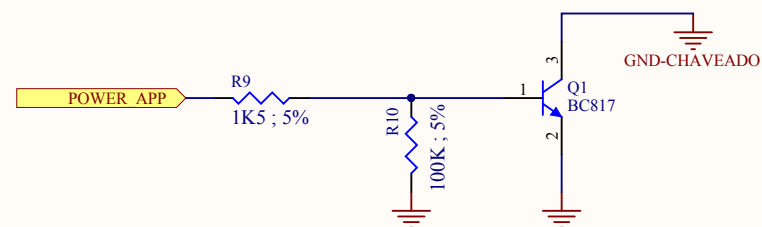
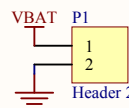


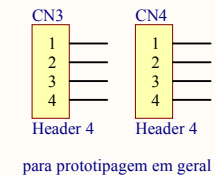
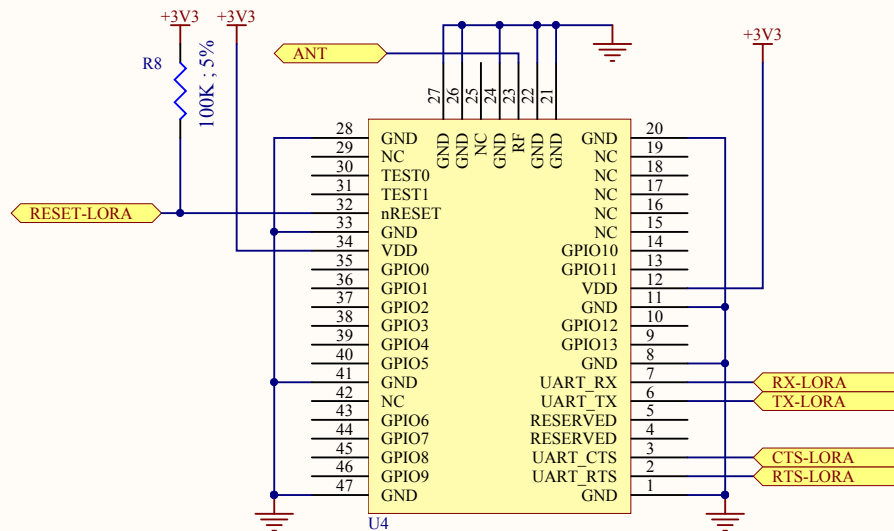
PIC24FJ128GB606 trocar o Pic para ter USB porém não será Ultra low power

Title:	CPU	*
Number:	*	*
Date: 26/02/2019	Sheet * of *	Revision: *
File: C:\arquivos_pessoais\fernando\trabalho\maua\DET\projetos\LoRa\NODE\hw\LORASIMPLESv3\LoraCpu_SchDoc		Site

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Title:	FORTE			*	Site
Number:	*			*	
Date: 26/02/2019	Sheet *	of *	Revision: *	*	
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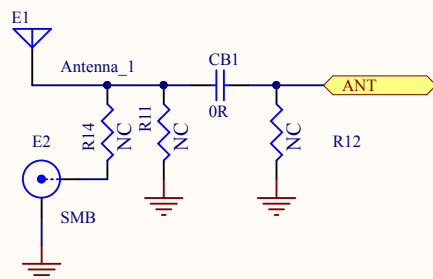


modulo LoRa

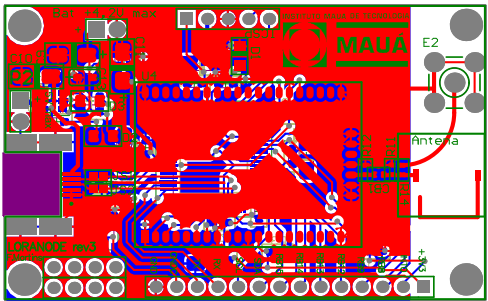
RF CHIP ANTENNA 902 - 928MHZ - JOHANSON 0915AT43A0026E

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Title:	MÓDULOS	*
Number:	*	*
Date: 26/02/2019	Sheet * of *	Revision: *
File: C:\arquivos_pessoais\fernando\trabalho\maua\DET\projetos\LoRa\NODE\hw\LORASIMPLESv3\LoRaModulos.SchDoc		Site



INSTITUTO MAUA DE TECNOLOGIA

Layer Stack Up Detail for: LORANODE v3
Rev.: 1.0

Top Layer

MASCARA ANTI-SOLDA : AZUL
SERIGRAFIA : BRANCO

MATERIAL : FR-4 (1.6mm)
COBRE BASE : 35 um (1oz)

Bottom Layer

ACABAMENTO : HOT AIR LEVELING
METALIZACAO DO FURO : Cu (35um) + SnPb

Description	Designator	Encapsulamento	Footprint	Obs	Quantity	Valor	Value
Capacitor de tântalo	C1		CASE-A		1	10uF ; 6V3	
Capacitor de tântalo	C2		CASE-A		1	10uF ; 6V3	
Capacitor Cerâmico SMD	C3	0402	0603 - CAP		1	100nF	
Capacitor Cerâmico SMD	C4	0402	0603 - CAP		1	100nF	
Capacitor Cerâmico SMD	C5	0402	0603 - CAP		1	100nF	
Capacitor de tântalo	C6		CASE-A		1	10uF ; 6V3	
Capacitor Cerâmico SMD	C7	0402	0603 - CAP		1	100nF	
Capacitor de tântalo	C8		CASE-A		1	10uF ; 6V3	
Capacitor de tântalo	C9		CASE-A		1	10uF ; 6V3	
Capacitor de tântalo	C10		CASE-A		1	10uF ; 6V3	
Capacitor de tântalo	C11		CASE-A		1	10uF ; 6V3	
Capacitor Cerâmico SMD	C12	0402	0603 - CAP		1	100nF	
Capacitor Cerâmico SMD	C13		0603 - CAP		1		100nF
Capacitor Cerâmico SMD	C81		0402		1		0R
Header, 5-Pin	CN1		HDR1X5		1		
Header, 14-Pin	CN2		HDR1X14		1		
Header, 4-Pin	CN3		HDR1X4		1		
Header, 4-Pin	CN4		HDR1X4		1		
Led	D1	0805	LED 0805 AM		1	WT	
Led	D2	0603	LED 0603 AM		1	STATUS - VM	
Led	D3	0603	LED 0603 AM		1	STATUS - VD	
Antenna PCI LoRa	E1		HADA31 TAOGLAS		1		
SMB Straight Connector	E2		SMB_V-RJ45		1		
USB On-The-Go (OTG) Mini-B Receptacle, Right Angle, SMT, 0.80mm (.031") Pitch, Solder Tabs with Back Cover, Recessed Type	J1		481900001		1		
JUMPER DE SOLDA 2 VIAS	J51		JUMPER SOLDA 2 VIAS		1		
JUMPER DE SOLDA 2 VIAS	J52		JUMPER SOLDA 2 VIAS		1		
Header, 2-Pin	P1		HDR1X2		1		
Header, 2-Pin	P2		HDR1X2		1		
Transistor NPN	Q1		SOT23-3N FAIRCHILD		1		
Resistor	R1	0402	0603		1	100K ; 5%	
Resistor	R2	0402	0603		1	100K ; 5%	
Resistor	R3	0402	0603		1	100K ; 5%	
Resistor	R4	0402	0603		1	1K5 ; 5%	
Resistor	R5	0402	0603		1	470R ; 5%	
Resistor	R6	0402	0603		1	2K2 ; 5%	
Resistor	R7	0402	0603		1	470R ; 5%	
Resistor	R8	0402	0603		1	100K ; 5%	
Resistor	R9	0402	0603		1	1K5 ; 5%	
Resistor	R10	0402	0603		1	100K ; 5%	
Resistor	R11	0402	0402		1	NC	
Resistor	R12	0402	0402		1	NC	
Resistor	R13	0402	0603		1	100K ; 5%	
Resistor	R14	0402	0402		1	NC	
Microcontrolador PIC	U1	TQFP-64	TQFP-64_MICROCHIP		1	PIC24FJ128GA306 I/PT	
Miniature Single-Cell, Fully Integrated Li-Ion, Li-Polymer Charge Management Controller, 4.2V, 5-Pin SOT-23, Industrial Temperature, Tape and Reel	U2		SOT-23-OT5_N		1		
Regulador de tensão	U3	SOT-89	SOT23-3N - MCP1700X		1		
LORA Transceiver	U4		RN2903		1	RN2903	