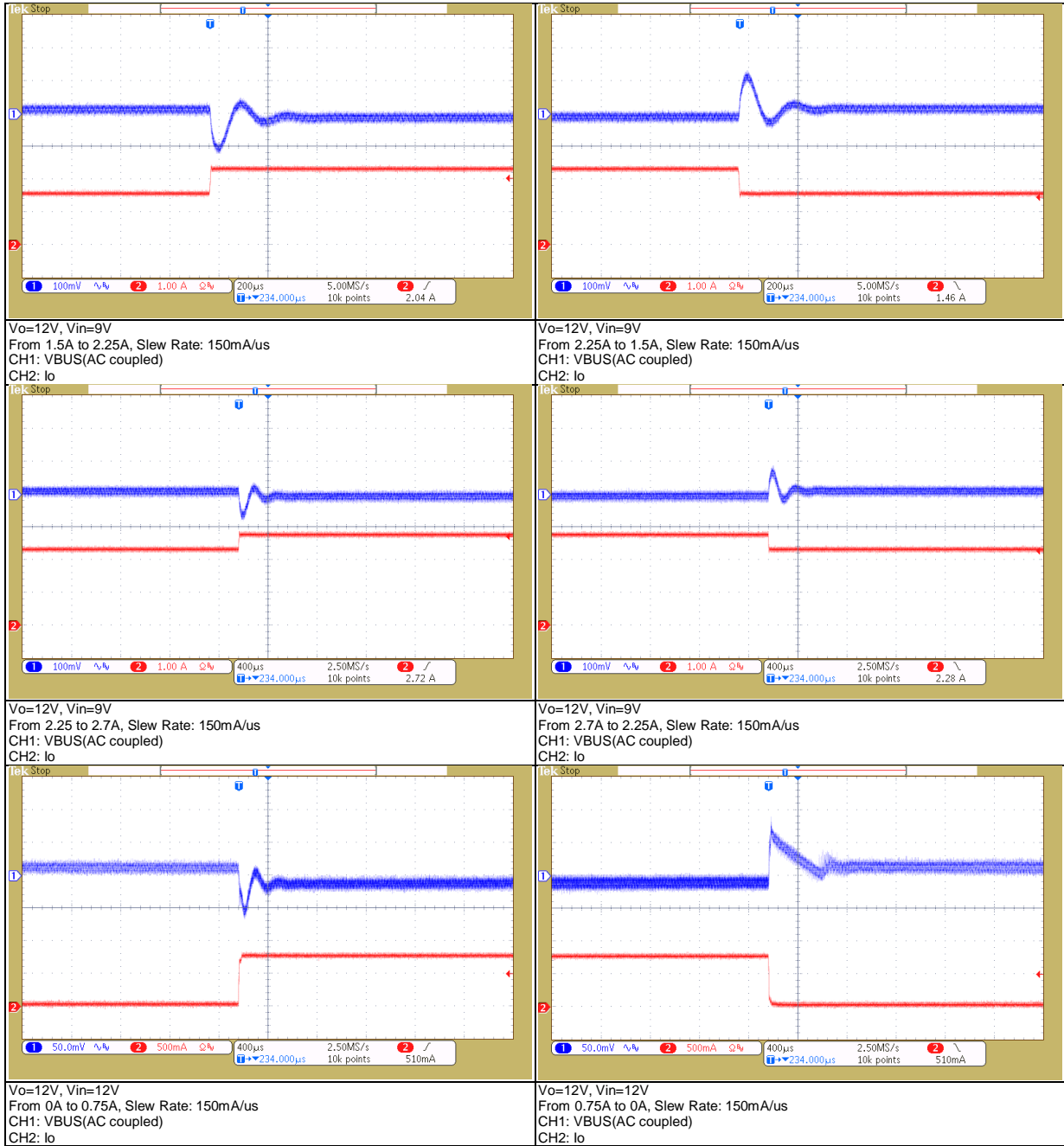


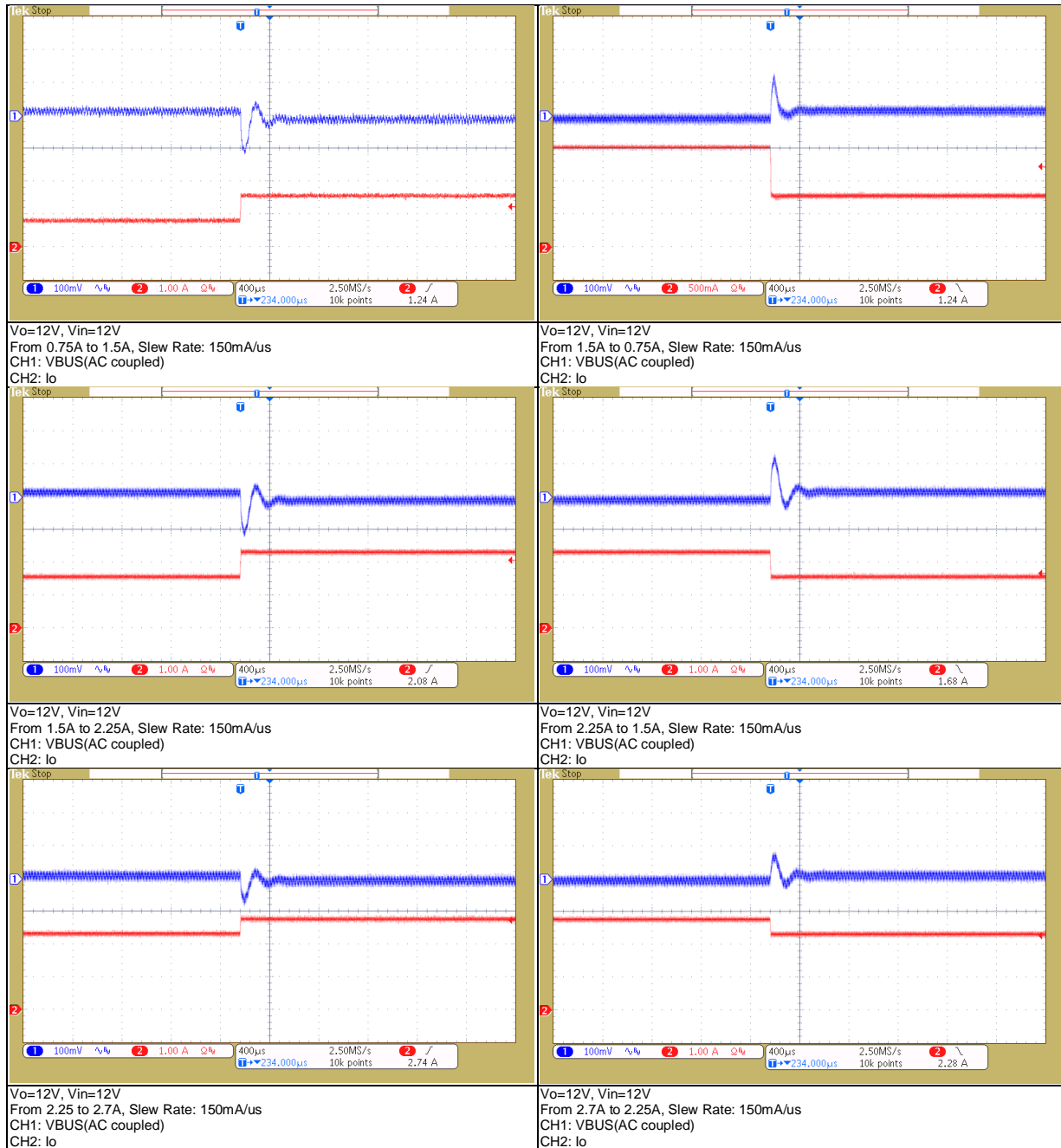


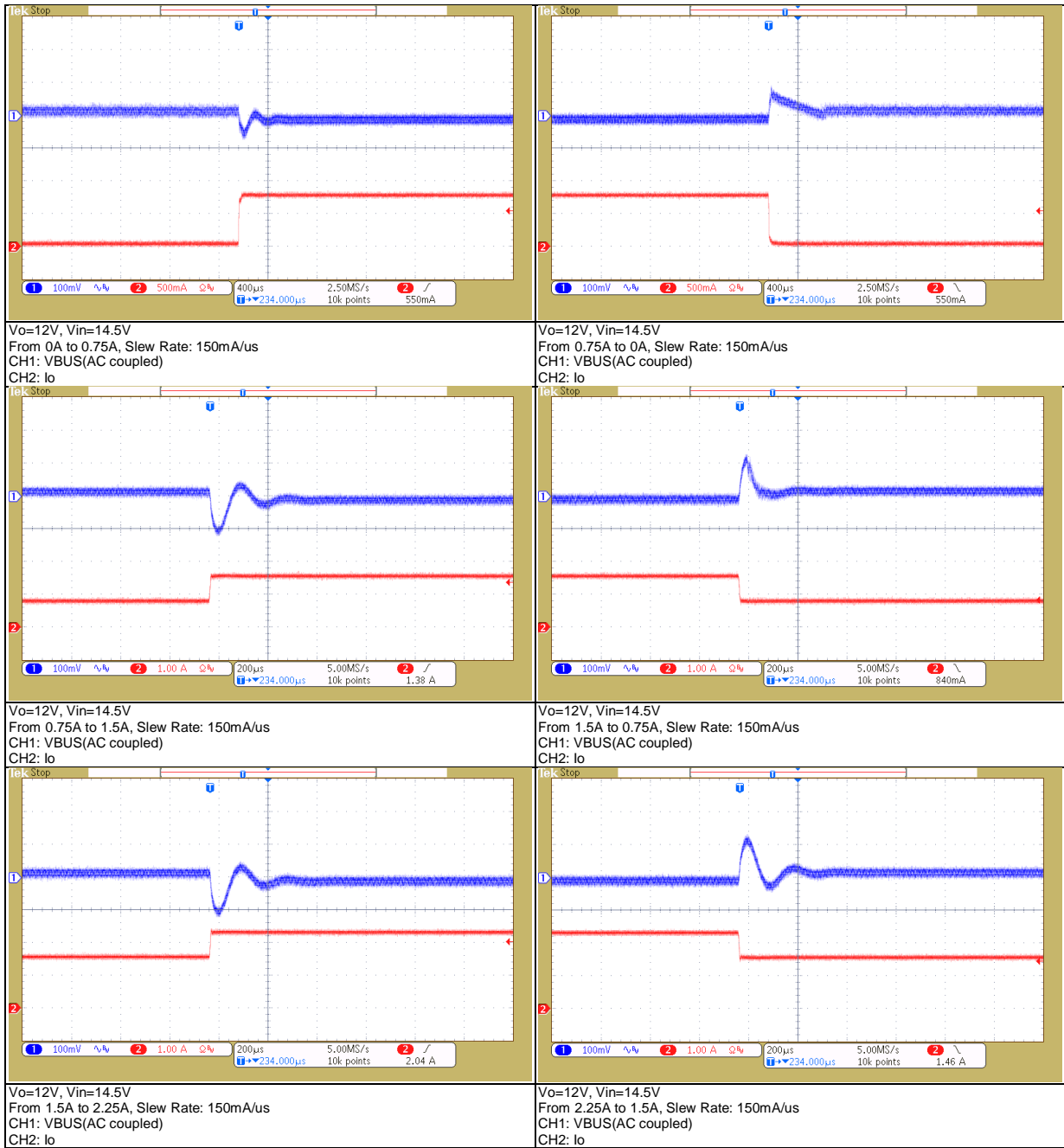


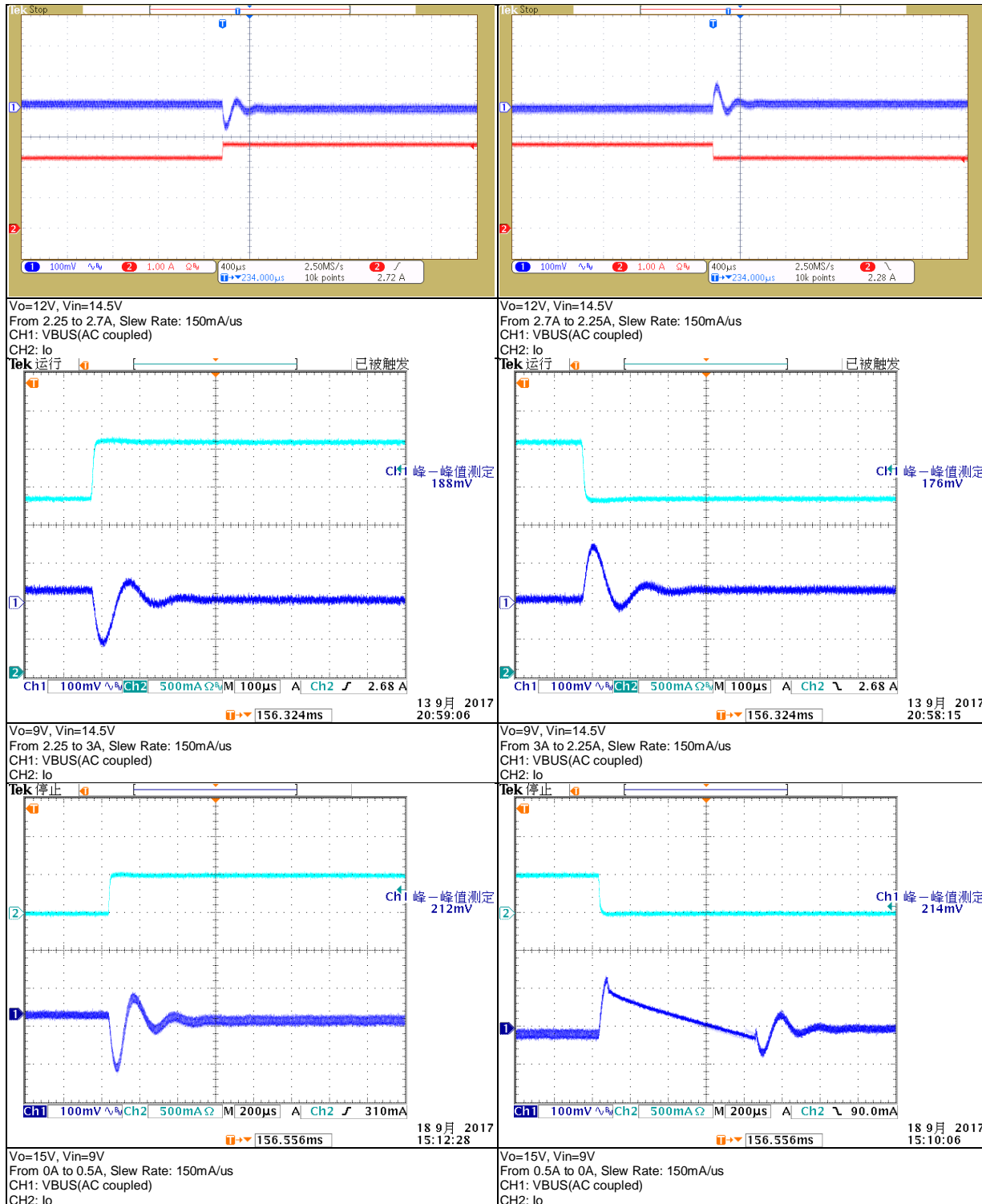


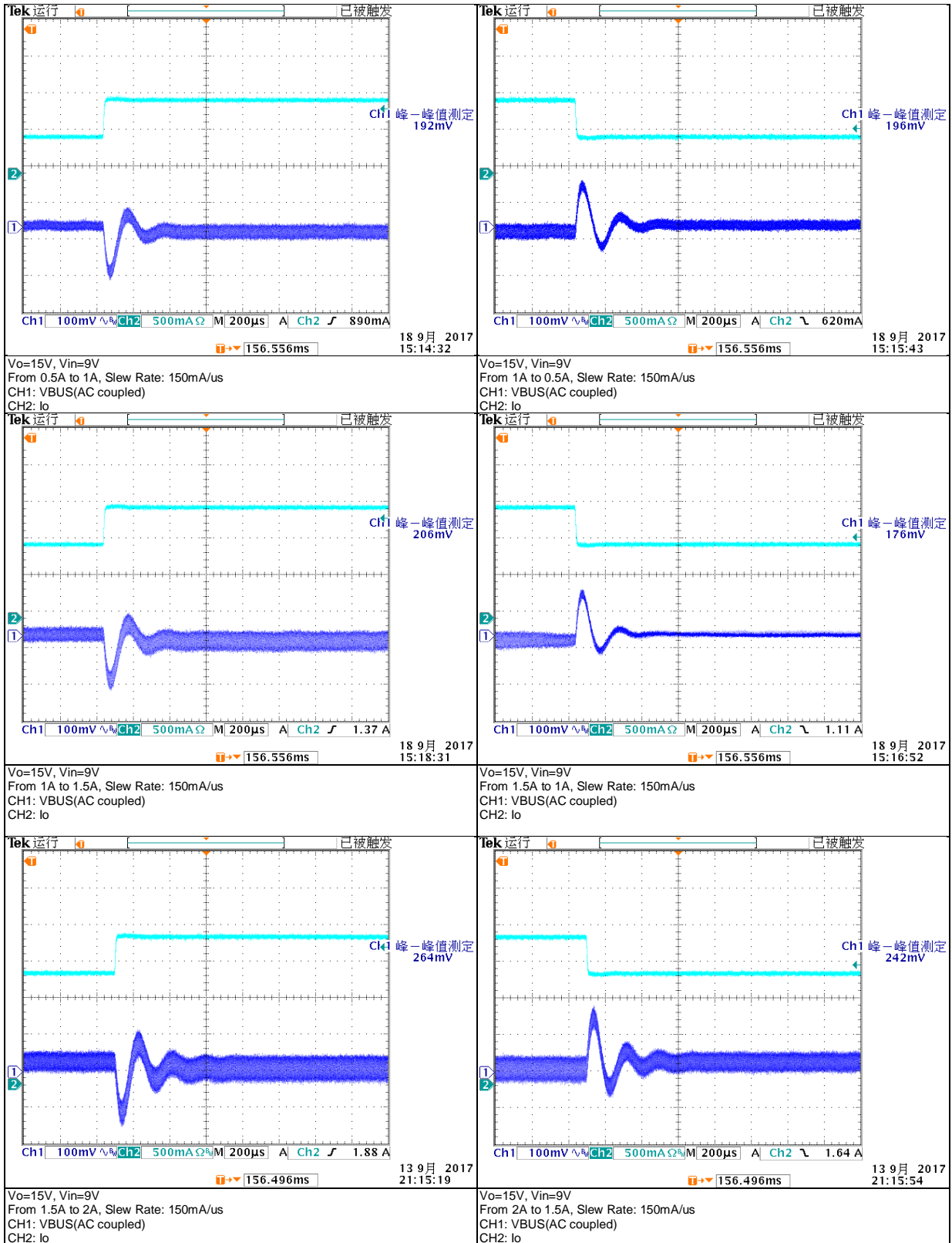


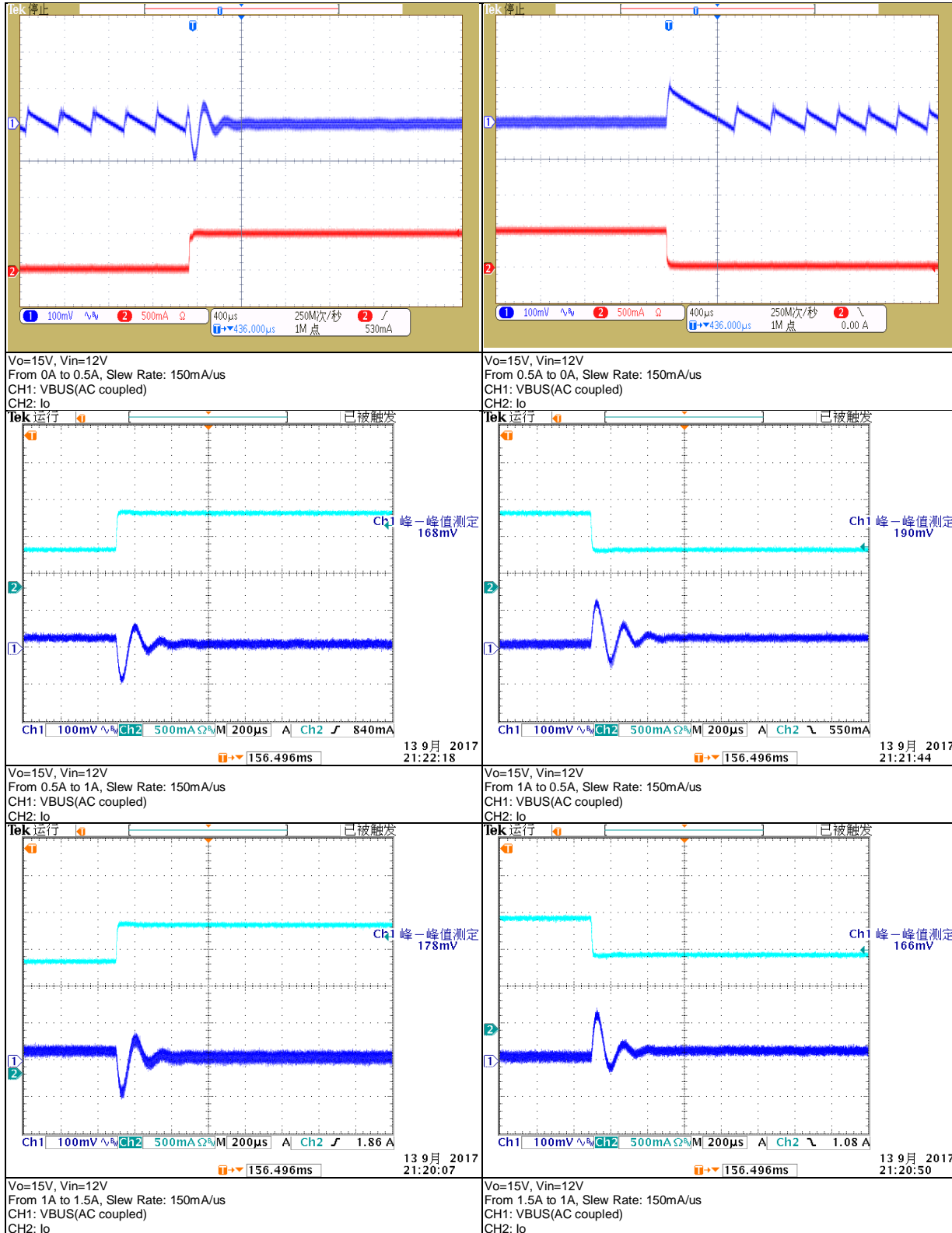


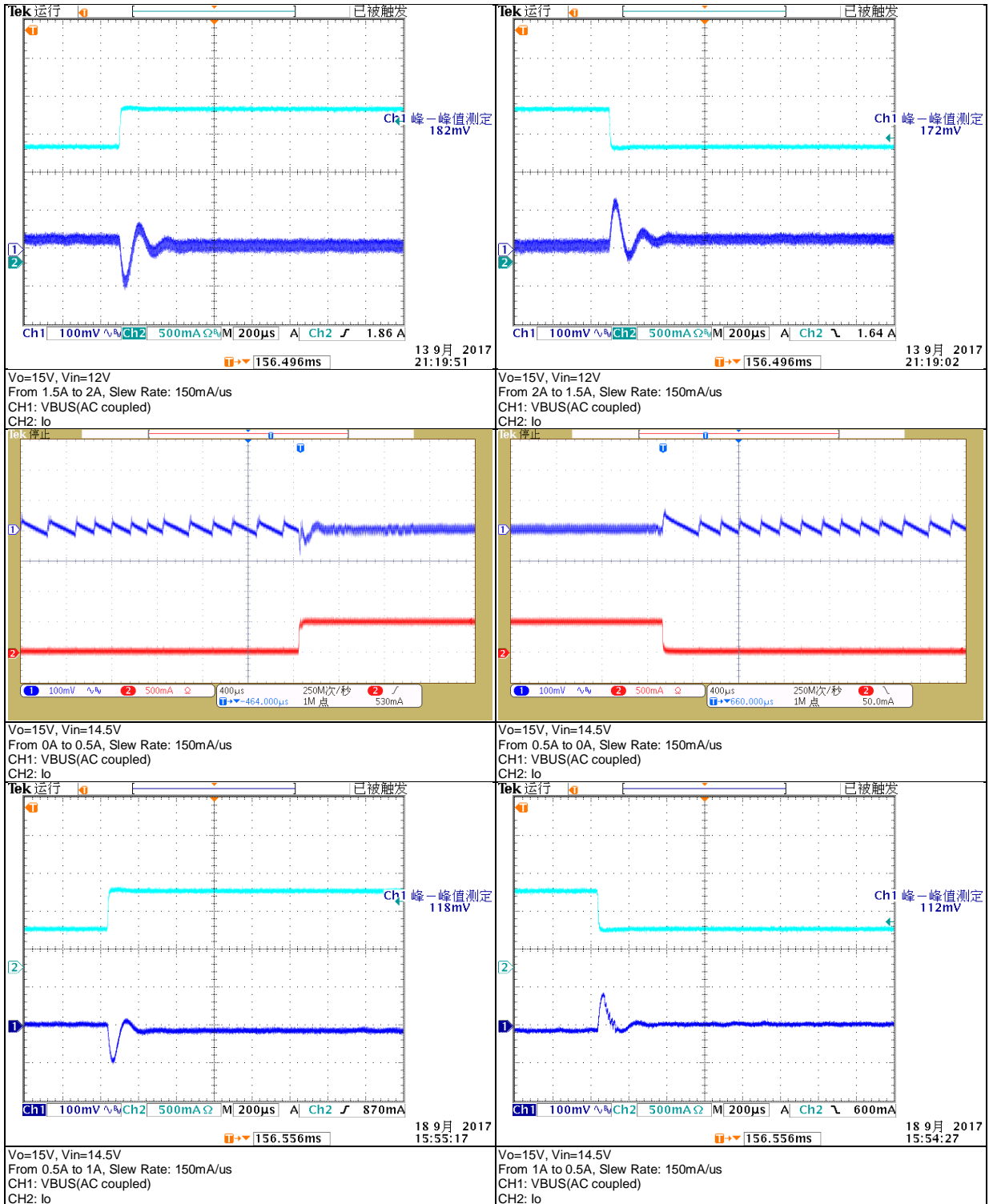


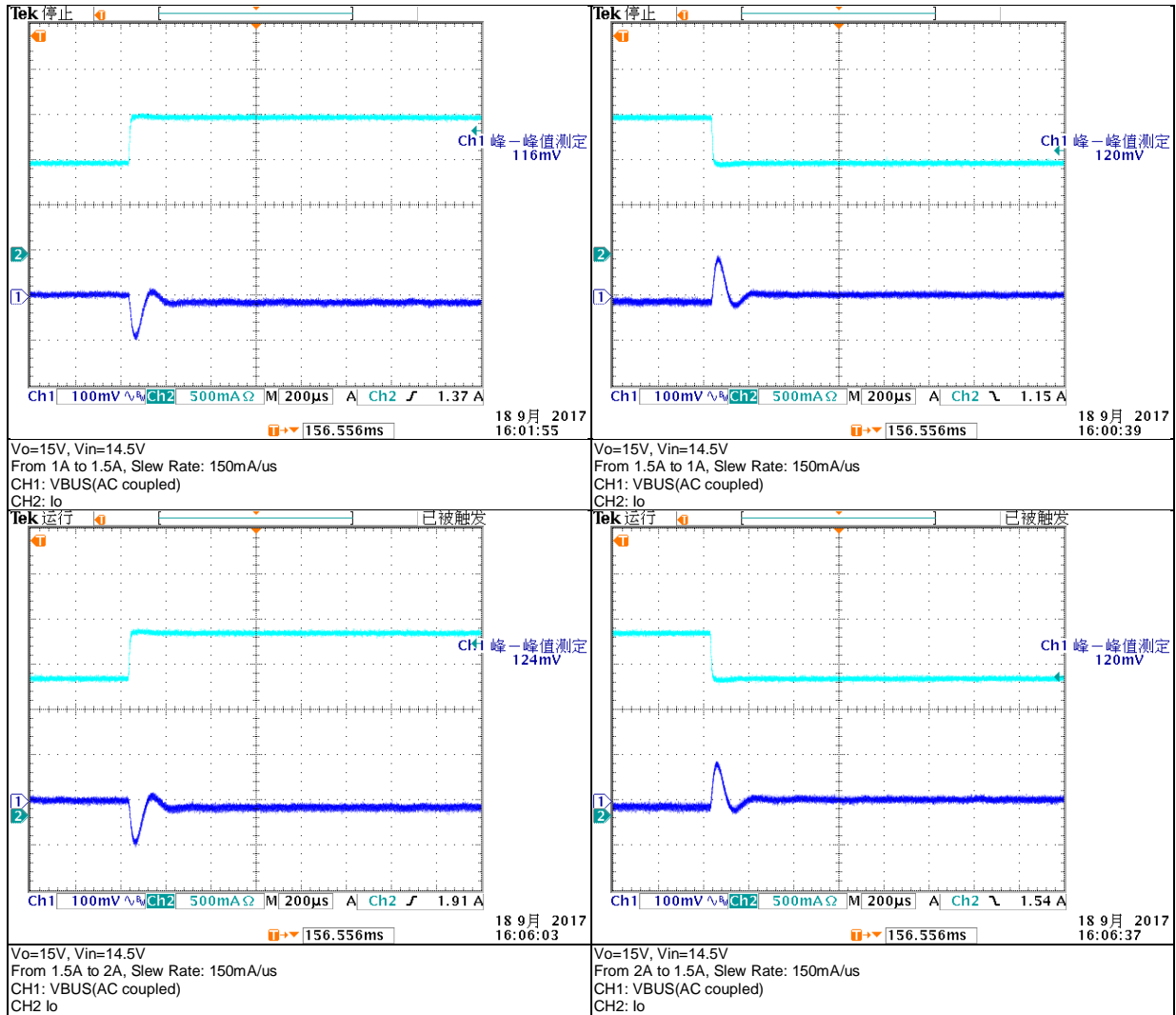




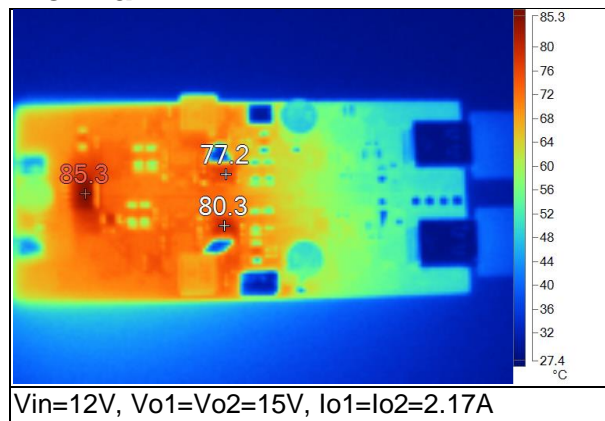








5. Thermal



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