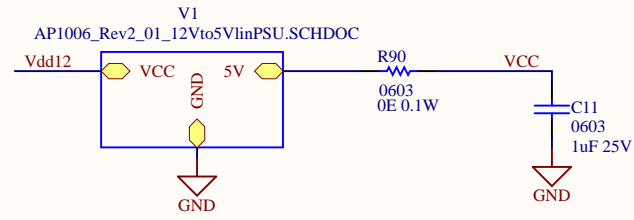
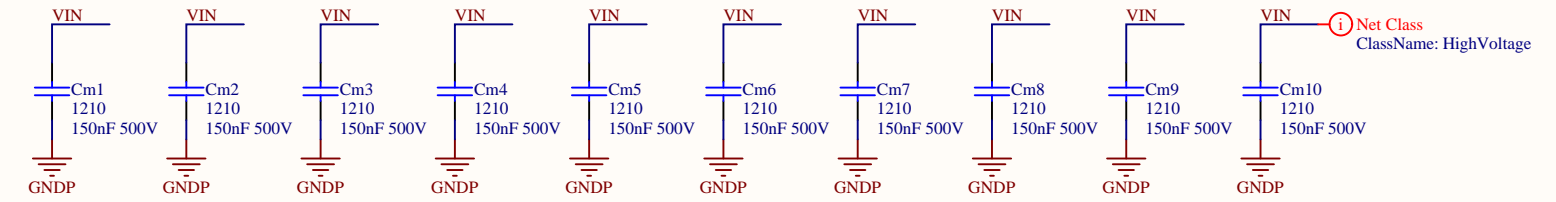


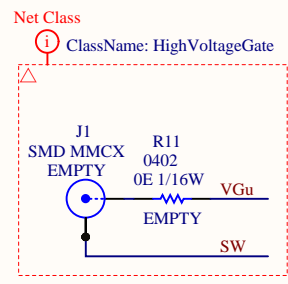
**Logic Supply**  
10-15 VDC



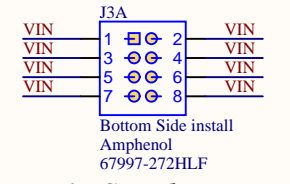
**5 V Logic Regulator**



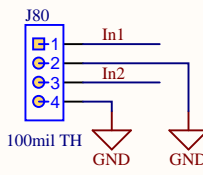
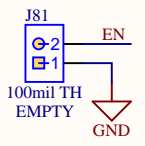
**Intermediate Capacitors**



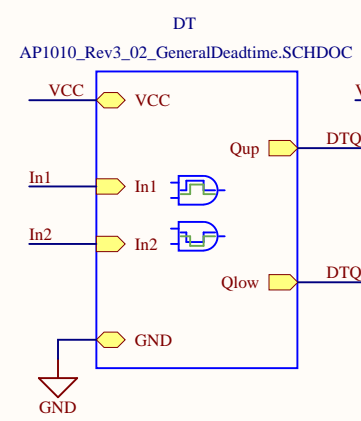
**Upper Gate**



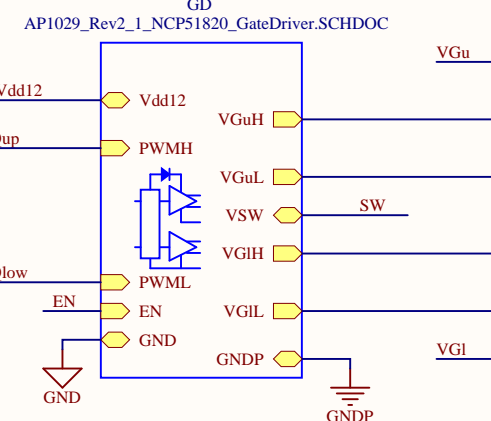
**Main Supply Input**



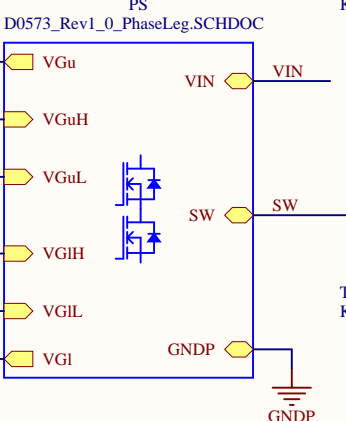
**Signal Inputs**



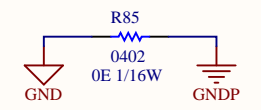
**dead-time and buffers**



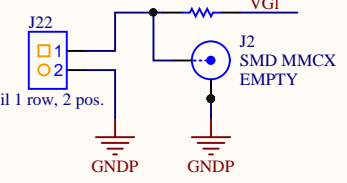
**Gate Driver**



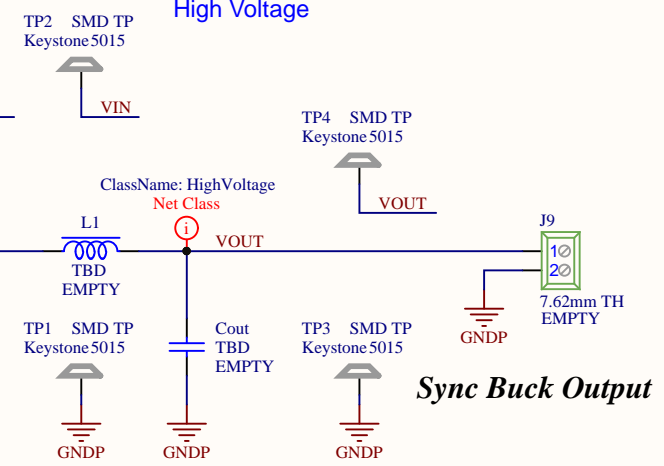
**Power Stage**



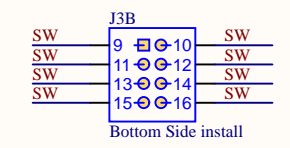
**Ground Connect**



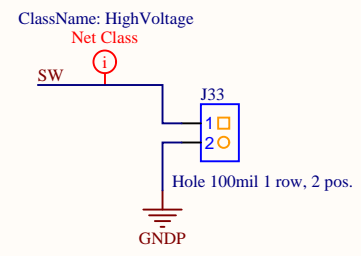
**Lower Gate**



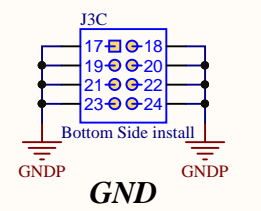
**Sync Buck Output**



**SW Output**



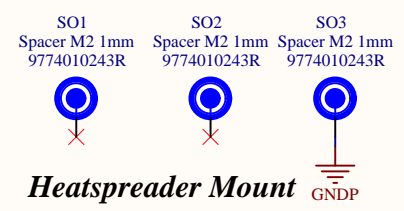
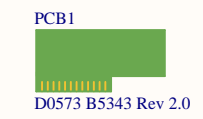
**Switch-node**



**GND**



For evaluation only;  
not FCC approved for resale



**Heatspreader Mount**

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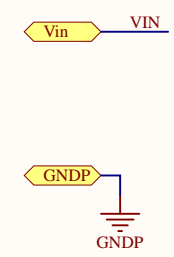
Evaluation Board for Main Schematic

Title: EPC90148_B5343_Rev2_0		Efficient Power Conversion 909 N. Pacific Coast Hwy, Ste. 23 El Segundo, CA 90245 United States <a href="http://www.epc-co.com">www.epc-co.com</a>
Size: A	Revision: 1	
Date: 11/3/2022	Sheet 1 of 5	
File: D0573_B5343_Rev2_0.SCHDOC		

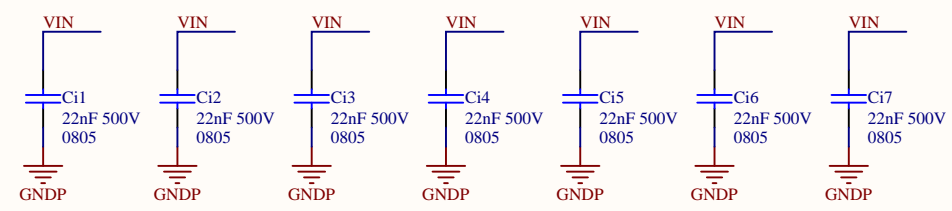


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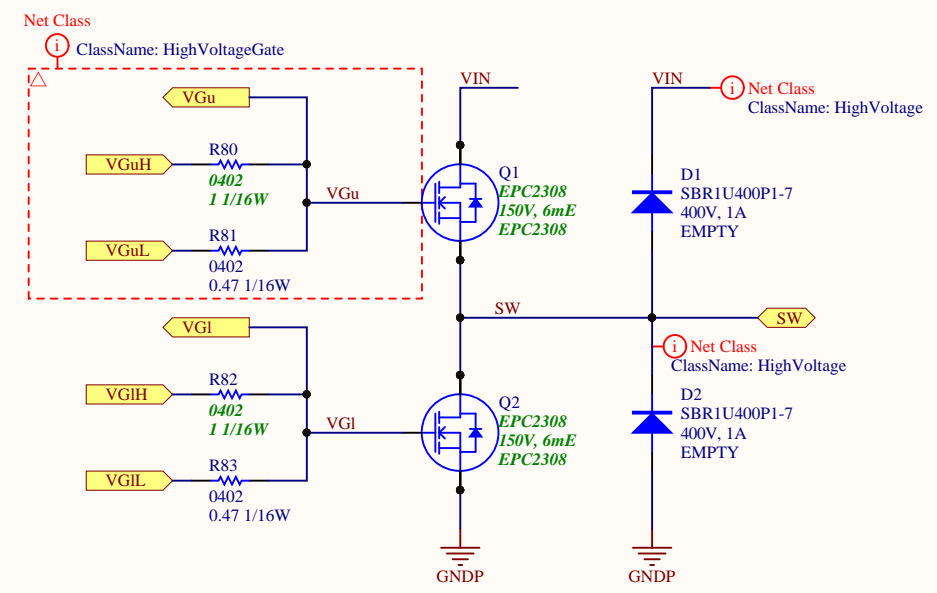
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**DC Input**  
**120 Vmax.**



**HF loop Capacitors**



**Power Stage**      **Optional Diodes**

**EPC2308**

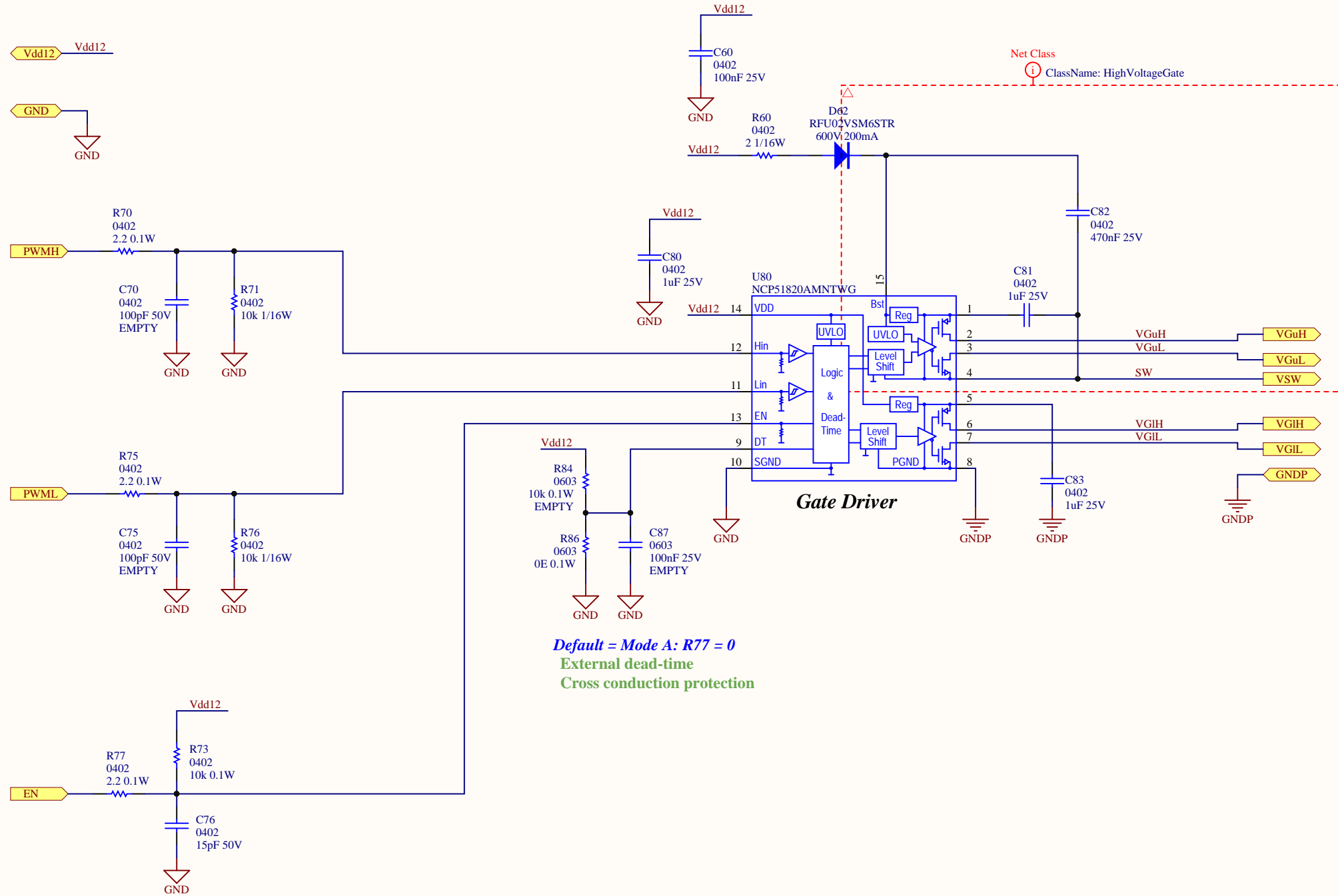
Title <b>D0573 Phase Leg Rev. 1.0</b>		Efficient Power Conversion 909 N. Pacific Coast Hwy, Ste. 23 El Segundo, CA 90245 United States <a href="http://www.epc-co.com">www.epc-co.com</a>	
Size: A	2	Revision: 1	
Date: 10/17/2022	Sheet 2 of 5		
File: D0573_Rev1_0_PhaseLeg.SCHDOC			

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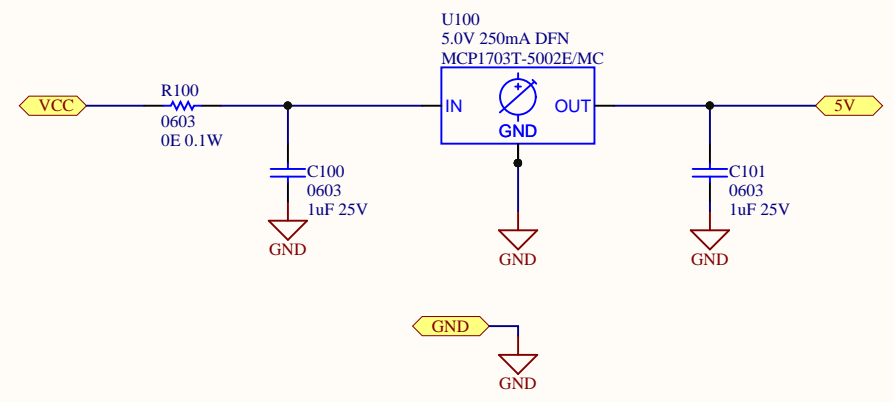
D

D



650 V Gate Driver using NCP51820

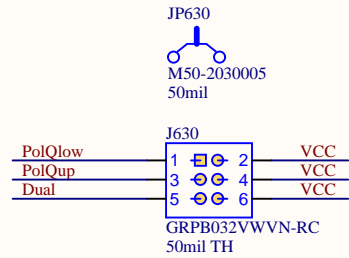
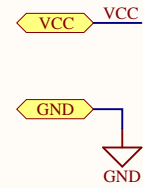
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Size: A	3	Revision: 2	
Date: 10/18/2022	Sheet 3 of 5		
File: AP1029_Rev2_1_NCP51820_GateDriver.SCHDOC			



12 V to 5 V LDO power supply

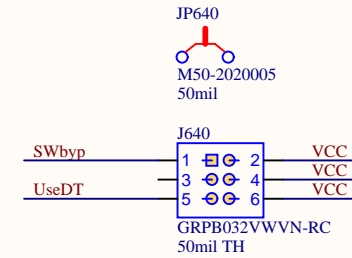
Title AP1006 Rev. 2.0		Efficient Power Conversion 909 N. Pacific Coast Hwy, Ste. 23 El Segundo, CA 90245 United States <a href="http://www.epc-co.com">www.epc-co.com</a>	
Size: A	4	Revision: 1	
Date: 10/17/2022	Sheet 4 of 5		
File: AP1006_Rev2_01_12Vto5VinPSU.SCHDOC			





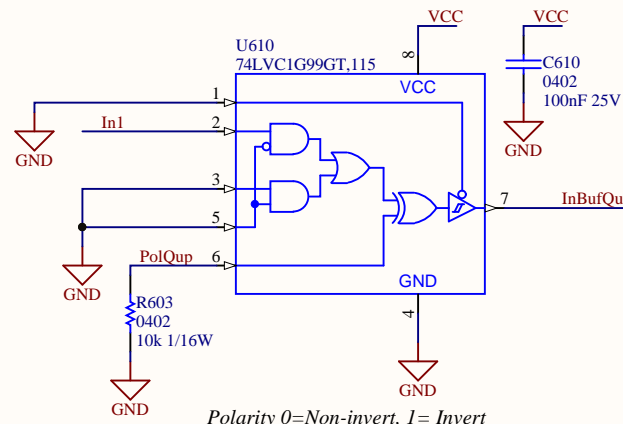
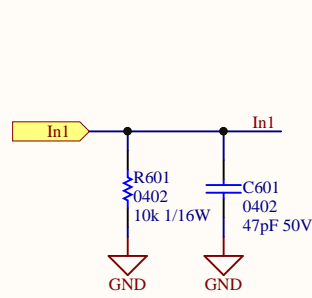
**Buck Single Signal  
Boost Single Signal  
Dual Signal**

**Dual/Single PWM, Buck, and Boost Mode Selector**



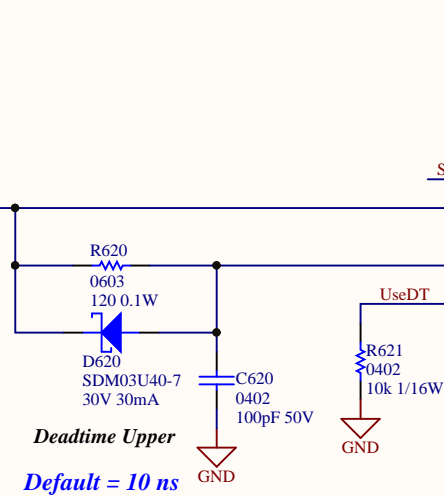
**Full Bypass  
DT Bypass  
No Bypass**

**Bypass Mode Select**



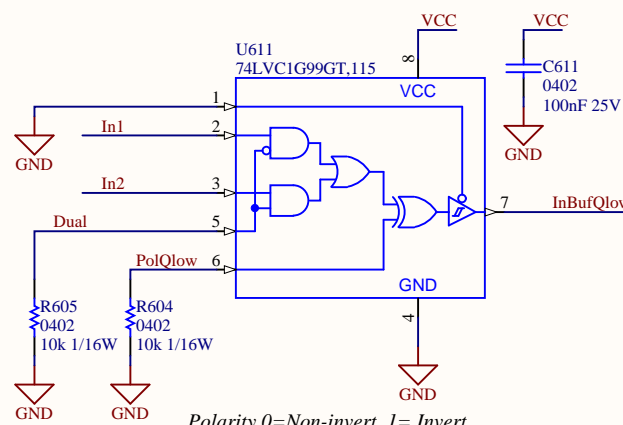
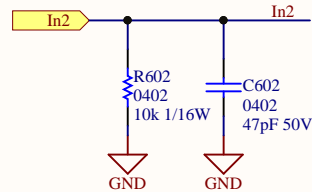
*Polarity 0=Non-invert, 1= Invert*

**Signal Polarity and Input Buffers**

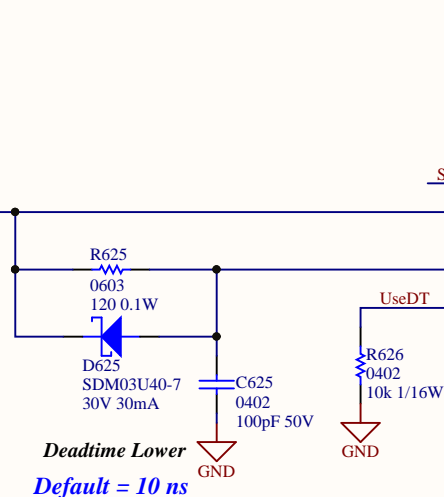


**Deadtime Upper  
Default = 10 ns**

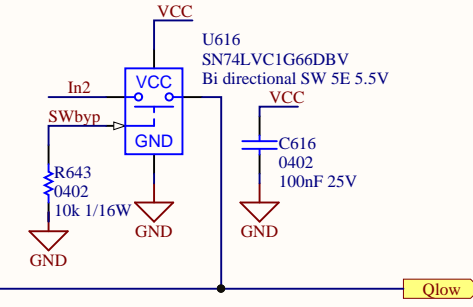
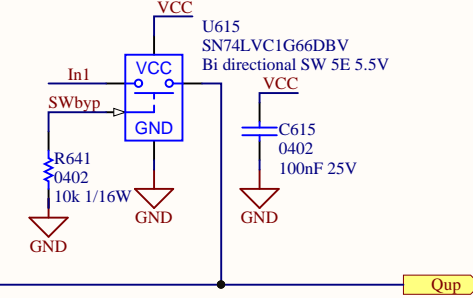
**Output Buffers and Signal Select**



*Polarity 0=Non-invert, 1= Invert*



**Deadtime Lower  
Default = 10 ns**



**General Dead-time with Polarity Changer and Bypass**

Title AP1010 Rev. 3.0		Efficient Power Conversion 909 N. Pacific Coast Hwy, Ste. 23 El Segundo, CA 90245 United States <a href="http://www.epc-co.com">www.epc-co.com</a>		
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Date: 10/17/2022		Sheet 5 of 5		
File: AP1010_Rev3_02_GeneralDeadtime.SCHDOC				