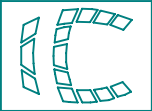



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	Sheet	Title																Content		
	1	Overview																this Sheet		
	2	Open Issues																open issues and Revision List		
	5	GTL2010																Schematic		
	6	MECHANICAL																Holes, Passer Marks, etc.		
	7	PCB Placement																PCB Placement Overview		
	8	LAYER_STACK																shows the Layer Stack of the board		



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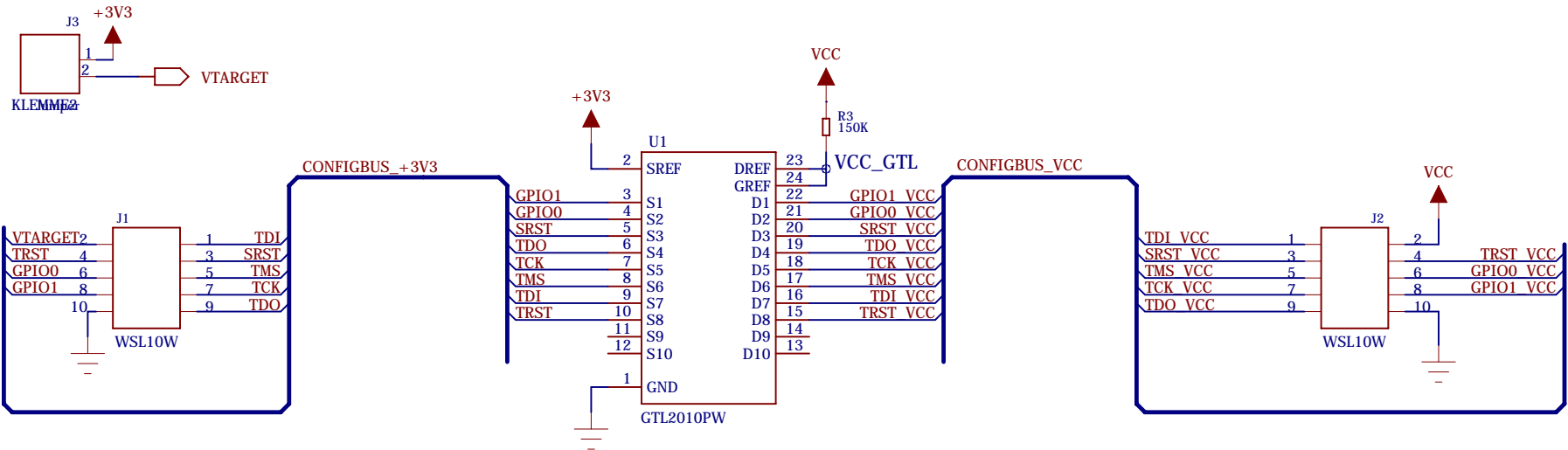
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CHECKED: <Checked By>	DATED: <Checked Date>	LAST SAVED 19.11.2007	SHEET: 1 OF 6

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E	<div><div></div><div><div>In-Circuit GmbH</div><div>Königsbrücker Str. 73</div><div>D-01099 Dresden</div><div>Germany</div></div></div> <table><tr><td colspan="4">PROJECT TITLE:</td></tr><tr><td colspan="4">Levelshifter</td></tr><tr><td>BOARD NO</td><td colspan="2">SHEET TITLE</td><td>SIZE:</td><td>REV:</td></tr><tr><td><CODE></td><td colspan="2">OPEN_ISSUES</td><td>A3</td><td>A</td></tr><tr><td>DRAWN:</td><td>DATED:</td><td>RELEASED:</td><td colspan="2">DATED:</td></tr><tr><td>Lars Träger</td><td><Drawn Date></td><td><Released By></td><td colspan="2"><Release Date></td></tr><tr><td>CHECKED:</td><td>DATED:</td><td>LAST SAVED</td><td colspan="2"></td></tr><tr><td><Checked By></td><td><Checked Date></td><td>19.11.2007</td><td colspan="2">SHEET: 2 OF 6</td></tr></table>									PROJECT TITLE:				Levelshifter				BOARD NO	SHEET TITLE		SIZE:	REV:	<CODE>	OPEN_ISSUES		A3	A	DRAWN:	DATED:	RELEASED:	DATED:		Lars Träger	<Drawn Date>	<Released By>	<Release Date>		CHECKED:	DATED:	LAST SAVED			<Checked By>	<Checked Date>	19.11.2007	SHEET: 2 OF 6		E
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Calculation for propagation delay:

The low to high transition time in the system is determined by the total RC time constant and the relevant pick off points + internal delay rise time(<5.5ns)
The high to low transition is less than 5.5 ns
The total propagation time is: 5.5ns + 5.5ns+3k3*50pF=164ns+11ns
The pick off point is 1/2
so the propagation delay is = 164ns/2+11ns=93ns=10.7MHZ

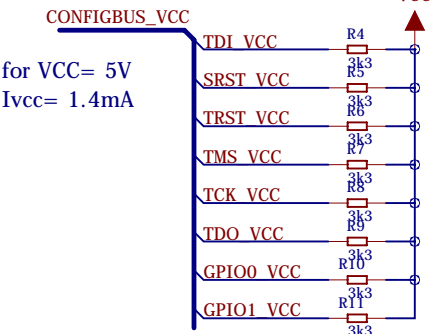
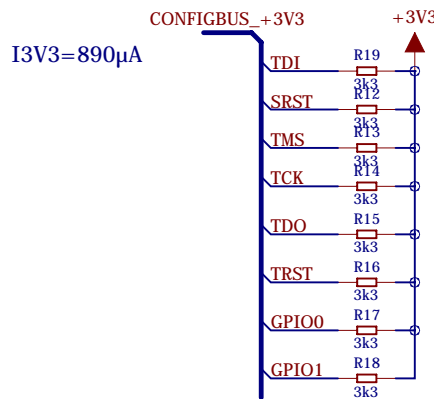
LEVELSHIFTER



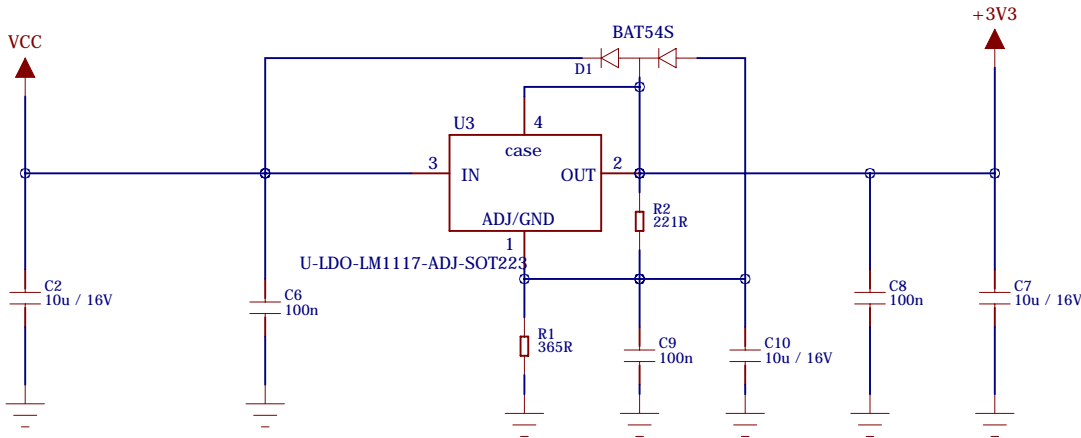
for more informations about Gtl2010 please look at Application Note AN10145 from Philips Semiconductors

PULL-UP Resistors for 3V3 and VCC Bus

Resistor value (Ω) = $\frac{\text{Pull-up voltage (V)} - 0.35 \text{ V}}{\text{Pull-up current}}$

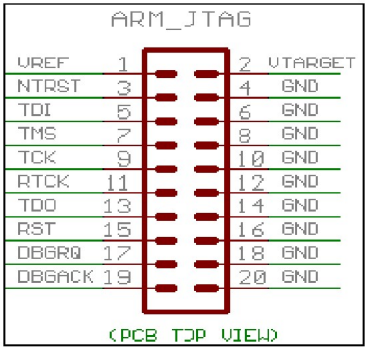
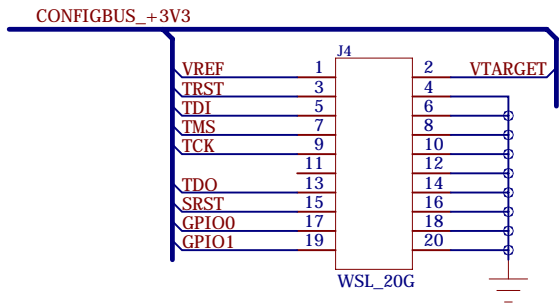


POWER_SUPPLY

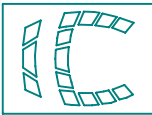
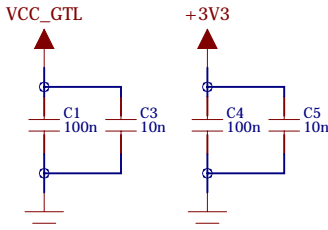


$V_{out} = (1 + R1/R2) * 1.25 \text{ V} \Rightarrow R1 = 365 \text{ Ohms for } V_{out} = 3.31 \text{ V}$

ARM_JTAG



Decoupling for GTL2010



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PROJECT TITLE:

Levelshifter

BOARD NO

<CODE>

SHEET TITLE

GTL2010

SIZE:

A3

REV:

A

DRAWN:

Lars Träger

DATED:

<Drawn Date>

RELEASED:

<Released By>

DATED:

<Release Date>

CHECKED:

<Checked By>

DATED:





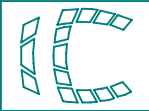
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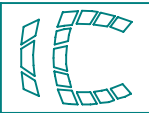
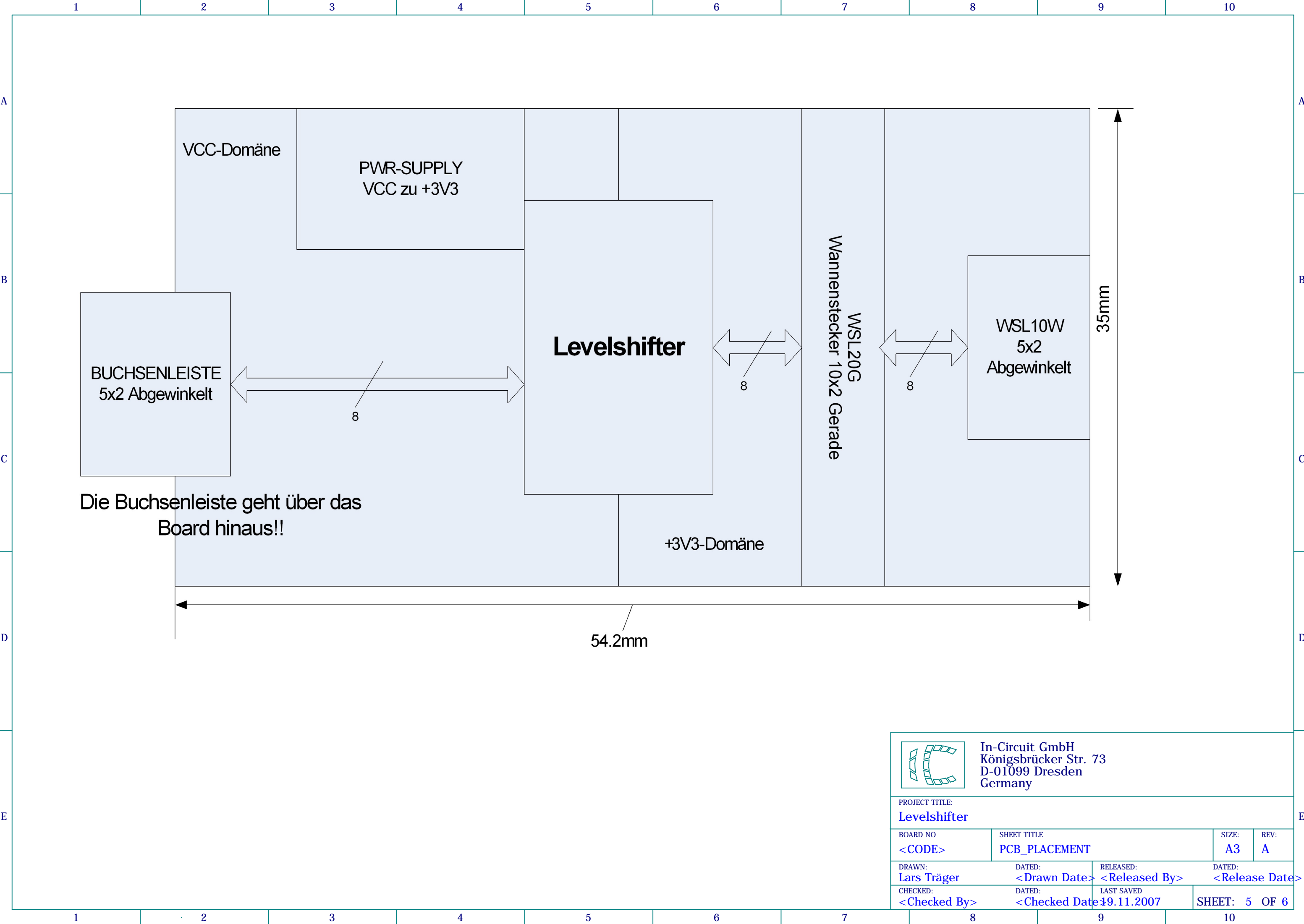
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19.11.2007

SHEET:

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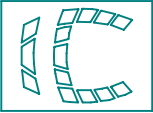
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PROJECT TITLE: Levelshifter			
BOARD NO <CODE>	SHEET TITLE PCB_PLACEMENT		SIZE: A3
DRAWN: Lars Träger	DATED: <Drawn Date>	RELEASED: <Released By>	DATED: <Release Date>
CHECKED: <Checked By>	DATED: <Checked Date>	LAST SAVED 19.11.2007	SHEET: 5 OF 6

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PROJECT TITLE: Levelshifter									
BOARD NO <CODE>		SHEET TITLE PCB_LAYER_STACK						SIZE: A3	REV: A
DRAWN: Lars Träger		DATED: <Drawn Date>		RELEASED: <Released By>			DATED: <Release Date>		
CHECKED: <Checked By>		DATED: <Checked Date>		LAST SAVED 19.11.2007			SHEET: 6 OF 6		