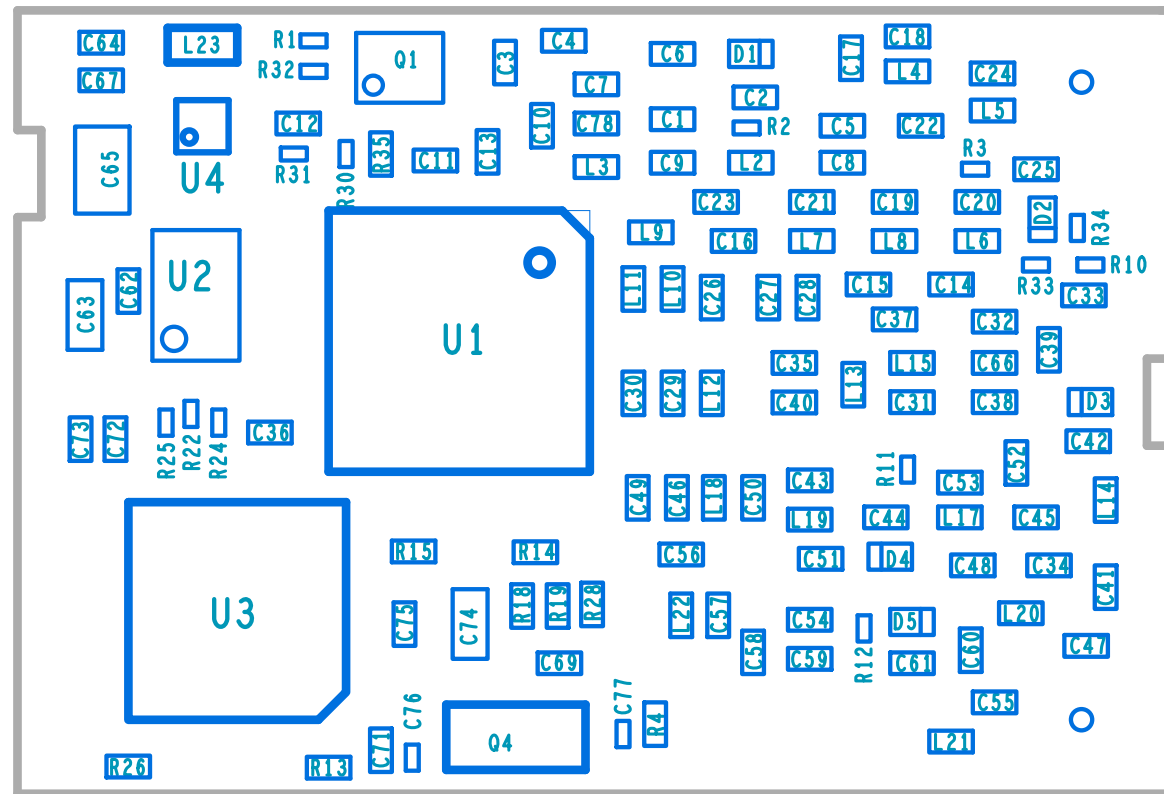


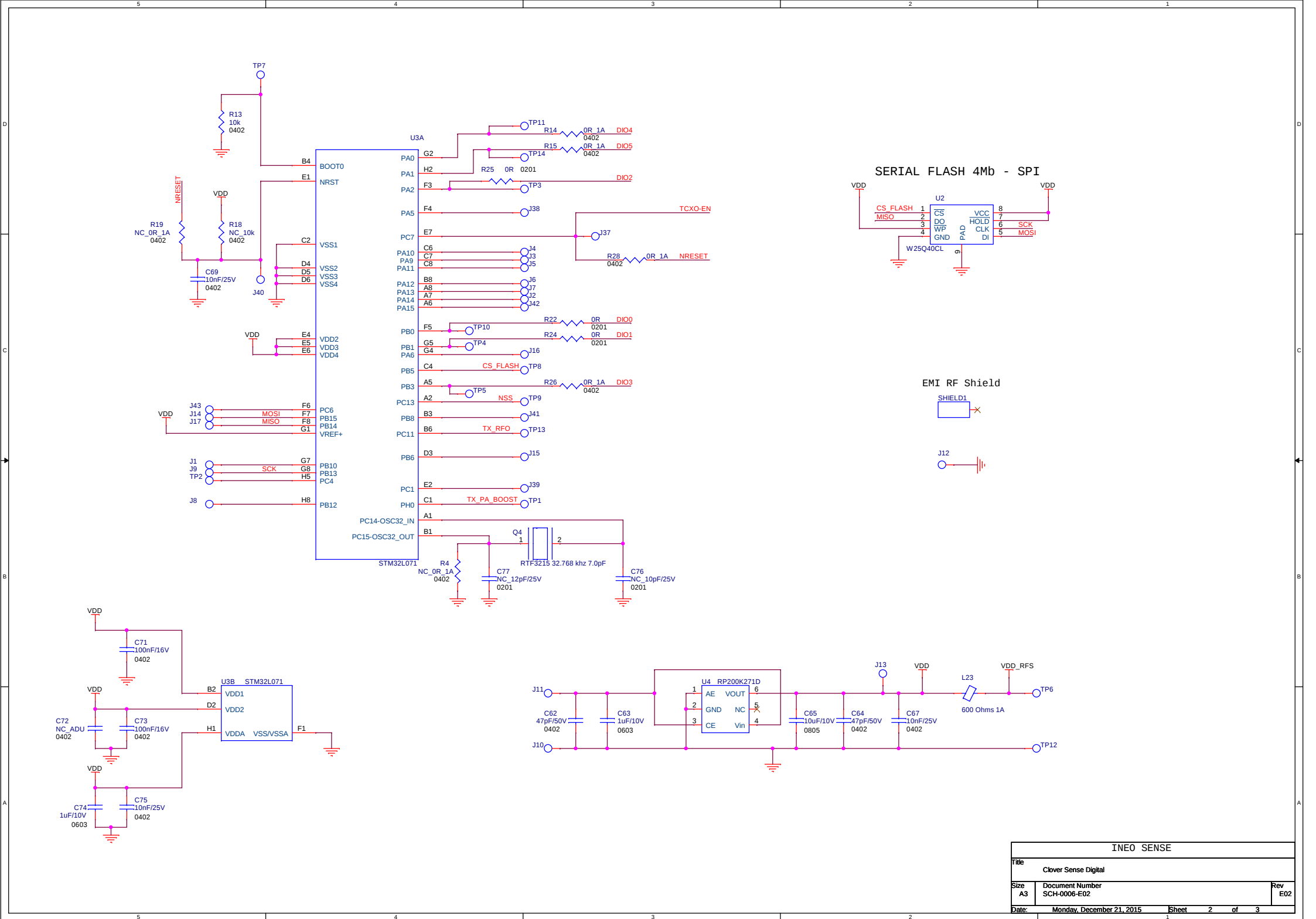
Clover sense Module Bill of material



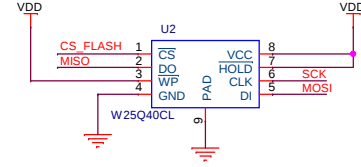
REF	DESIGNATION	QTY	REMARK
U2	Flash série SPI - 4MB USON8 - 2,3V WINBOND W25Q40CLUXIG	1	
U3	ARM Cortex M0+ 32bits 192 Kbytes Flash, 32 MHz TFBGA64 ST STM32L073RZH6	1	
U4	LDO Regulator 2,7V DFN 1212-6 RICOH RP200K271D-TR	1	
U1	Low Power Bi-Band Transceiver LoRa SF12 QFN28 SEMTECH SX1276IMLTRT	1	
D1,D2,D3,D4,D5	Pin diode RF NXP BAP142LX	5	
Q1	Quartz 32 MHz SMD 2x1,6mm RAKON FTR5123-A0	1	
Q4	Quartz 32.768 KHz SMD 3.2x1,5mm Esr 80Ko Cload 7pF RAKON RTF3215 32.768 7.0	1	
C52	Ceramic 1.0pF 50 V NPO +/-0.25pF SMD 0402 MURATA GRM1555C1H1R0CA01D	1	
C43	Ceramic 1.2pF 50 V NPO +/-0.25pF SMD 0402 MURATA GRM1555C1H1R2CA01D	1	
C31	Ceramic 1.5pF 50 V NPO +/-0.25pF SMD 0402 MURATA GRM1555C1H1R5CA01D	1	
C42,C47,C51,C53	Ceramic 1.8pF 50 V NPO +/-0.25pF SMD 0402 MURATA GRM1555C1H1R8CA01D	4	
C15	Ceramic 2.7pF 50 V NPO +/-0.25pF SMD 0402 MURATA GRM1555C1H2R7CA01D	1	
C48,C57	Ceramic 3.3pF 50 V NPO +/-0.25pF SMD 0402 MURATA GRM1555C1H3R3CA01D	2	
C8,C24	Ceramic 3.9pF 50 V NPO +/-0.25pF SMD 0402 MURATA GRM1555C1H3R9CA01D	2	
C9,C20,C38,C50	Ceramic 4.7pF 50 V NPO +/-0.25pF SMD 0402 MURATA GRM1555C1H4R7CA01D	4	
C37,C60,C61	Ceramic 5.6pF 50 V NPO +/-0.25pF SMD 0402 MURATA GRM1555C1H5R6CA01D	3	
C25,C78	Ceramic 6.2pF 50 V NPO +/-0.25pF SMD 0402 MURATA GRM1555C1H6R2CA01D	2	
C17,C18	Ceramic 8.0pF 50 V NPO +/-0.25pF SMD 0402 MURATA GRM1555C1H8R0CA01D	2	
C23,C40,C54	Ceramic 8.2pF 50 V NPO +/-0.5pF SMD 0402 MURATA GRM1555C1H8R2DA01D	3	
C27	Ceramic 100pF 50 V NPO 5% SMD 0402 MURATA GRM1555C1H101JA01D	1	
C67,C26,C75	Ceramic 10nF 25 V X7R SMD 0402 MURATA GRM155R71E103KA01D	3	
C10,C11,C13,C29,C36,C69,C71,C73	Ceramic 100nF 16 V X7R SMD 0402 MURATA GRM155R71C104KA88D	8	
C63,C74	Ceramic 1µF 10 V X5R SMD 0603 MURATA GRM188R61A105KA61D	2	
C65	Ceramic 10µF 10 V X5R SMD 0805 MURATA GRM21BR61A106KE19L	1	
C19	Ceramic 12pF 50 V NPO 5% SMD 0402 MURATA GRM1555C1H120JA01D	1	
C4,C12,C21	Ceramic 15pF 50 V NPO 5% SMD 0402 MURATA GRM1555C1H150JA01D	3	
C35	Ceramic 22pF 50 V NPO 5% SMD 0402 MURATA GRM1555C1H220JA01D	1	
C46	Ceramic 33pF 50 V NPO 5% SMD 0402 MURATA GRM1555C1H330JA01D	1	
C5,6,16,22,28,30,33,34,44,45,55,62,64,66	Ceramic 47pF 50 V NPO 5% SMD 0402 MURATA GRM1555C1H470JA01D	14	
L23	Ferrite - 600o/100Mhz - 1A - 0603 WURTH 742792651	1	
L11	Inductor 2,2nH +/-0,2nH CMS 0402 MURATA LQW15AN2N2C10D	1	
L15	Inductor 4,7nH +/-0,2nH CMS 0402 MURATA LQW15AN4N7C00D	1	
L13,L19	Inductor 5,6nH +/-0,2nH CMS 0402 MURATA LQW15AN5N6C10D	2	
L14,L17	Inductor 6,2nH +/-0,1nH CMS 0402 MURATA LQW15AN6N2B00D	2	
L20,L22	Inductor 10nH +/- 5% CMS 0402 MURATA LQG15HS10NJ02D	2	
L18	Inductor 10nH +/- 2% CMS 0402 MURATA LQW15AN10NG00D	1	
L8	Inductor 12nH +/- 5% CMS 0402 MURATA LQG15HS12NJ02D	1	
L5,L21	Inductor 12nH +/- 2% CMS 0402 MURATA LQW15AN12NG00D	2	
L2	Inductor 15nH +/- 5% CMS 0402 MURATA LQG15HS15NJ02D	1	
L3,L4,L6	Inductor 18nH +/- 5% CMS 0402 MURATA LQG15HS18NJ02D	3	
L7	Inductor 22nH +/- 5% CMS 0402 MURATA LQG15HS22NJ02D	1	
L10,L12	Inductor 33nH +/- 5% CMS 0402 MURATA LQW15AN33NJ00D	2	
L9	Inductor 47nH +/- 5% CMS 0402 MURATA LQW15AN47NJ00D	1	
C3,R14,R15,R26,R28,R35	Resistor 0 o 1% SMD 0402 . .	6	
R22,R24,R25,R32,R33	Resistor 0 o 1% SMD 0201 . .	5	
R13	Resistor 10 Ko 1% SMD 0402 . .	1	
R2,R3,R10,R11,R12	Resistor 5 Ko 1% SMD 0201 . .	5	
C1,2,7,14,32,39,41,49,56,58,59,72,76,77	Non mounted Capacitor . .	14	
R1,R4,R18,R19,R30,R31,R34	Non mounted Resistor . .	7	



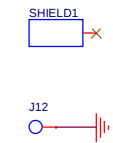
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D	11/03/15	HARDTECH	Modif longueur de carte
C	17/11/14	HARDTECH	Modif boitier U3 et U4
B	24/09/14	HARDTECH	Leger déplacement de U4 et C76
A	31/07/14	HARDTECH	Creation du document
Ind	Date	Redacteur	Modifications
Titre: Assemblage cote TOP			
Carte Clover Sense			
INEO SENSE		23/11/2015	Ind E02



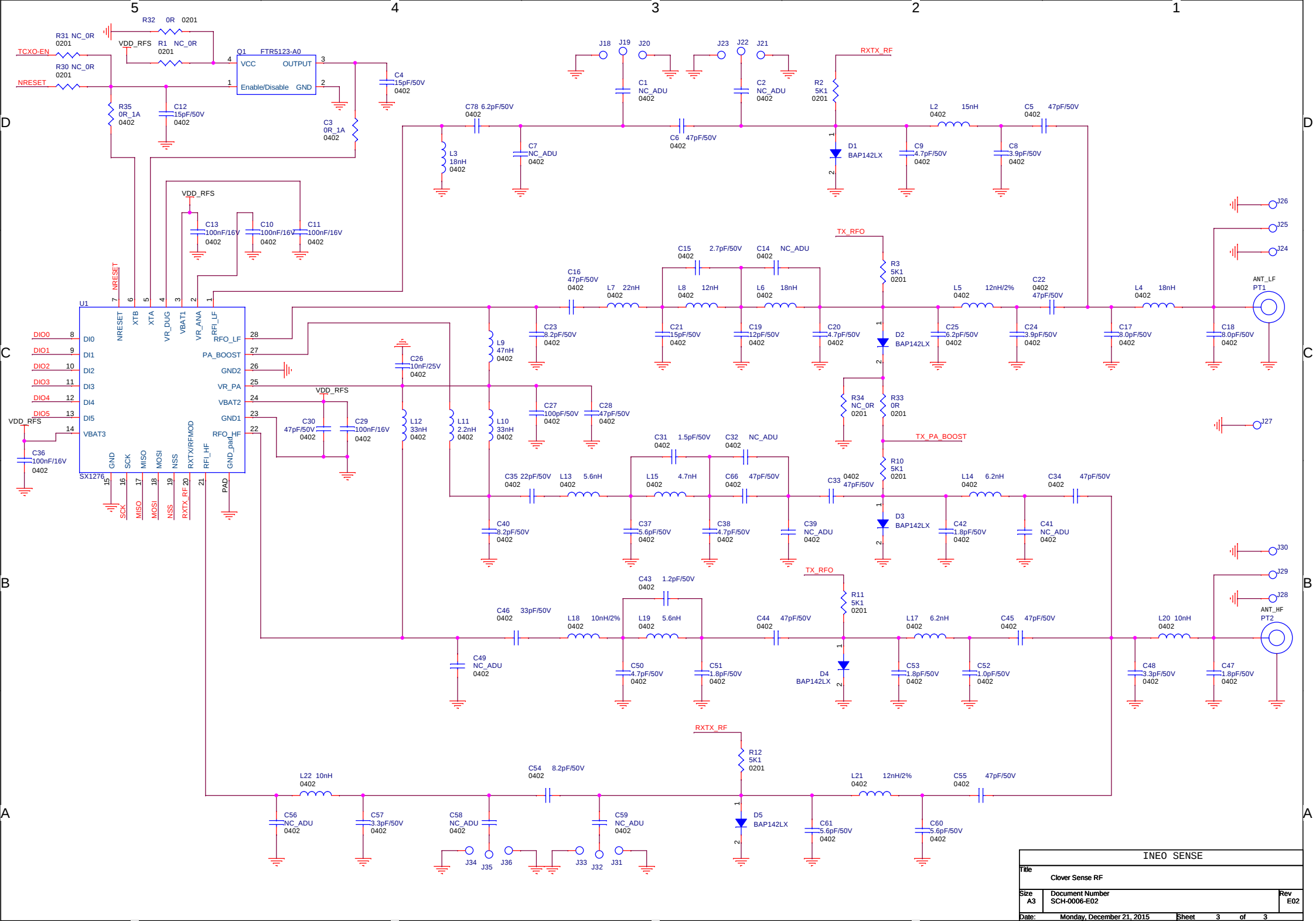
SERIAL FLASH 4Mb - SPI



EMI RF Shield



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