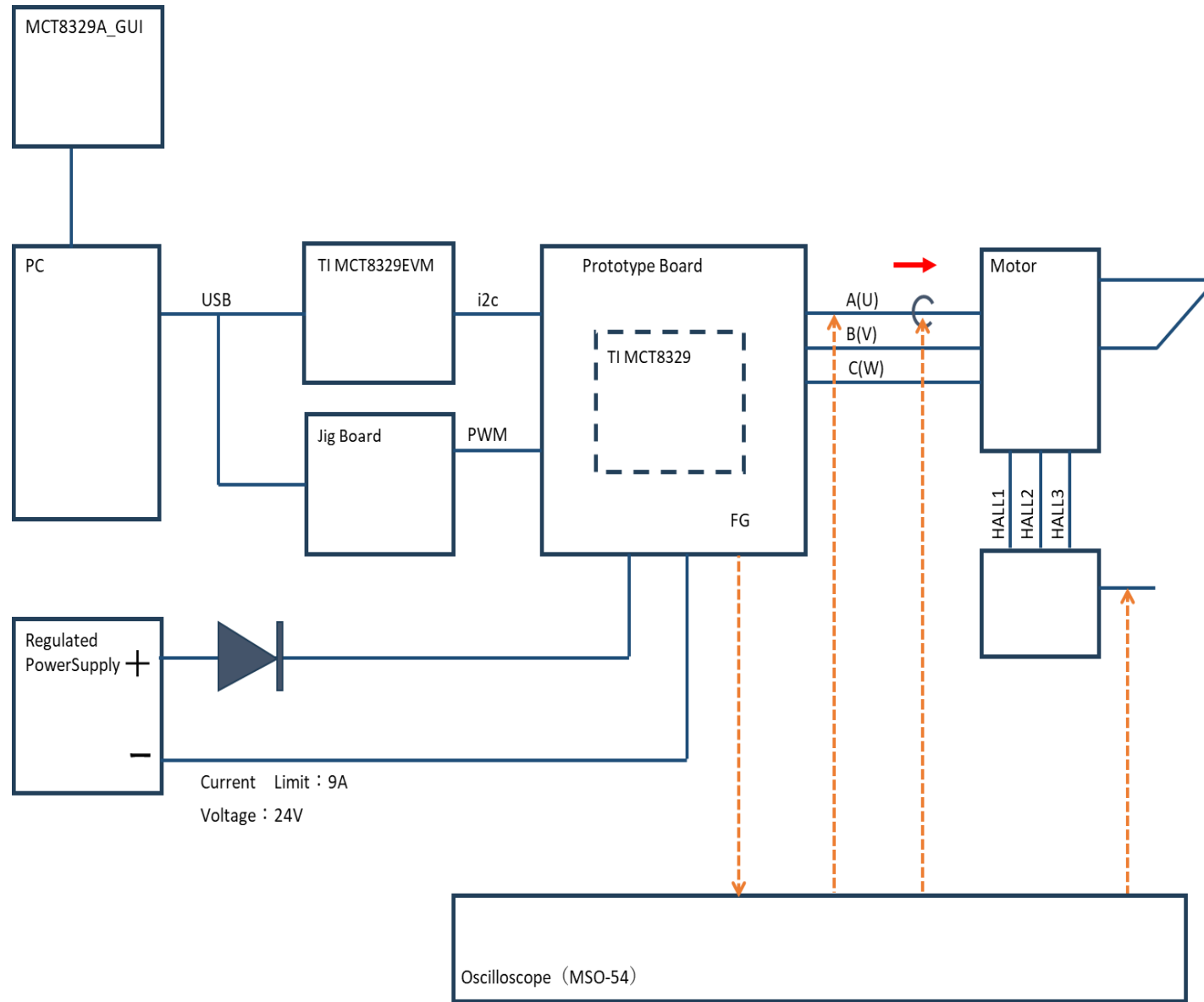


Schematic



(1) Normal Start-UP (without Retry)

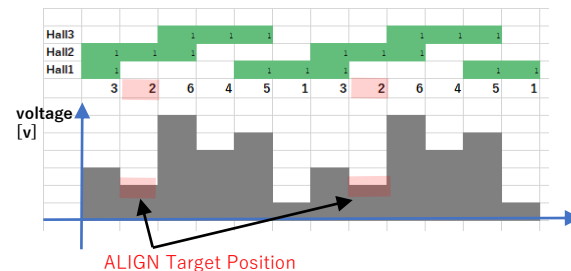
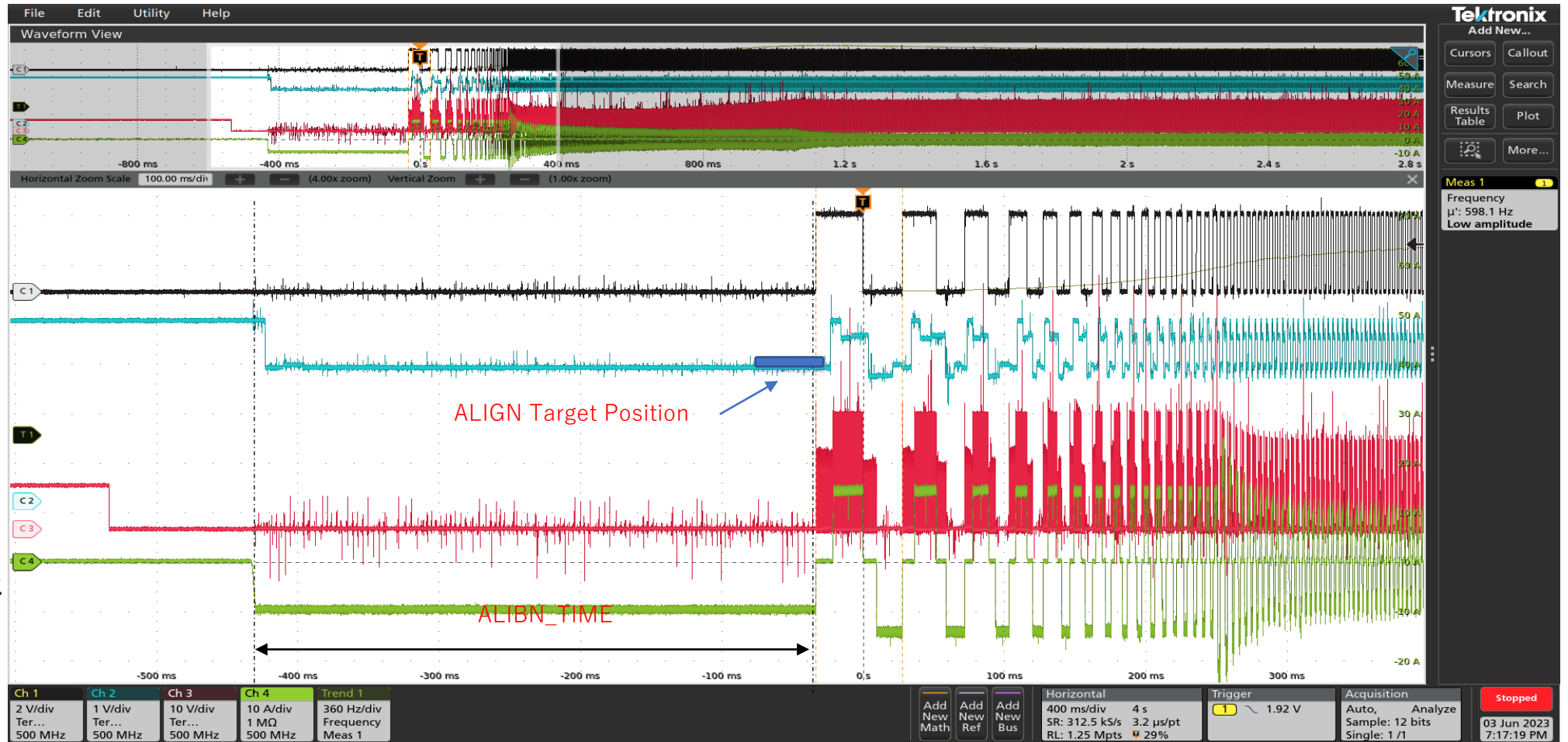
FG frequency

Motor Hall Signal

A Phase Voltage

A Phase Current

$C \Rightarrow A$



Hall signal is converted to voltage
pull-in position is at Hall Position [2].

(2) Normal Start-UP (without Retry)

FG frequency

Motor Hall Signal

A Phase Voltage

A Phase Current

C⇒A



AlignMode causes the motor shaft to move, butRetry does not occur.

(3) Abnormal Start-UP (with Retry)

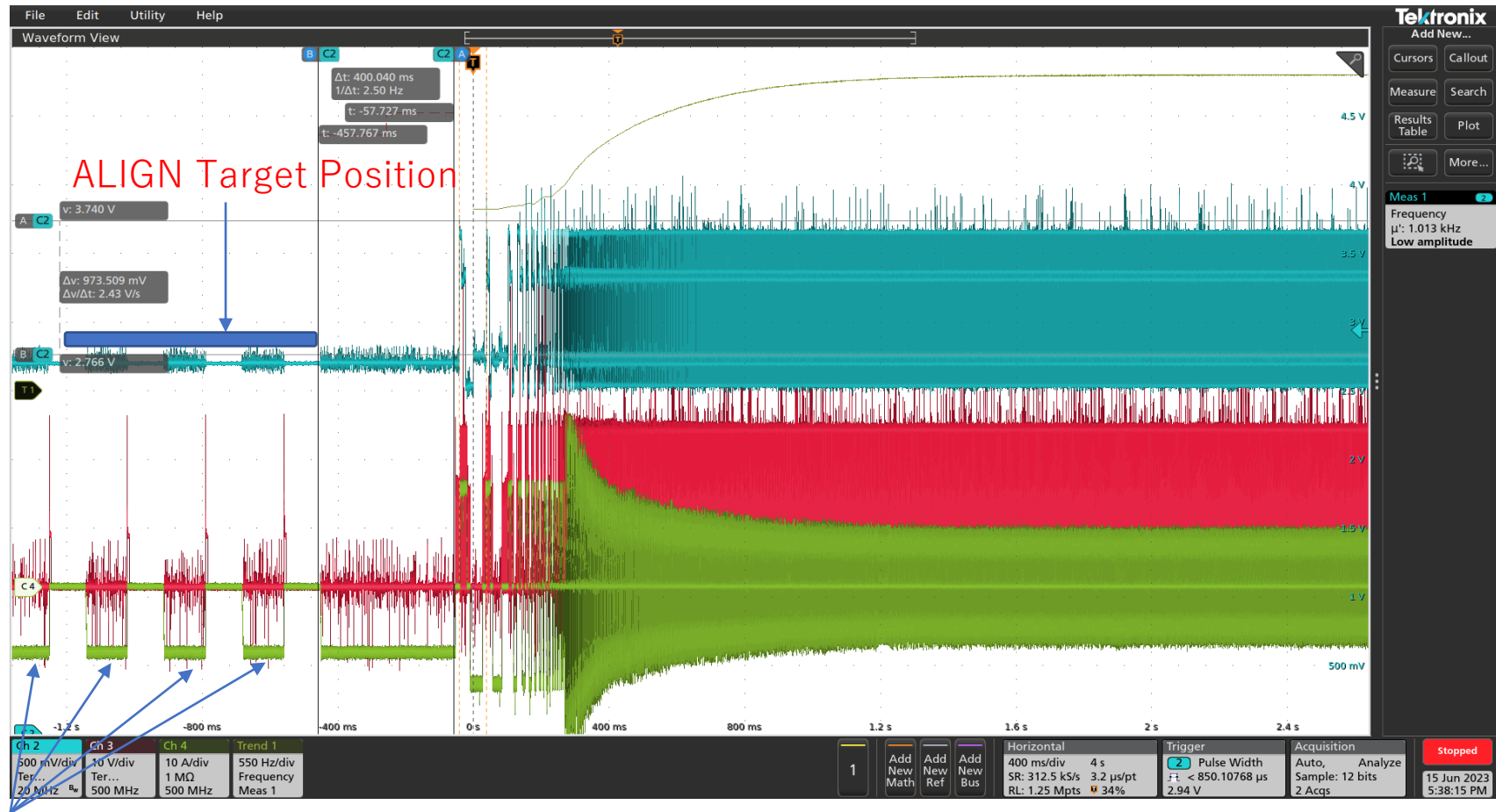
FG frequency

Motor Hall Signal

A Phase Voltage

A Phase Current

C⇒A



Align has settled the motor shaft in Hall Position [2], but Retry is occurring.

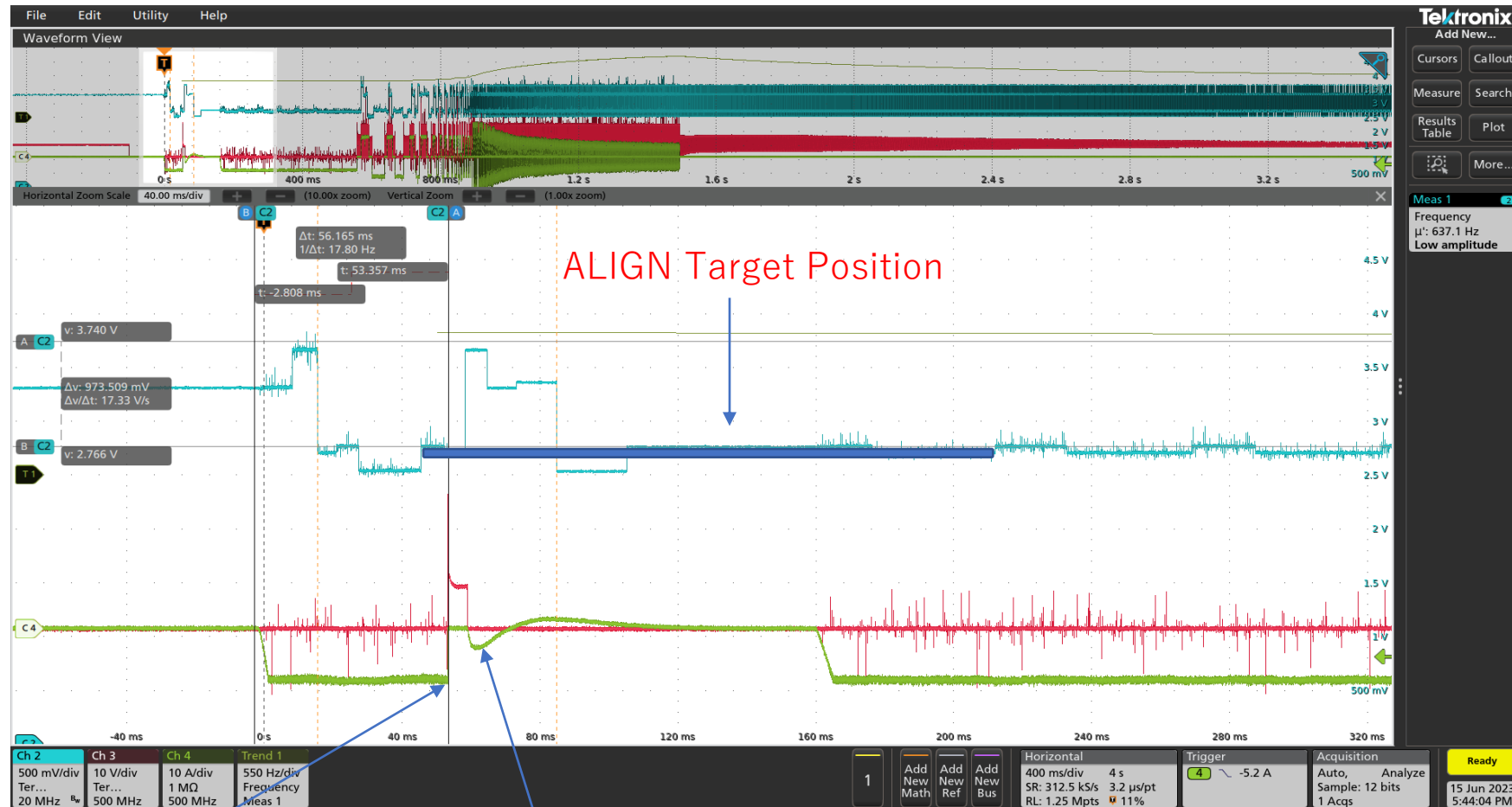
(4) Waveform expansion of (3) (with Retry)

FG frequency

Motor Hall Signal

A Phase Voltage

A Phase Current
C⇒A



When stopped, A Phase voltage rises, but A Phase current does not flow, and current flows after the voltage drops.

Register Information

0	isd_config	0x7F404D00
1	motor_startup1	0x6B9265B7
2	motor_startup2	0x332D3295
3	closed_loop1	0x1025E600
4	closed_loop2	0x02A1A4A8
5	closed_loop3	0x34C92001
6	closed_loop4	0x001AC953
7	const_speed	0x30010001
8	const_pwr	0x22600640
9	150_deg_two_ph_profile	0x24DB7200
10	150_deg_three_ph_profile	0x48DB6946
11	ref_profiles1	0x2341A349
12	ref_profiles2	0x58099B3C
13	ref_profiles3	0x67FFFF34
14	ref_profiles4	0x000FABC7
15	ref_profiles5	0x6AF1F8C0
16	ref_profiles6	0x7FFF8000
0	algo_ctrl1	0x00000000
1	device_ctrl	0x00000000
0	ana_trim3	0x48004800

1	ana_trim4	0x3400000000
2	ana_trim5	0x00000034
3	ana_trim6	0x00000000
4	ana_trim7	0x0089CA61
5	ana_trim8	0x00004A25
6	ana_trim9	0x0085B85E
7	ana_trim10	0x5377FF3C
0	fault_config1	0x4160960C
1	fault_config2	0x7691400A
0	gate_driver_fault_status	0x00000000
1	controller_fault_status	0x00000000
0	gd_config1	0x000600BE
1	gd_config2	0x00000000
0	pin_config1	0x58000002
1	pin_config2	0x3E0020AA
2	device_config	0x27100008
0	sys_status1	0x00EE0C50
1	sys_status2	0x60010000
2	sys_status3	0x00000000