
TELIT HE910-NA
Data Terminal Modules
HARDWARE REVISION 0

TECHNICAL
MANUAL

Code: 1vv0300999

Rev. 0

2012/03/09

REVISION INDEX		
REV.	SUBJECT OF MODIFICATION	DATE

MASTER INDEX

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ANNEX 1
HE910-NA LABEL LAYOUT



ANNEX 2
HE910-NA MODULE PHOTOS

Image #1
(Top Side)



Image #2
(Bottom Side)

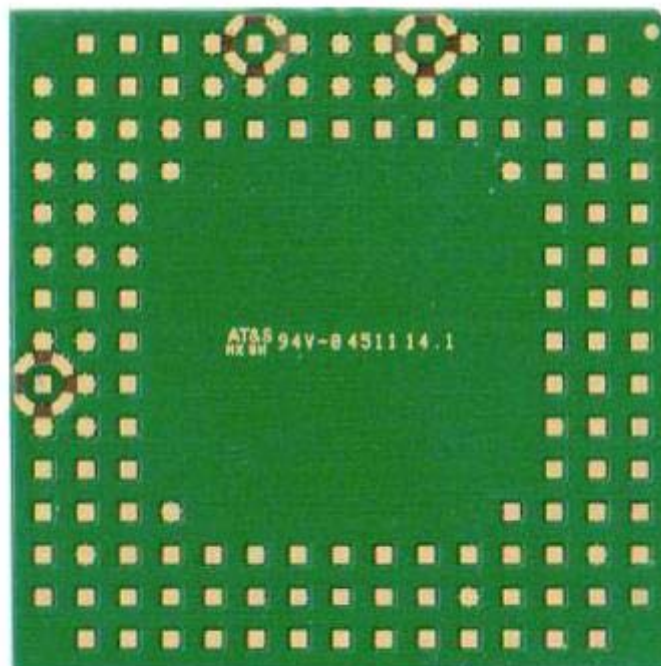
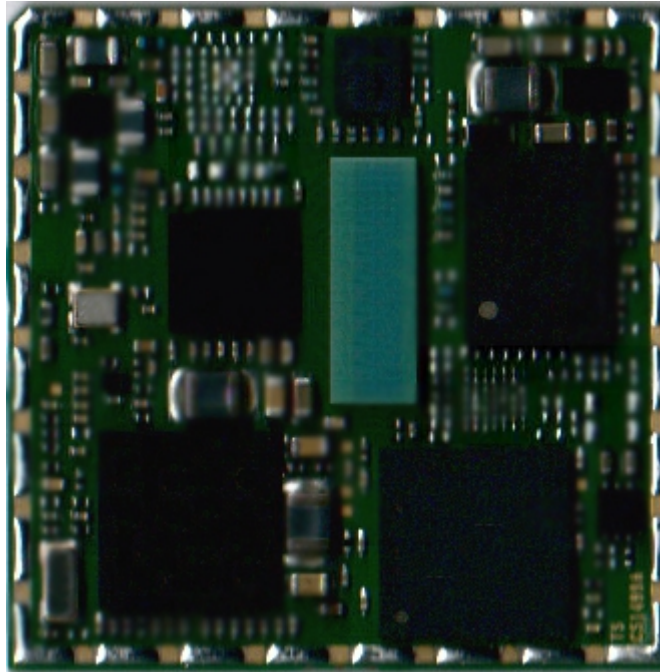
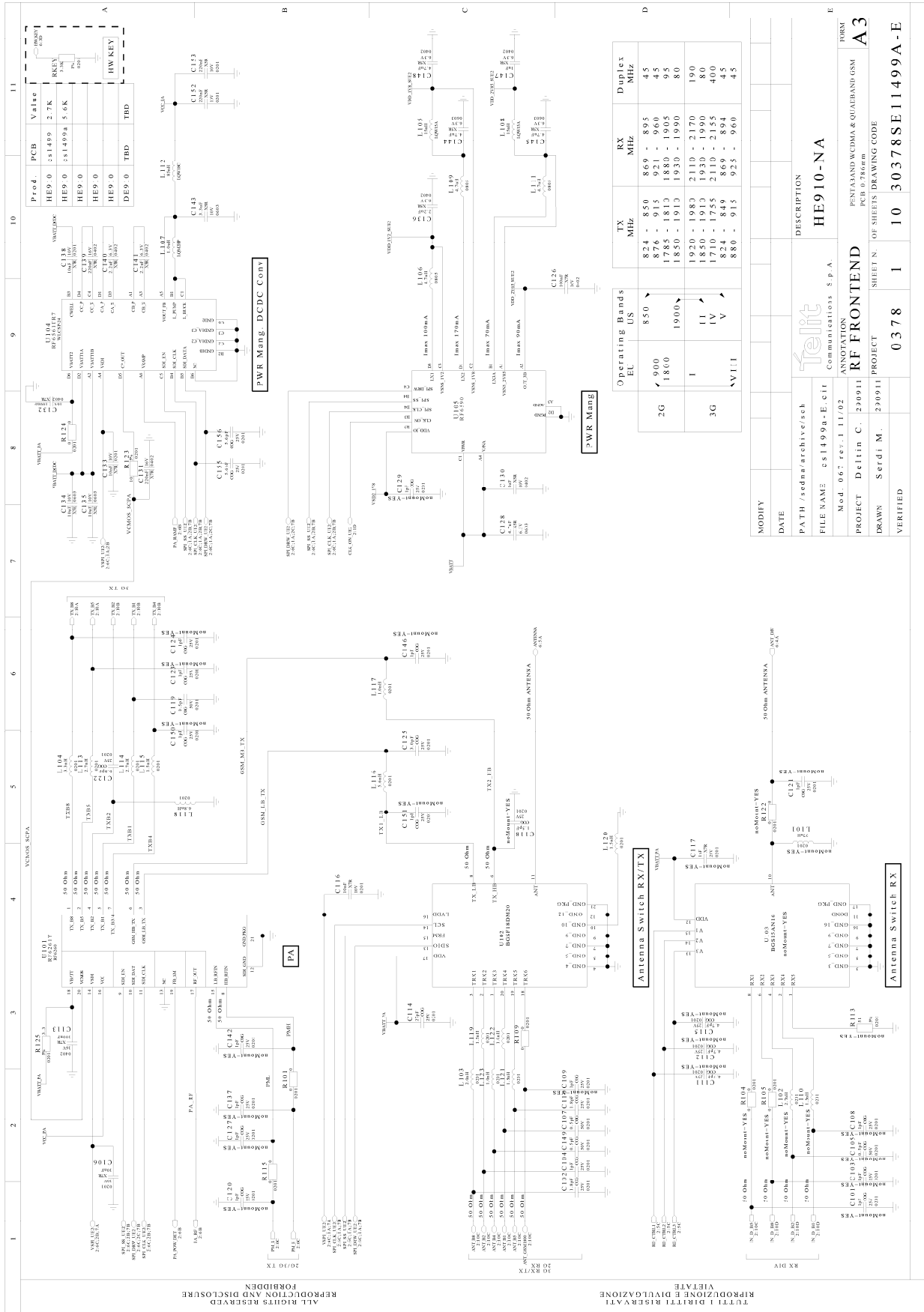
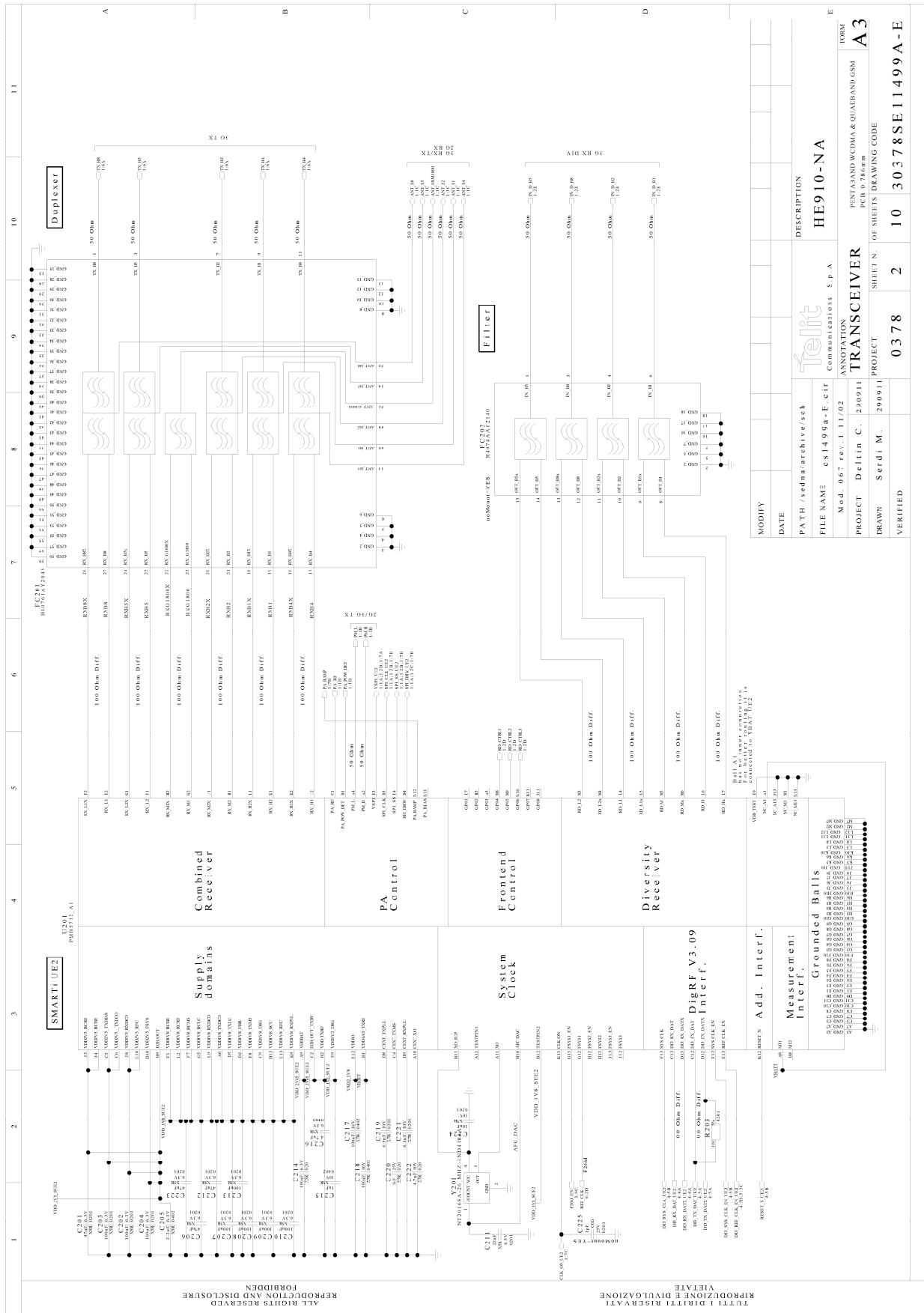


Image #3
(Inside Top)

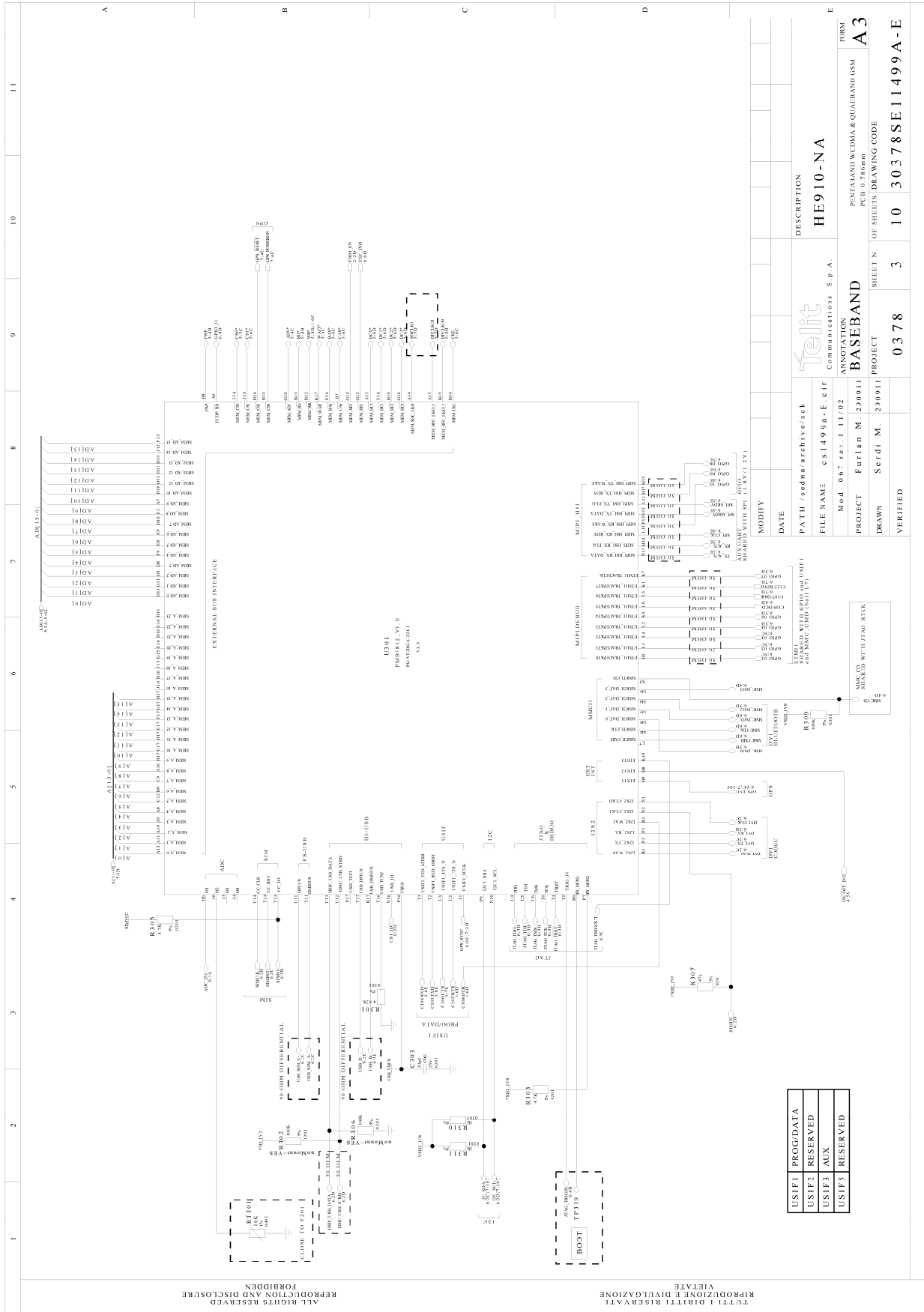


ANNEX 3
HE910-NA MODULE SCHEMATICS



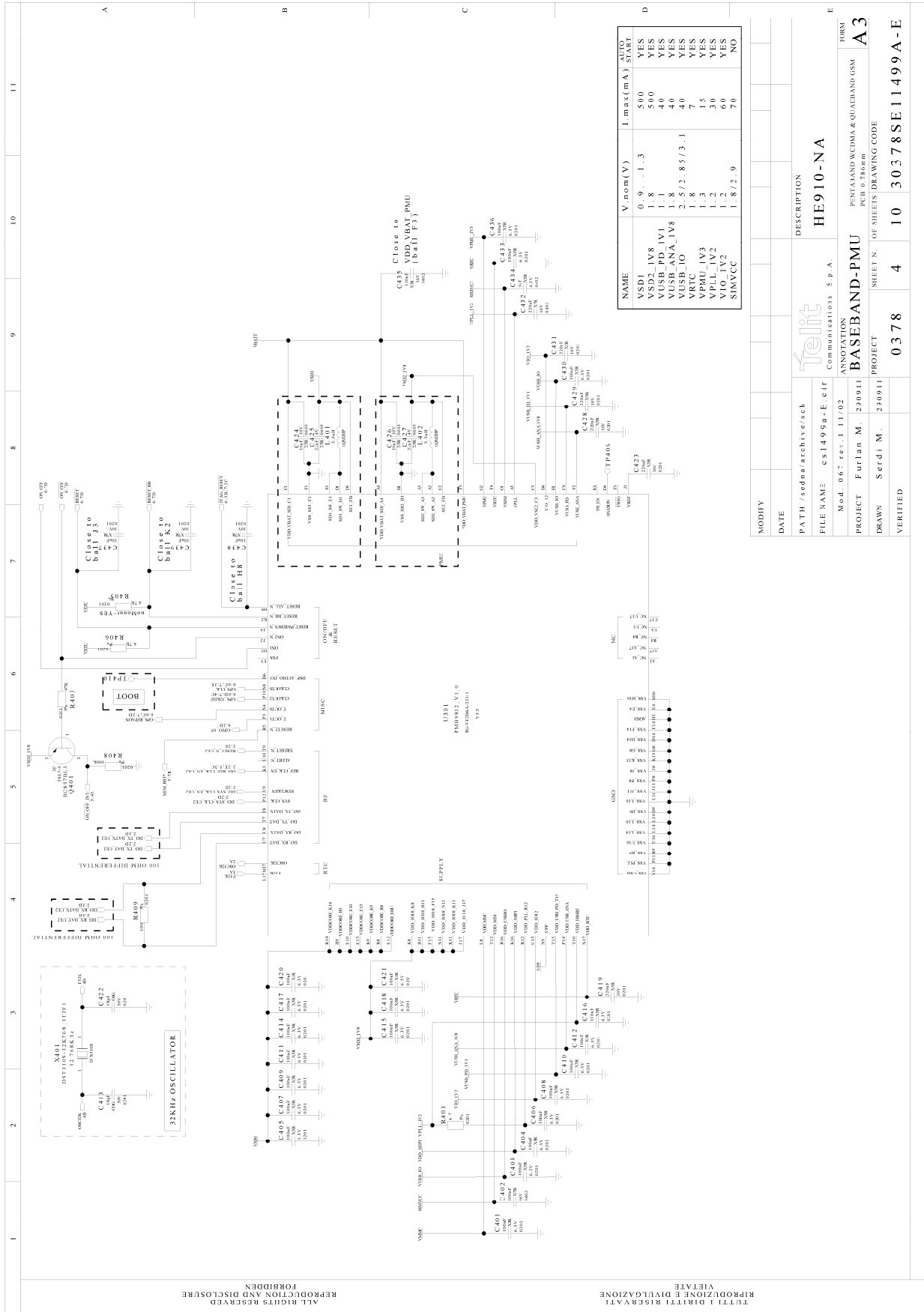


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Mod. 067: rev. 1 11/02	COMMUNICATIONS S.p.A.				
PROJECT: Dellin C. 200911	ANNOTATION				
DRAWN: Serdi M. 200911	PROJECT				
VERIFIED:	0378	2	10	30378SE11499A-E	
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					FORM A3
					PRINTAAND WC/DMA & QUADRADO SM
					PCB 0-786000

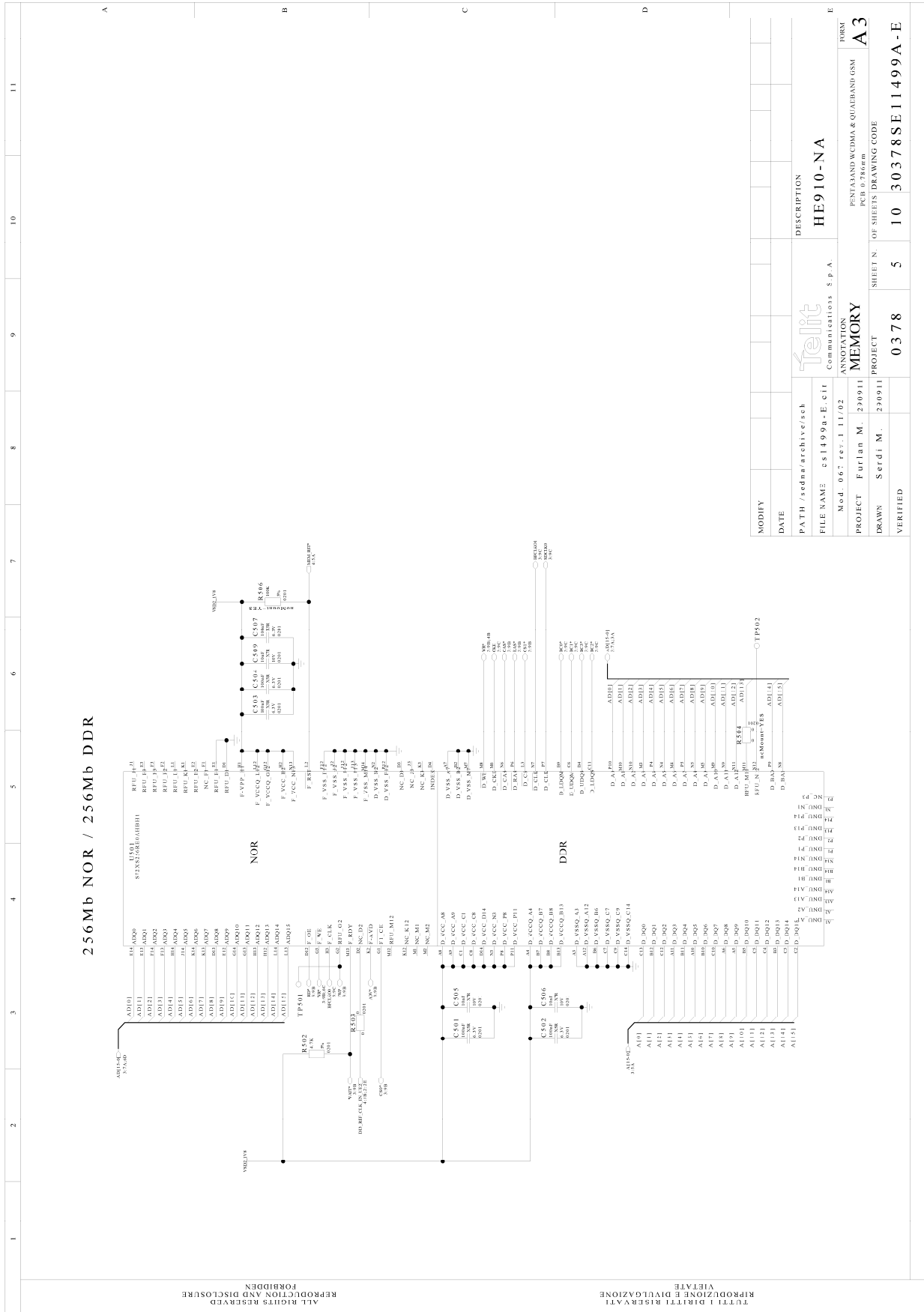


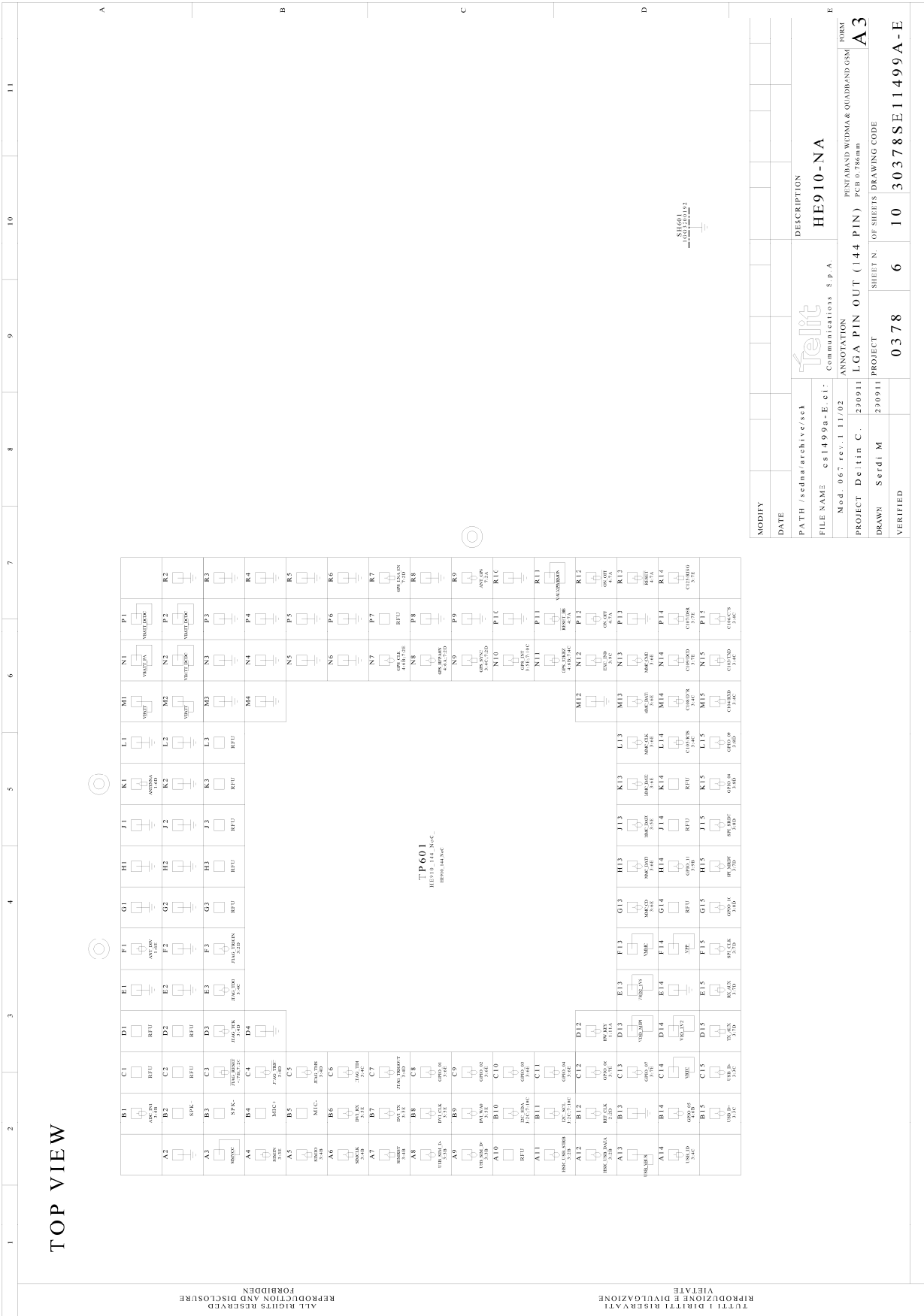
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US1F2	RESERVED
US1F3	AUX
US1F4	RESERVED

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HE910-NA	
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Mod. 067, rev. 11/02	Communications S.p.A.
PROJECT	Futlan M. 200911
DRAWN	Serdi M. 200911
PROJECT	0378
SHEET N.	3
OF SHEETS	10
DRAWING CODE	30378SE11499A-E
FORM	A3
PENTAAND WCDMA & QUADBAND GSM PCB 0.78mm	



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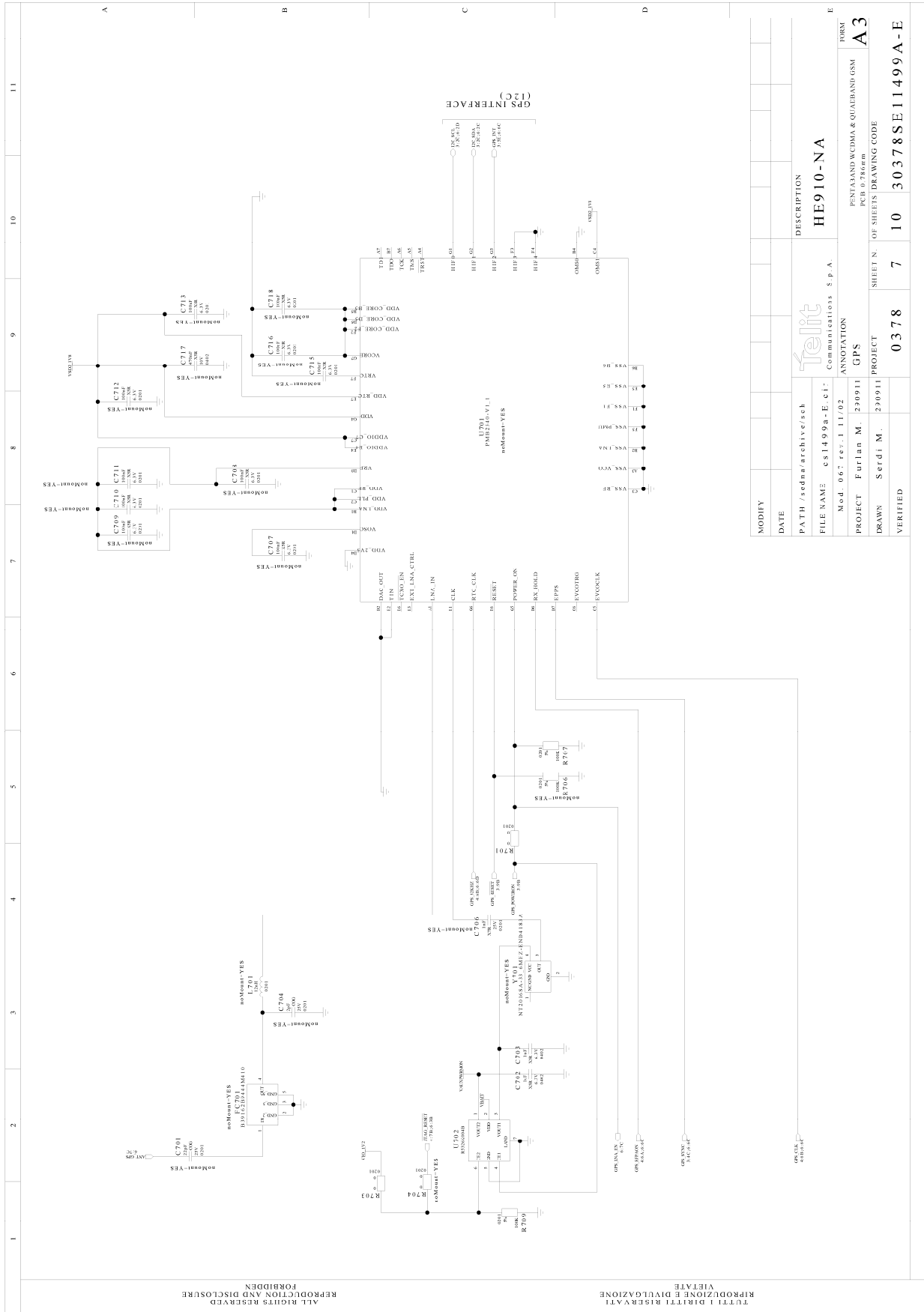




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MODIFY												
DATE												
PATH /sedna/archive/sch	DESCRIPTION											
FILE NAME	HE910-NA											
Mod. rev. 11/02	RINAKKO WIDMA & QUADRINO GSM FORM											
PROJECT	LGA PIN OUT (144 PIN) PCB 6 P0000											
DRAWN	Serdi M	PROJECT	230911	LGA PIN OUT (144 PIN)	ANNOTATION	S.p.A.	COMMUNICATIONS	3	HE910-NA	FORM	A3	
VERIFIED		SHEET N.	0378	6	10	30378SE11499A-E						



MODIFY	DATE	DESCRIPTION
		HE910-NA

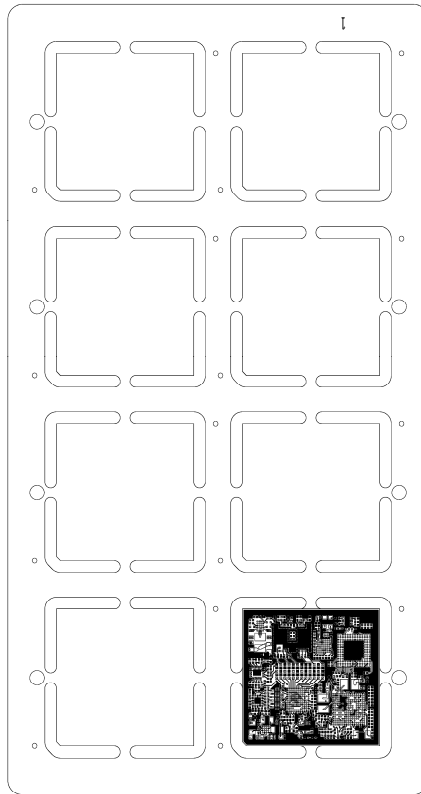
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Mod. 067, rev. 11/02	Communication S.p.A.
PROJECT Furlan M. 230911	ANNOTATION
DRAWN Serdi M. 230911	GPS
VERIFIED	

PENTAAND WCDMA & QUADBAND GSM	FORM
PCB 0.78x6mm	A3
SHEET N. 7	OF SHEETS DRAWING CODE
0378	30378SE11499A-E

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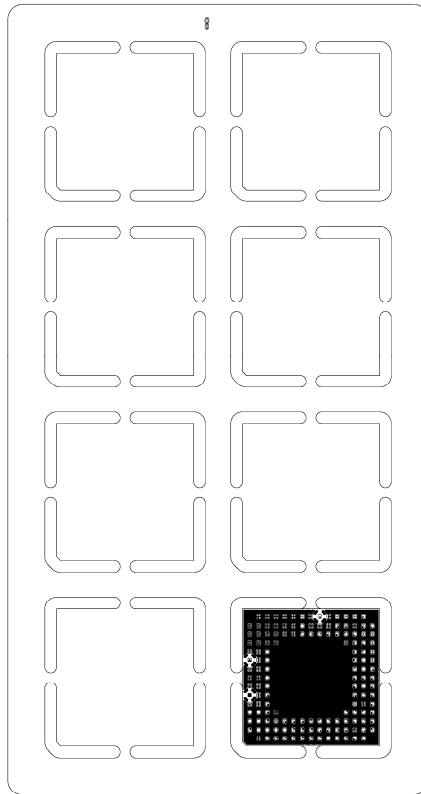
ANNEX 4
HE910-NA MODULE GERBER LAYOUT

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FILE NAME	CS1489A.c1	CSCode	CS1489A
	Mod. Dxx rev.0 06/2009	Description	HE910
Project by	Delfin Claudio	FORMA A3	
Drawn by	Serdil Mauro	Project	0378
	29/09/11	SHEET N	1
		OF SHEETS	8
		DRAWING CODE	CS1489A.PCM
		ANNOTATION Copper layer 1	

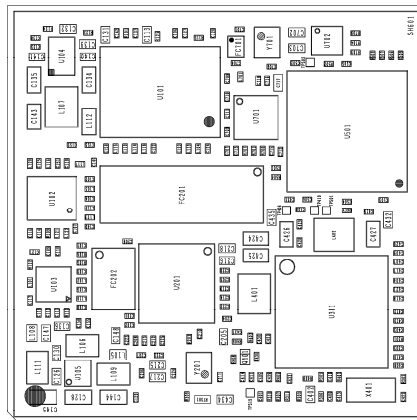
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FILE NAME		CS1499A.c8		CsCode		CS1499A	
Project by		Mod. Dcx rev.0 06/2009		Description		HE910	
Drawn by		Delvin Claudio		ANNOTATION		FORM A3	
		Serdil Mauro		Project		0378	
		29/09/11		SHEET N		OF SHEETS	
				8		8	
				DRAWING CODE		CS1499A.PCM	

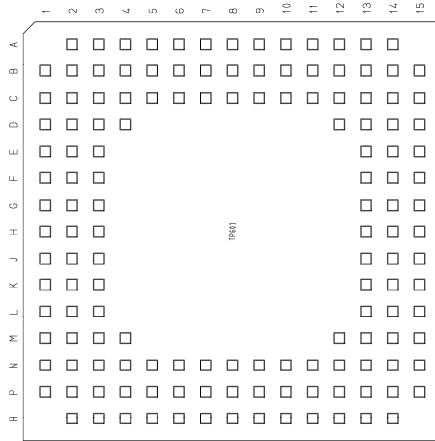
ANNEX 5
HE910-NA MODULE ASSEMBLY LAYOUT

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FILE NAME	CS1489A.SKP		CaCode	CS1489A
	Mod. Dxx rev.06/2009		Description	HE910
Project by	Delfin Claudio		Silkscreen side A	FORM A3
Drawn by	Serdj Mauro		SHEET N.	1
	29/09/11		OF SHEETS	2
			DRAWING CODE	CS1489A-SM

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FILE NAME		CS1489A.SKS		CaCode		CS1489A	
		Mod. 0xx rev.06/2009		Description		HE910	
Project by	Delfin Claudio			ANNOTATION		FORM	
Drawn by	Serdj Mauro			Silkscreen side B		A3	
	29/09/11			SHEET N. OF SHEETS		DRAWING CODE	
				0378 2		CS1489A-SM	

ANNEX 6
HE910-NA MODULE PARTS LIST

3990400721 HE910-NA MODULE cs1499a-E PARTS LIST			
Reference	Description	Um	Qty
PCB	HE910 MODULE PCB cs1499a	Pcs	1
R503 R115 R109 R124 R701 R101 R703	RES SMD 0 OHM JUMPER 1/20W 0201	Pcs	7
R125	RES SMD 3.3 R 5% 1/20W 0201	Pcs	1
R401	RES SMD 4.7 R 5% 1/20W 0201	Pcs	1
R123	RES SMD 10 R 5% 1/20W 0201	Pcs	1
R409 R203	RES SMD 100 R 5% 1/20W 0201	Pcs	2
R310 R311	RES SMD 1 K 5% 1/20W 0201	Pcs	2
RKEY	RES SMD 3.3 K 1% 1/20W 0201	Pcs	1
R303 R305 R406 R502	RES SMD 4.7 K 5% 1/20W 0201	Pcs	4
R403 R307	RES SMD 47 K 5% 1/20W 0201	Pcs	2
R309 R408 R707 R709	RES SMD 100 K 5% 1/20W 0201	Pcs	4
R301	RES SMD 4.02 K 1% 1/20W 0201	Pcs	1
RT301	RES NTC SMD 10 K 1% 0402 NCP15XH	Pcs	1
C102 C110	COND CER SMD 1.8pF C0G 0201 +/-0.1pF 25V	Pcs	2
C125	COND CER SMD 3.0pF C0G 0201 +/-0.1pF 25V	Pcs	1
C156 C155	COND CER SMD 5.6pF C0G 0201 +/-0.1pF 25V	Pcs	2
C122	COND CER SMD 6.8pF C0G 0201 +/-0.1pF 25V	Pcs	1
C503 C502 C501 C404 C210 C405 C421 C406 C407 C213 C214 C408 C409 C430 C433 C504 C415 C416 C417 C418 C414 C202 C203 C204 C207 C208 C420 C209 C401 C403 C507 C411 C412 C410 C436	COND CER SMD 100nF X5R 0201 10% 6.3V GRM	Pcs	35
C425 C427	COND CER SMD 22 uF X5R 0603 20% 4V GRM	Pcs	2
C134 C426 C424 C135	COND CER SMD 10 uF X5R 0603 20% 10V GRM	Pcs	4
C216 C148	COND CER SMD 4.7uF X5R 0402 20% 6.3V GRM	Pcs	2
C141 C140 C136 C205	COND CER SMD 2.2uF X5R 0402 10% 6.3V GRM	Pcs	4
C215 C130	COND CER SMD 1uF X5R 0402 10% 10V GRM	Pcs	2
C419 C153 C431 C429 C428 C152 C423	COND CER SMD 220 nF X5R 0201 20% 10V	Pcs	7
C143	COND CER SMD 3.3 uF X5R 0603 10% 10V GRM	Pcs	1
C104	COND CER SMD 1.0pF COG 0201 +/-0.25pF 25V	Pcs	1
C114	COND CER SMD 27 pF COG 0201 5% 25V	Pcs	1
C303	COND CER SMD 33 pF COG 0201 5% 25V	Pcs	1
C222	COND CER SMD 4.7nF X7R 0201 10% 10V	Pcs	1
C221 C219	COND CER SMD 6.8nF X7R 0201 10% 10V	Pcs	2
C133 C505 C506 C509 C116 C138 C439 C106 C438 C224 C437	COND CER SMD 10 nF X7R 0201 10% 10V	Pcs	11
C147 C703 C702 C434	COND CER SMD 1 uF X5R 0402 10% 6.3V	Pcs	4
C128 C144 C145	COND CER SMD 4.7uF X5R 0603 10% 6.3V	Pcs	3
C435 C217 C218 C113 C132 C402 C126	COND CER SMD 100 nF X7R 0402 10% 16V	Pcs	7
C422 C413	COND CER SMD 18 pF COG 0201 +/-5% 50V	Pcs	2
C432 C139 C131	COND CER SMD 220 nF X7R 0402 10% 16V	Pcs	3
C211	COND CER SMD 22 nF X5R 0201 10% 6.3V GRM	Pcs	1
C201 C212 C223 C206	COND CER SMD 47 nF X5R 0201 10% 6.3V GRM	Pcs	4
C220	COND CER SMD 1 nF X7R 0201 10% 25V	Pcs	1
C119 C107 C149	COND CER SMD 0.5 pF COG 0201 +/-0.05p 50V	Pcs	3
L111 L109 L106	INDUCT SMD 4.7 uH 20% MLZ2012 0805	Pcs	3

3990400721 HE910-NA MODULE cs1499a-E PARTS LIST			
Reference	Description	Um	Qty
L402 L401	INDUT SMD 3.3 uH 20% LQM2HP_G0 1008	Pcs	2
L107	INDUT SMD 1.0 uH 20% LQM2HP_G0 1008	Pcs	1
L108 L105	INDUCT SMD 15 nH 5% LQW15AN 0402	Pcs	2
L112	PWR INDUCT SMD 85 nH 5% 0603 LQW18CN	Pcs	1
L114 L113	INDUT SMD 2.7 nH +/-0.1nH 0201 LQP03T_02	Pcs	2
L103	INDUT SMD 2.0 nH +/-0.1nH 0201 LQP03T_02	Pcs	1
L122 L123 L117	INDUT SMD 1.0 nH +/-0.1nH 0201 LQP03T_02	Pcs	3
L120 L119 L121 L115	INDUT SMD 1.5 nH +/-0.1nH 0201 LQP03T_02	Pcs	4
L104	INDUT SMD 3.3 nH +/-0.1nH 0201 LQP03T_02	Pcs	1
L116	INDUT SMD 5.6 nH +/-3% 0201 LQP03T_02	Pcs	1
L118	INDUT SMD 6.8 nH +/-3% 0201 LQP03T_02	Pcs	1
U105	POWER MANAGEMENT IC RF6590	Pcs	1
U702	IC ANALOG R5326K004B-TR DFN(PLP)1820-6	Pcs	1
U104	PWR MNG. BOOST BUCK DCDC RF6561	Pcs	1
U501	IC MEM S72XS256RE0AHBH13 256Mb+256Mb	Pcs	1
U301	IC uP PMB9812V1.0 PG-VF2BGA-221-1	Pcs	1
U101	3G MULTIBAND MULTIMODE P.A. RF6261Y	Pcs	1
U102	IC RF SP8T ANTENNA SWITCH BGSF18DM20	Pcs	1
U201	IC TRANSCEIVER PMB5712 A1	Pcs	1
FC201	DUPLEX BANK 1/2/4/5/8+G1800 B40761AY2045	Pcs	1
X401	CRYSTAL DST310S-32K768_1TJF125DP1AI001	Pcs	1
Y201	VC-TCXO NT2016SA END4184A 26.0MHZ	Pcs	1
Q401	TRANS PNP BC857BL3 TSLP-3	Pcs	1
SH601	METALLIC SHIELD HE910	Pcs	1
	Tot	Pz	171

ANNEX 7
HE910-NA MODULE BLOCK DIAGRAMS

