













Design Rules Verification Report

Filename : E:\Projekte\Keyboard\PCBs\EmphaseMainBoard\EmphaseMainBoard.PcbDoc

Warnings 0  
Rule Violations 1

Warnings	
Total	0

Rule Violations	
Short-Circuit Constraint (Allowed=No) (All),(All)	0
Un-Routed Net Constraint ( (All) )	0
Clearance Constraint (Gap=0.254mm) (All),(All)	0
Power Plane Connect Rule(Relief Connect )(Expansion=0.508mm) (Conductor	0
Width=0.254mm)(Min=0.152mm) (Max=2.54mm) (Preferred=0.254mm) (All)	0
Height Constraint (Min=0mm) (Max=50mm) (Prefered=12.7mm) (All)	0
Hole Size Constraint (Min=0.025mm) (Max=6mm) (All)	0
Hole To Hole Clearance (Gap=0.254mm) (All),(All)	0
Minimum Solder Mask Sliver (Gap=0.152mm) (All),(All)	0
Silkscreen Over Component Pads (Clearance=0.152mm) (All),(All)	0
Silk to Silk (Clearance=0.152mm) (All),(All)	1
Net Antennae (Tolerance=0mm) (All)	0
Total	1

Silk to Silk (Clearance=0.152mm) (All),(All)	
Text "LABS" (89.154mm,64.008mm) Top Overlay	Text "NONLINEAR" (89.397mm,55.033mm) Top Overlay

Designator	Comment	Value	LibRef	Quantity
C1, C4, C11, C12, C15, C17, C18, C21, C39, C40, C41, C42, C43, C44, C45, C46	Cap Semi	100nF	Cap Semi	16
C2, C16	Cap Pol1	10uF	Cap Pol1	2
C3, C22	Cap Semi	10uF	Cap Semi	2
C13	Cap Pol1	470uF	Cap Pol1	1
C14	Cap Pol1	100uF	Cap Pol1	1
C20	Cap Pol1	10uF	Cap Pol1	1
C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38	Cap Semi	470p	Cap Semi	16
D1	Task_Overrun		LED3	1
D2	Error		LED3	1
D3	Bridge Rectifier		Bridge Rectifiers	1
D4	5V_Good		LED3	1
D5	3V3_Good		LED3	1
D6, D7, D8, D9, D10, D11, D12, D13	Double Diode		Double Diode	8
IC1			Component_1	1
J1	VSEL_DIO_SPI_ADC		Header 3	1
J4	VSEL_SPARE_A		Header 3	1
J5	VSEL_SPARE_B		Header 3	1
J6	5V InCurrent		Header 2	1
J7	5V OutCurrent		Header 2	1
J8	3.3V InCurrent		Header 2	1
J9	3.3V OutCurrent		Header 2	1
J10	VSEL_CLAV		Header 3	1
J11	VSEL_LCD		Header 3	1
J13	USB_Shield to GND		Header 2	1
J14	USB_GND to GND		Header 2	1
J16	ETH_GND to GND		Header 2	1
J17	ETH_SHIELD to GND		Header 2	1
J18	5V to JTAG		Header 2	1
P1b	JTAG mini		10 pol Header	1
P2	SPARE_UARTS		10 pol Header	1
P3	DIO		10 pol Header	1
P4	Mini USB		Mini USB Jack B	1
P5	SPI_ADC		10 pol Header	1
P6	ADC_A		10 pol Header	1
P7	SPARE_A		10 pol Header	1
P8	ADC_B		10 pol Header	1
P9	SPARE_B		10 pol Header	1
P10	Lumberg PowerCon		Lumberg Power Connector	1
P11	5V Supply		Header 2	1
P12	3V3 Supply		Header 2	1
P13	Claviature_1		16 pol Header	1
P14	LCD_1		16 pol Header	1
P15	Claviature_2		16 pol Header	1
P16	LCD_2		16 pol Header	1
P17	Ethernet		Ethernet Jack	1
Q1	BC337		NPN	1
R1	Res2	10K	Res2	1
R2, R3, R4, R5, R6, R7, R8, R9, R11, R12, R13, R14, R16, R18, R19, R20, R21, R22	Res2	1K	Res2	18
R15	Contrast		RPot SM	1
R17	Luminance		RPot SM	1
R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38	Res2	100	Res2	16
R39, R40, R41, R42, R43, R44, R45, R46	Res2	5k	Res2	8
SW1	CPU_Reset		Generic SMD Switch	1
SW2	ISP_Reset		Generic SMD Switch	1
SW3	Task_Error_Reset		Generic SMD Switch	1
U1	SN74HC541DW		SN74HC541DW	1
U2	SN74HC595D		SN74HC595D	1
U3	SN74HC154DW		SN74HC154DW	1
VR1	5 V		Voltage Regulator	1
VR2	3.3 V		Voltage Regulator	1