

MCU Freq.	100	MHZ
MCU period	10	ns
PWM Freq.	20000	Hz
PWM Period	0.05	ms
PWM count	5000	ticks
PWM duty	HS 50%	LS 50%
PWM rise/fall	Central aligned	
PWM dead time	1000	ns

【 Previous fault 】 Passed Low-side OCP, or charge bump under voltage when disable OCP.

【 Presnet fault 1 】 VGS gate drive fault for **Low-side** MOSFET A\B\C.

Table 13. Gate Driver VGS Faults Register Description

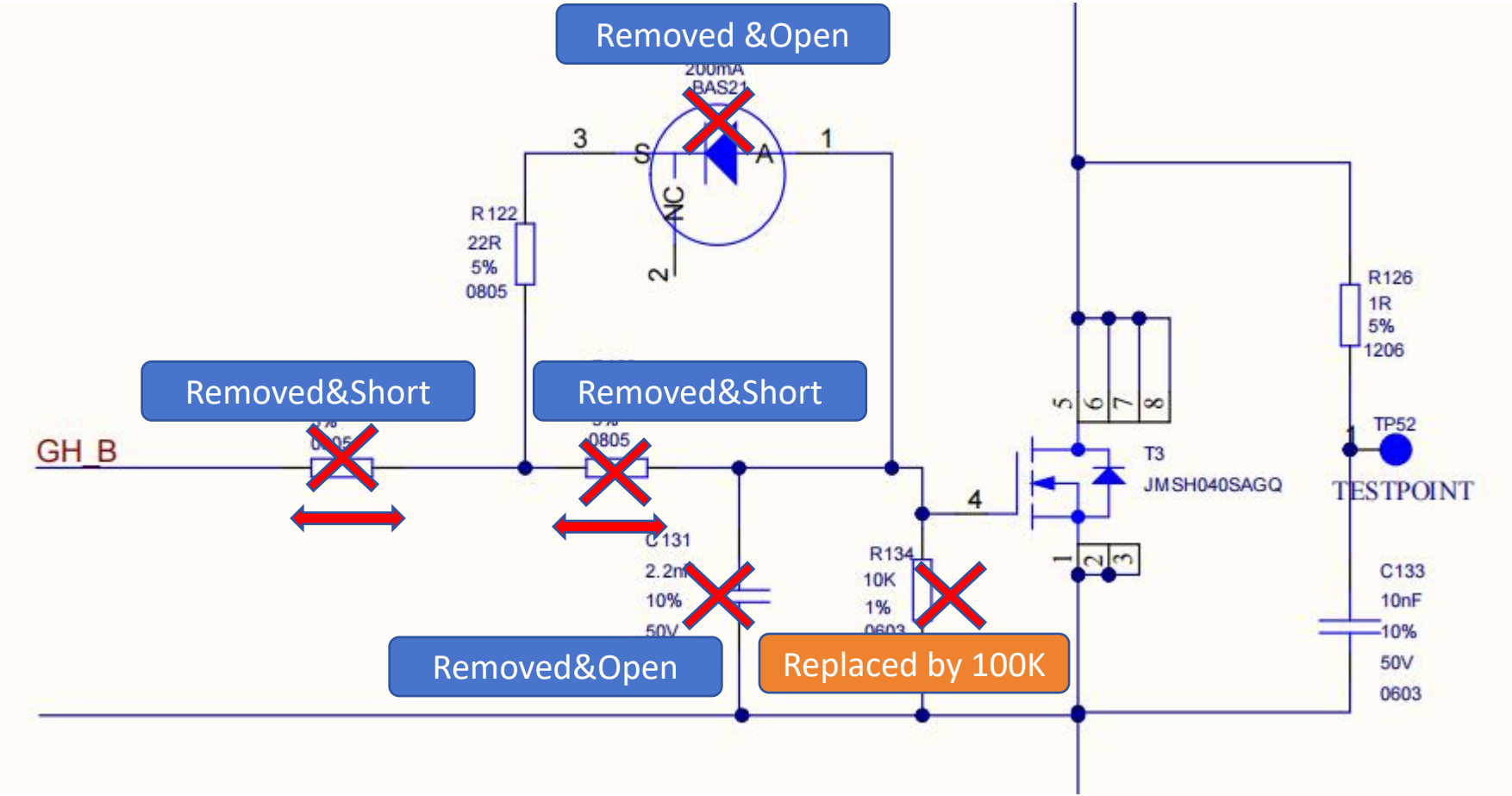
BIT	R/W	NAME	DEFAULT	DESCRIPTION
10	R	VGS_HA	0x0	VGS gate drive fault for high-side MOSFET A
9	R	VGS_LA	0x0	VGS gate drive fault for low-side MOSFET A
8	R	VGS_HB	0x0	VGS gate drive fault for high-side MOSFET B
7	R	VGS_LB	0x0	VGS gate drive fault for low-side MOSFET B
6	R	VGS_HC	0x0	VGS gate drive fault for high-side MOSFET C
5	R	VGS_LC	0x0	VGS gate drive fault for low-side MOSFET C
4:0	R	RSVD	0x0	-

```

ReadOnlyRegisterbeofrePWM 0x70004788
ReadOnlyRegisterbeofrePWM[0] 0000 0000 0000 0000
ReadOnlyRegisterbeofrePWM[1] 0000 0000 0000 0000
ReadOnlyRegisterbeofrePWM[2] 0
ReadOnlyRegisterbeofrePWM[3] 0000 0010 1010 0000

```

MCU Freq.	100	MHZ
MCU period	10	ns
PWM Freq.	20000	Hz
PWM Period	0.05	ms
PWM count	5000	ticks
PWM duty	HS 50%	LS 50%
PWM rise/fall	Central aligned	
PWM dead time	1000	ns



【 Previous fault 】
 Lower-side OCP, or charge bump under voltage when disable OCP.

【 Presnet fault 2 】
 VGS gate drive fault for **High-side** MOSFET A\B\C.

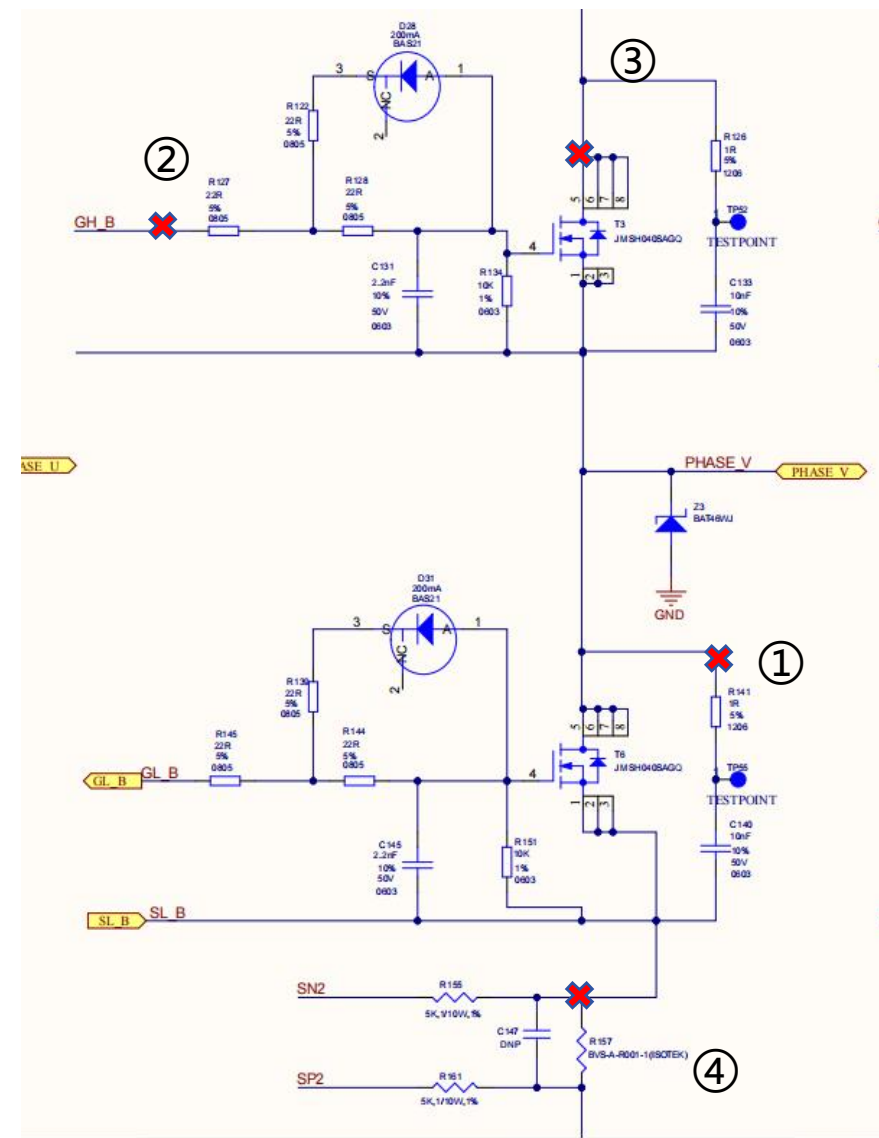
7.6.1.4 VGS Faults (Address = 0x4)

Table 13. Gate Driver VGS Faults Register Description

BIT	R/W	NAME	DEFAULT	DESCRIPTION
10	R	VGS_HA	0x0	VGS gate drive fault for high-side MOSFET A
9	R	VGS_LA	0x0	VGS gate drive fault for low-side MOSFET A
8	R	VGS_HB	0x0	VGS gate drive fault for high-side MOSFET B
7	R	VGS_LB	0x0	VGS gate drive fault for low-side MOSFET B
6	R	VGS_HC	0x0	VGS gate drive fault for high-side MOSFET C
5	R	VGS_LC	0x0	VGS gate drive fault for low-side MOSFET C
4:0	R	RSVD	0x0	-

ReadOnlyRegisterbeforePWM	0x70004788
ReadOnlyRegisterbeforePWM[0]	0000 0000 0000 0000
ReadOnlyRegisterbeforePWM[1]	0000 0000 0000 0000
ReadOnlyRegisterbeforePWM[2]	0000 0000 0000 0000
ReadOnlyRegisterbeforePWM[3]	0000 0101 0100 0000

(1") SHx/GHxS/ LBx/V_D @ removed G-resistor



①CH1_Yellow SHx (@R141)
<0V - 12V>

③CH3_Red V_D = PVDD (@MOS_D)
<12V>

②CH2_Blue GHx (@R127)
<0V - 12V>

④ CH4_Green SLBx (@R157)
<0V>

(2'') SHx/GHxS/VCP_LSD/VCPH @ removed G-resistor

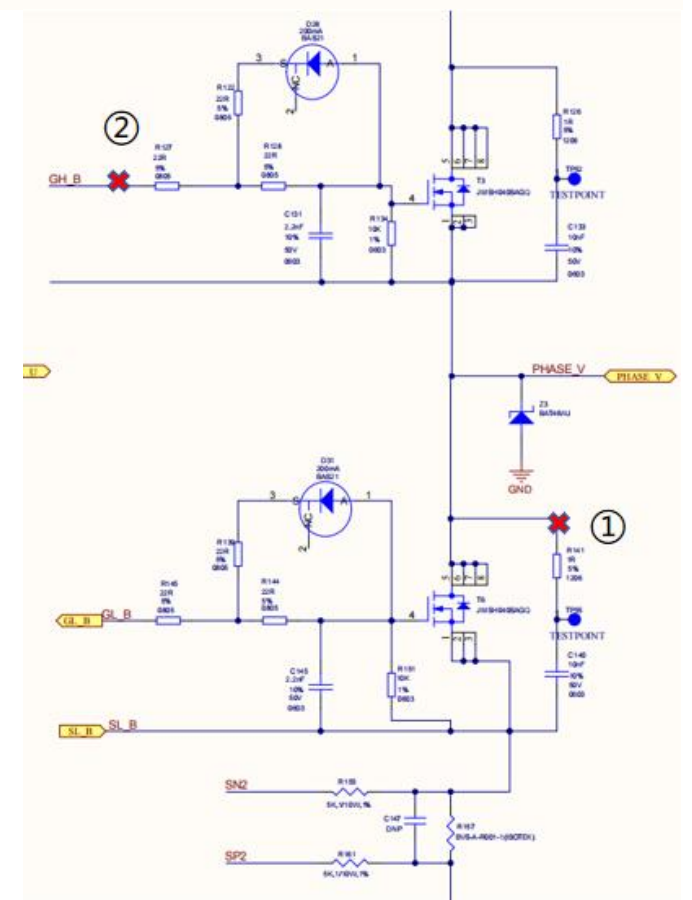
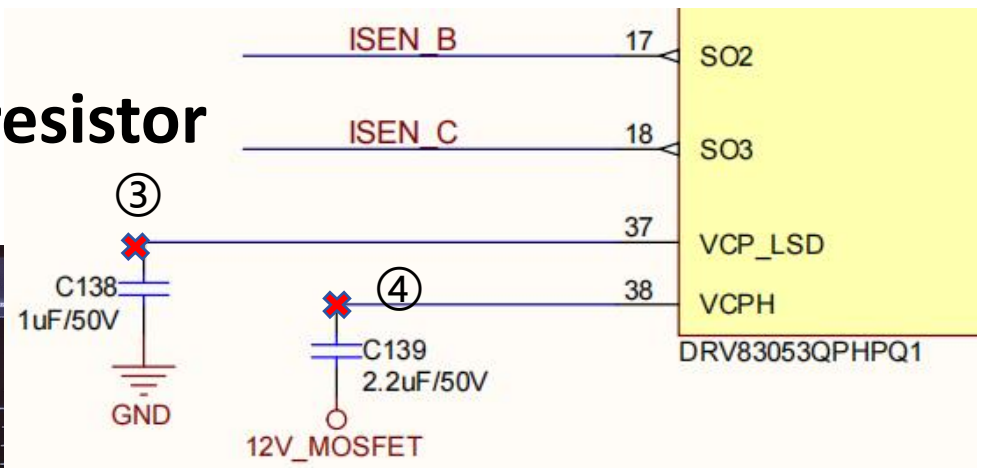


①CH1_Yellow SHx (@R141)
<0V - 12V>

③CH3_Red VCP_LSD (@C138)
<0V-12V>

②CH2_Blue GHx (@R127)
<0V - 12V>

④CH4_Green VCPH (@C139)
<12V-23V>



(3") SHx/GHxS/INHx/INLx @ removed G-resistor



Item	value	unit
MCU Freq.	100	MHZ
MCU period	10	ns
PWM Freq.	20000	Hz
PWM Period	0.05	ms
PWM count	5000	ticks
PWM duty	50%	2500
PWM rise/fall	central align	
PWM dead time	1000	ns

- 6PWM input
- invert in pairs
- continuous fixed vduy value
- without FOC
- without motor

①CH1_Yellow SHx (R141)

③CH3_Red INHx PWM input

②CH2_Blue GHx high-side(R127)

④CH4_Green INLx PWM input

(4'') SHx/GHxS/nFault/PWRGD @ removed G-resistor



①CH1_Yellow SHx (@R141)
<0V - 12V>

③CH3_ Red PWRGD (@R120)
<1.7V-4V>

②CH2_Blue GHx (@R127)
<0V - 12V>

④CH4_Green nFault (@R136)
<0.6V-4V>