

# APPLE IPHONE 17 PRO MAX

## MAPA RFFE SDR SHIELD



### SHIELD RFFE iPhones 17 Pro / 17 Pro Max

SHIELD\_RFFE1\_SDR

Tipo	Componente	SDA	SCLK
MASTER	SDR	J16	K17
Slave	U_DSM_HB	H7	H8
Slave	U_PAUHLB_E *	G1 / R1603_E	H1 / R1602_E

SHIELD\_RFFE2\_SDR

Tipo	Componente	SDA	SCLK
MASTER	SDR	H17	G18
Slave	U_PA_HB_E *	K7	K8
Slave	U_QETO_E	25 / R1605_E	30 / R1604_E
Slave	U_CPLR_L_E	11	6

SHIELD\_RFFE3\_SDR

Tipo	Componente	SDA	SCLK
MASTER	SDR	H13	J14
Slave	U_PA_LB_E *	H1 C2104_E	G1 C2105_E
Slave	U_QET1_E	25	30

SHIELD\_RFFE4\_SDR

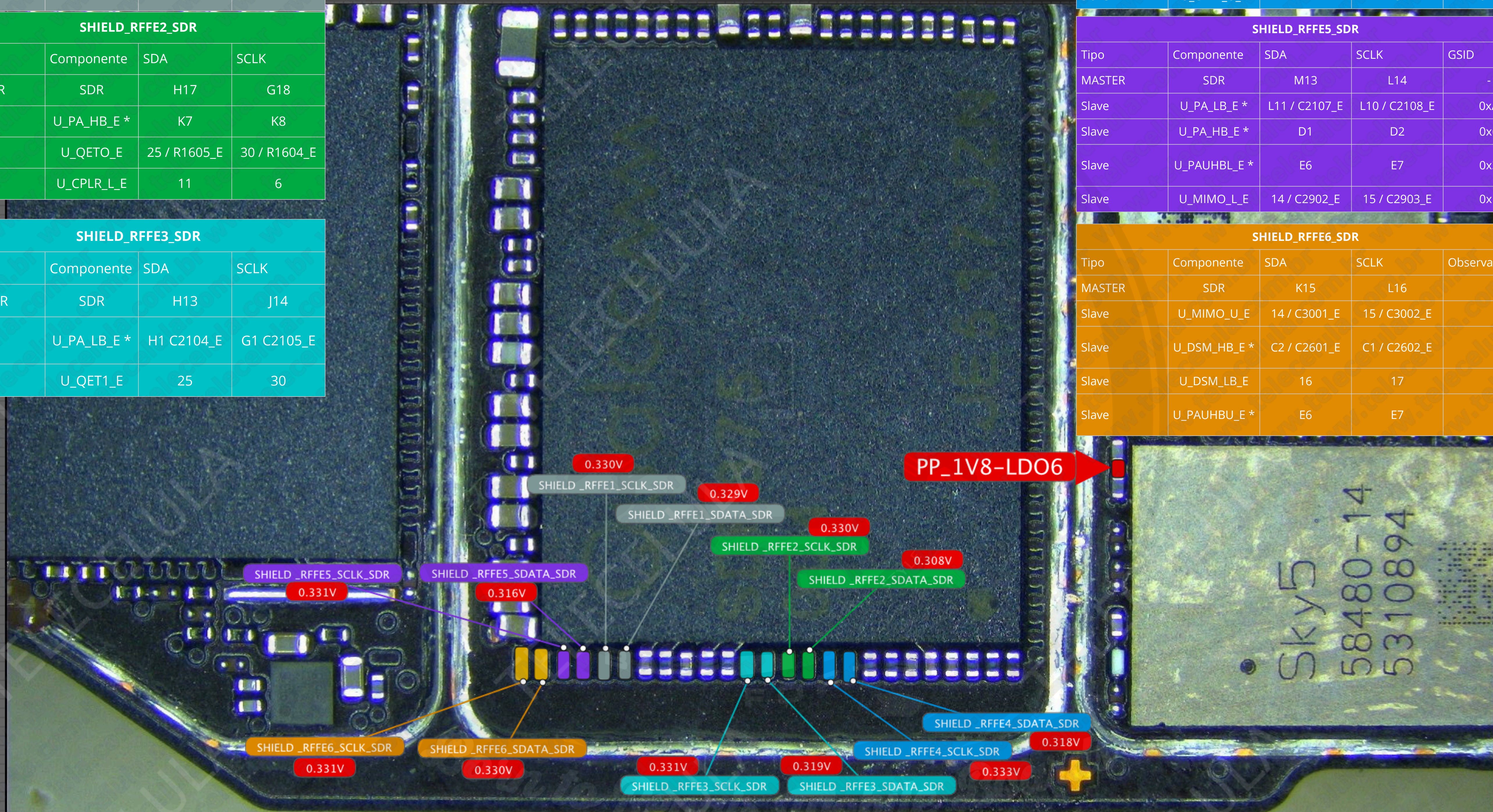
Tipo	Componente	SDA	SCLK	GSID
MASTER	SDR	K13	J12	-
Slave	U_PAUHB_U *	G1 / C2802_E	H1 / C2803_E	0x6
Slave	U_CPLR_U_E	11	6	0x8

SHIELD\_RFFE5\_SDR

Tipo	Componente	SDA	SCLK	GSID
MASTER	SDR	M13	L14	-
Slave	U_PA_LB_E *	L11 / C2107_E	L10 / C2108_E	0xA
Slave	U_PA_HB_E *	D1	D2	0x6
Slave	U_PAUHLB_E *	E6	E7	0x3
Slave	U_MIMO_L_E	14 / C2902_E	15 / C2903_E	0x1

SHIELD\_RFFE6\_SDR

Tipo	Componente	SDA	SCLK	Observações
MASTER	SDR	K15	L16	
Slave	U_MIMO_U_E	14 / C3001_E	15 / C3002_E	
Slave	U_DSM_HB_E *	C2 / C2601_E	C1 / C2602_E	
Slave	U_DSM_LB_E	16	17	
Slave	U_PAUHB_U *	E6	E7	



17 PRO / 17 PRO MAX TP RFFE

TEST POINTS RFFE

Autor : JAMES DIAS

Fecha : 23 Abr 2026

Escale : size 1/1

RFFE  
17 PRO/ MAX

@TECECELULA

PCB Solution FBL #

# APPLE IPHONE 17 PRO MAX



## MAPA RFFE SDR SHIELD

### SHIELD\_RFFE1\_SDR

Tipo	Componente	SDA	SCLK
MASTER	SDR	J16	K17
Slave	U_DSM_HB	H7	H8
Slave	U_PAUHBL_E *	G1 / R1603_E	H1 / R1602_E

### SHIELD\_RFFE4\_SDR

Tipo	Componente	SDA	SCLK	GSID
MASTER	SDR	K13	J12	-
Slave	U_PAUHBU_E *	G1 / C2802_E	H1 / C2803_E	0x6
Slave	U_CPLR_U_E		11	6 0x8

### SHIELD\_RFFE2\_SDR

Tipo	Componente	SDA	SCLK
MASTER	SDR	H17	G18
Slave	U_PA_HB_E *	K7	K8
Slave	U_QETO_E	25 / R1605_E	30 / R1604_E
Slave	U_CPLR_L_E		11 6

### SHIELD\_RFFE5\_SDR

Tipo	Componente	SDA	SCLK	GSID
MASTER	SDR	M13	L14	-
Slave	U_PA_LB_E *	L11 / C2107_E	L10 / C2108_E	0xA
Slave	U_PA_HB_E *	D1	D2	0x6
Slave	U_PAUHBL_E *	E6	E7	0x3
Slave	U_MIMO_L_E	14 / C2902_E	15 / C2903_E	0x1

### SHIELD\_RFFE3\_SDR

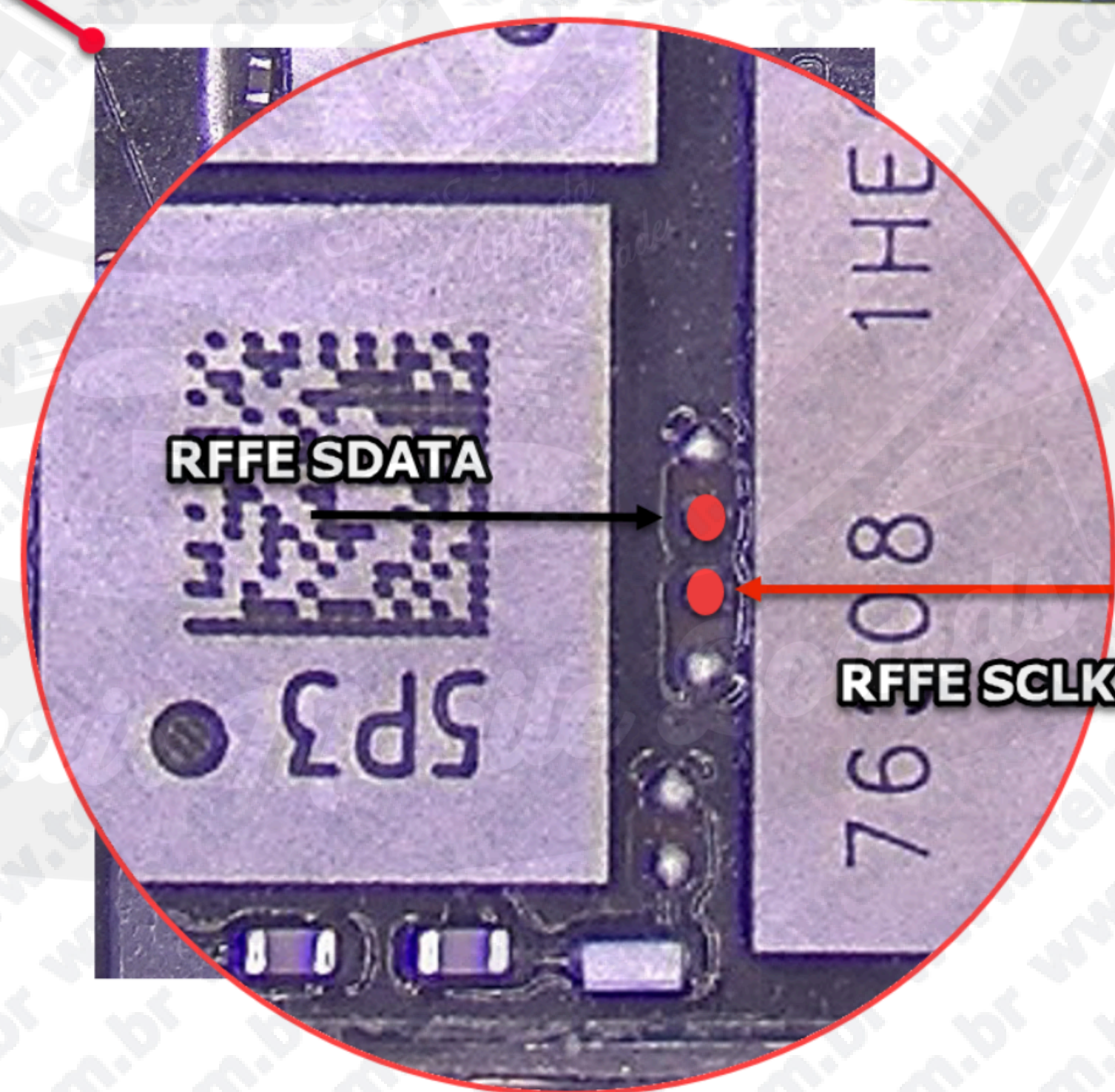
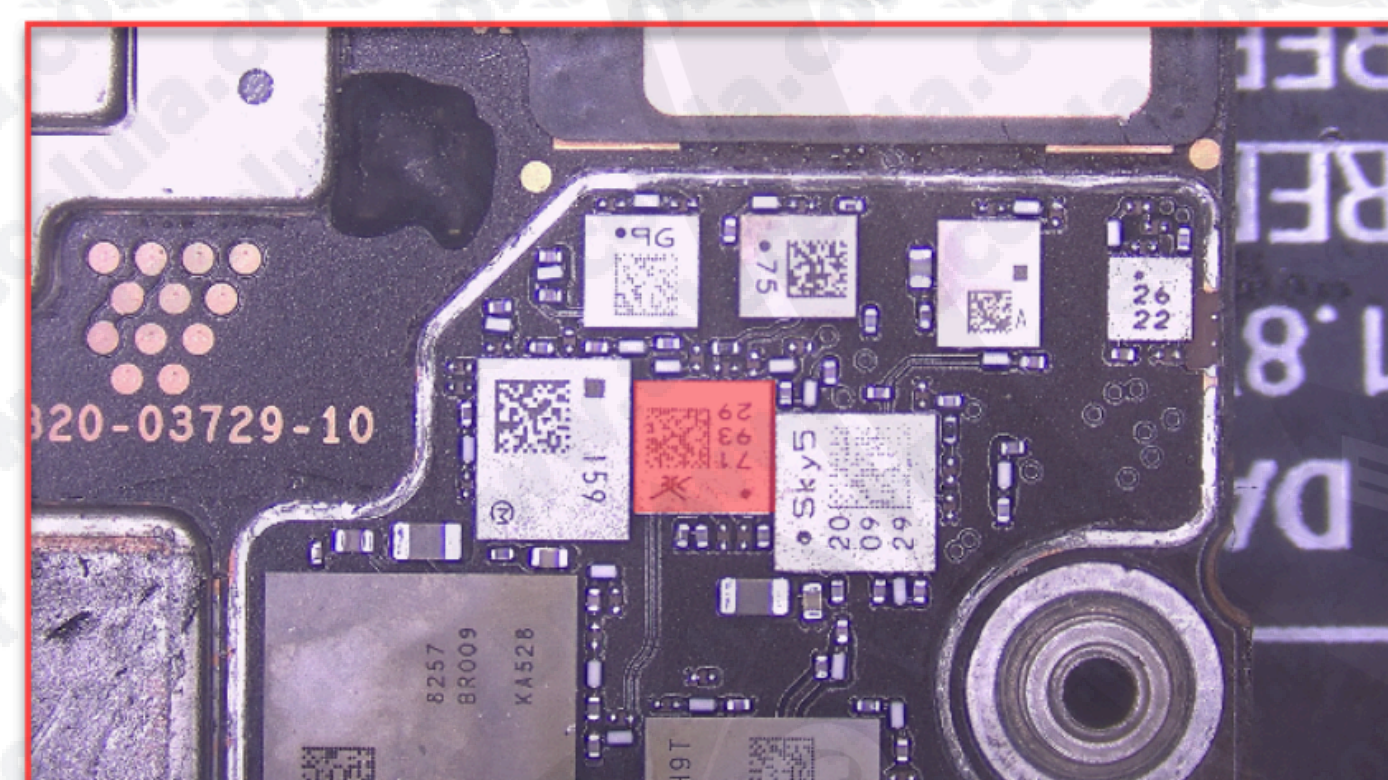
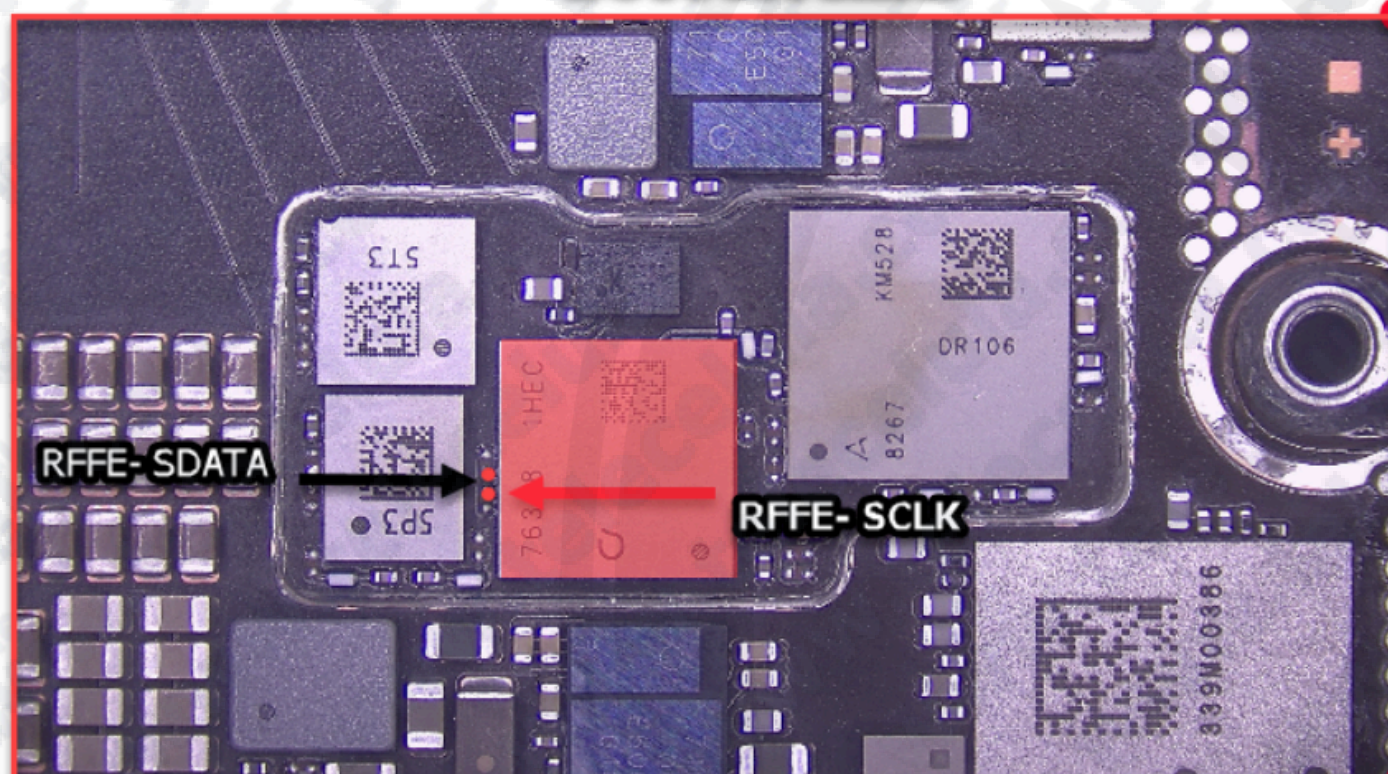
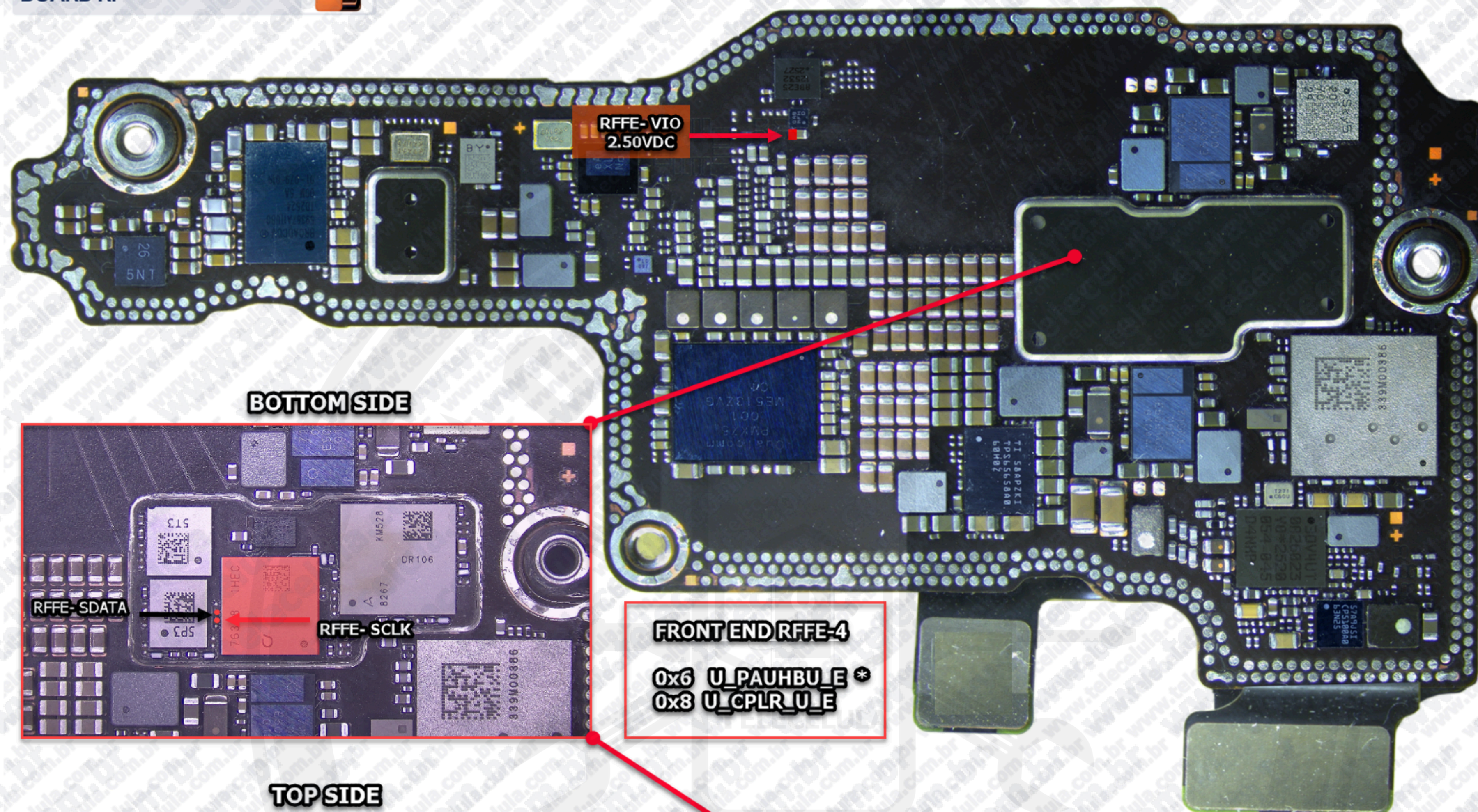
Tipo	Componente	SDA	SCLK
MASTER	SDR	H13	J14
Slave	U_PA_LB_E *	H1 / C2104_E	G1 / C2105_E
Slave	U_QET1_E		25 30

### SHIELD\_RFFE6\_SDR

Tipo	Componente	SDA	SCLK	Observações
MASTER	SDR	K15	L16	
Slave	U_MIMO_U_E	14 / C3001_E	15 / C3002_E	
Slave	U_DSM_HB_E *	C2 / C2601_E	C1 / C2602_E	
Slave	U_DSM_LB_E		16 17	
Slave	U_PAUHBU_E *	E6	E7	

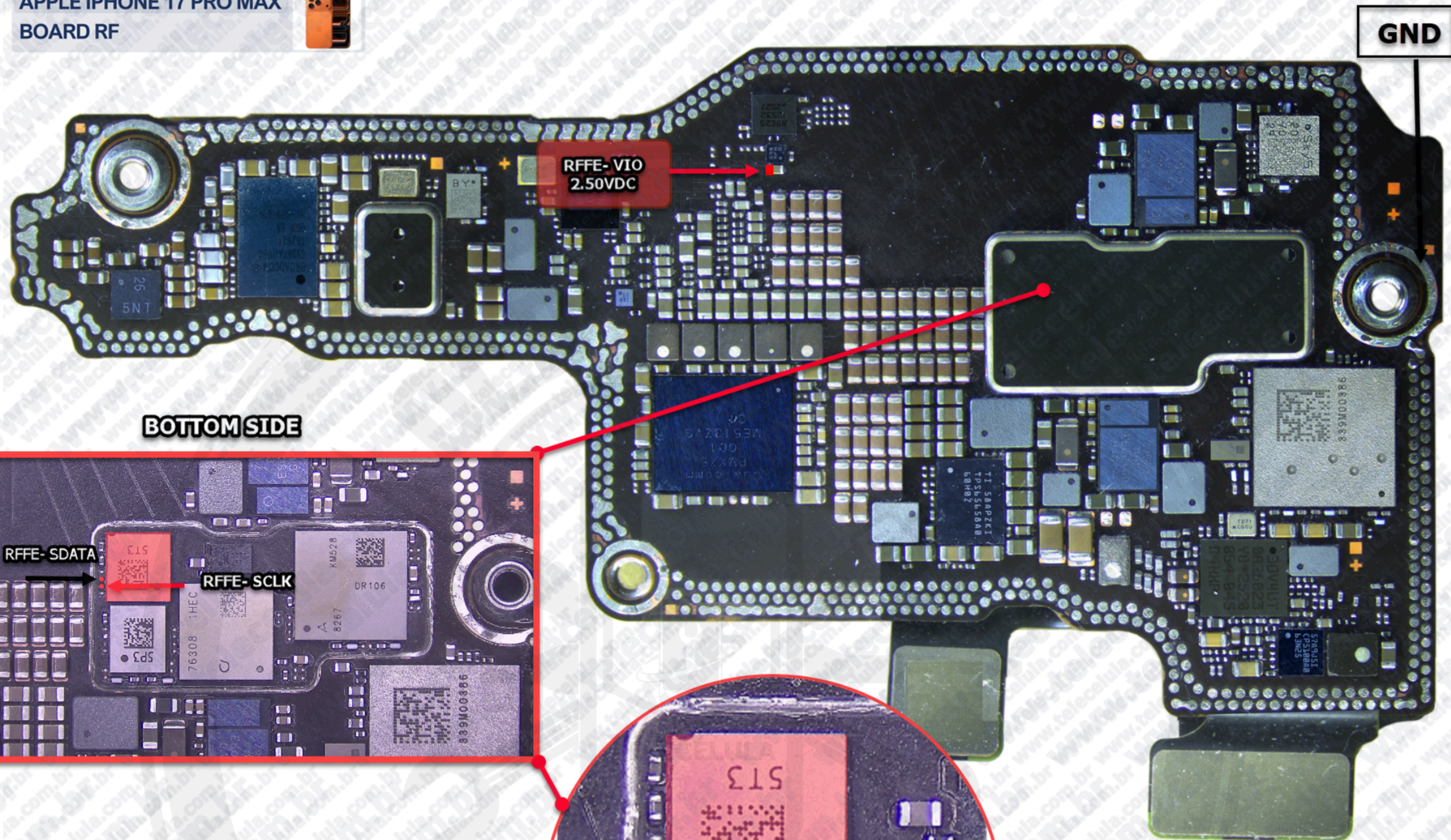
# SHIELD\_RFFE4\_SDR 17 PRO/ 17 PRO MAX

APPLE IPHONE 17 PRO MAX  
BOARD RF

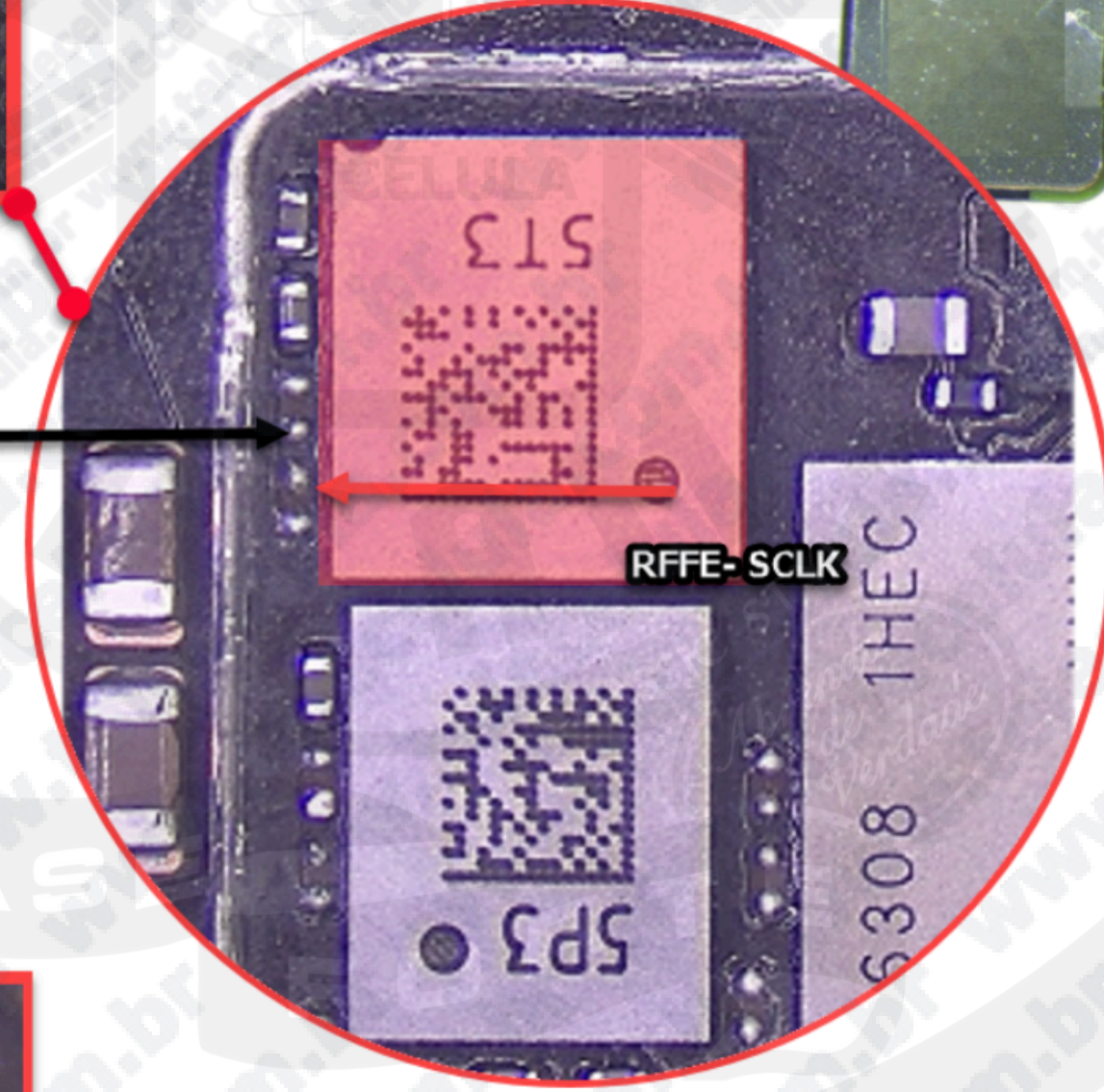
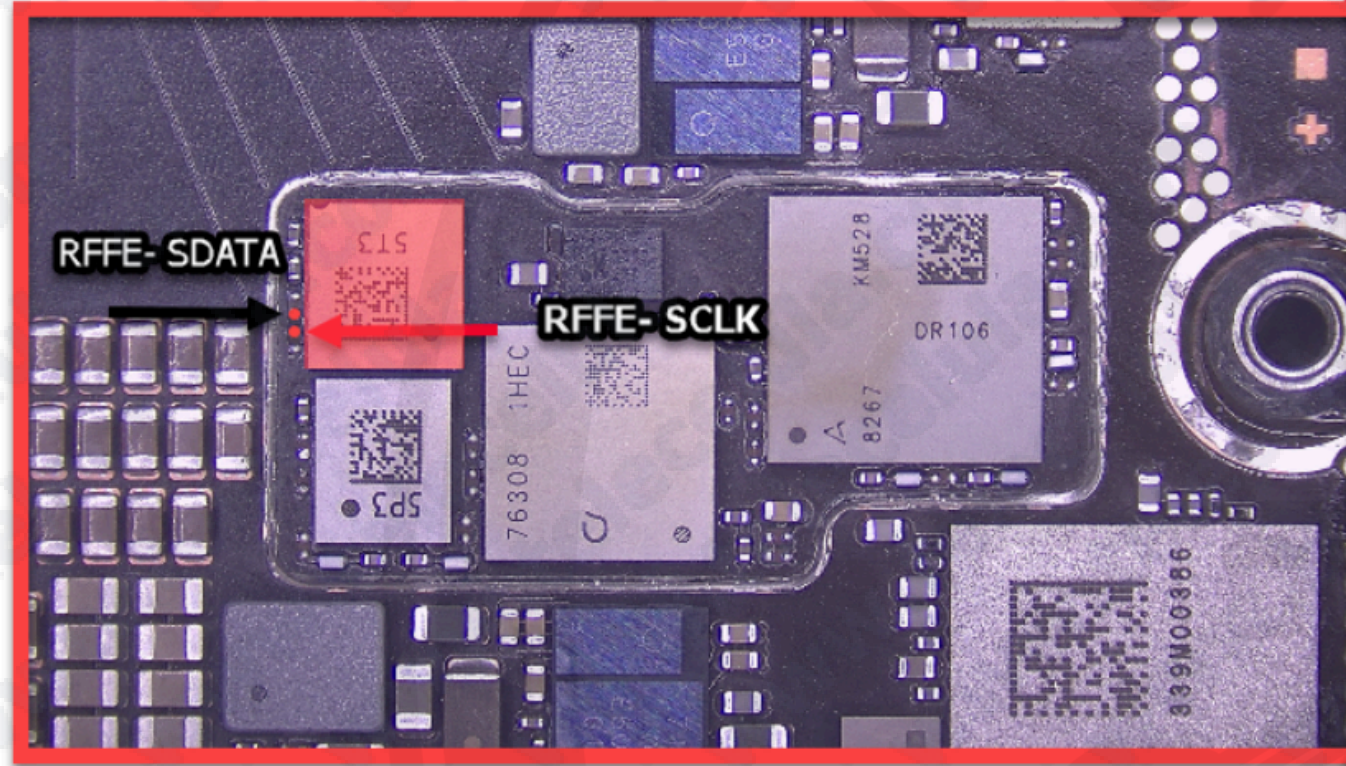


# SHIELD\_RFFE5\_SDR 17 PRO/ 17 PRO MAX

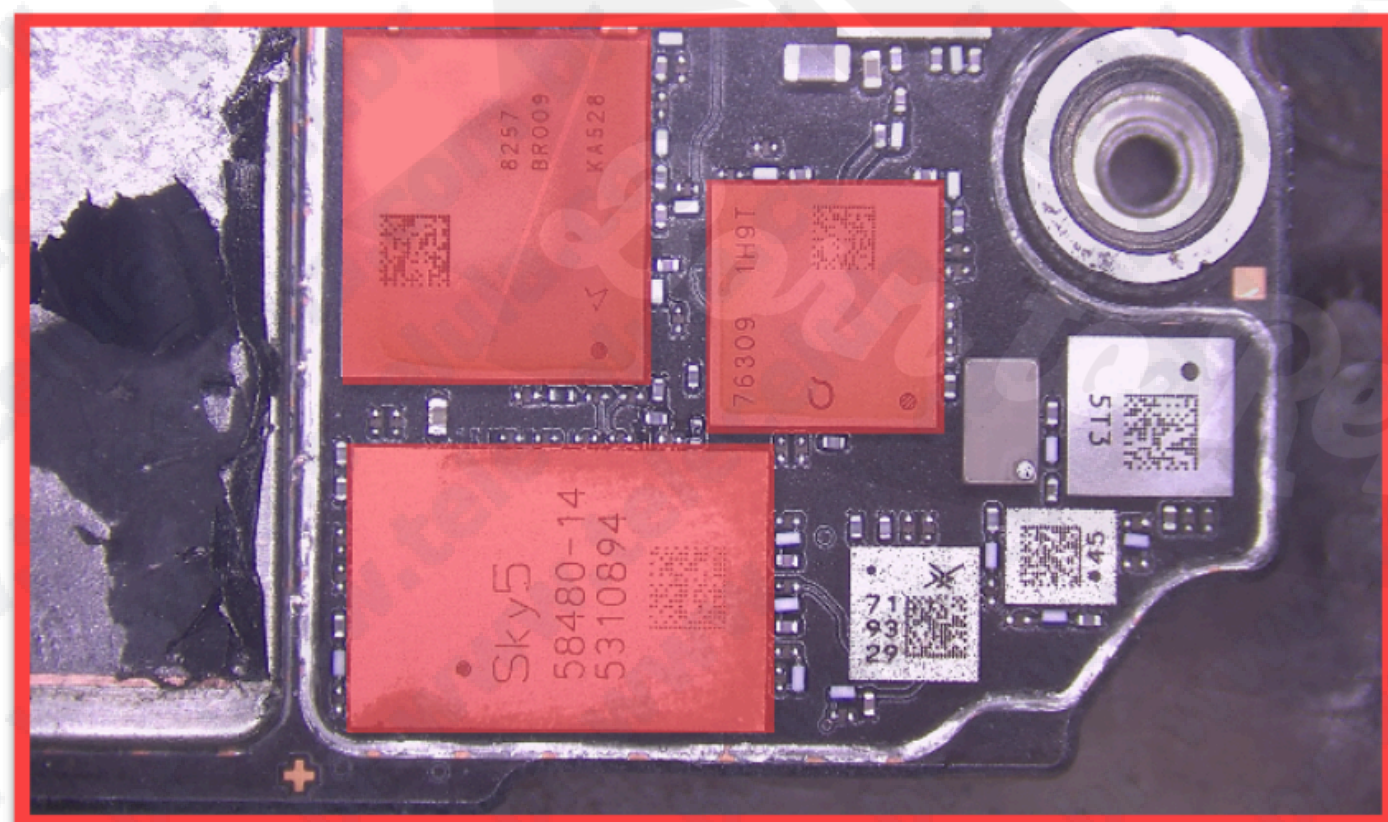
APPLE IPHONE 17 PRO MAX  
BOARD RF



**BOTTOM SIDE**



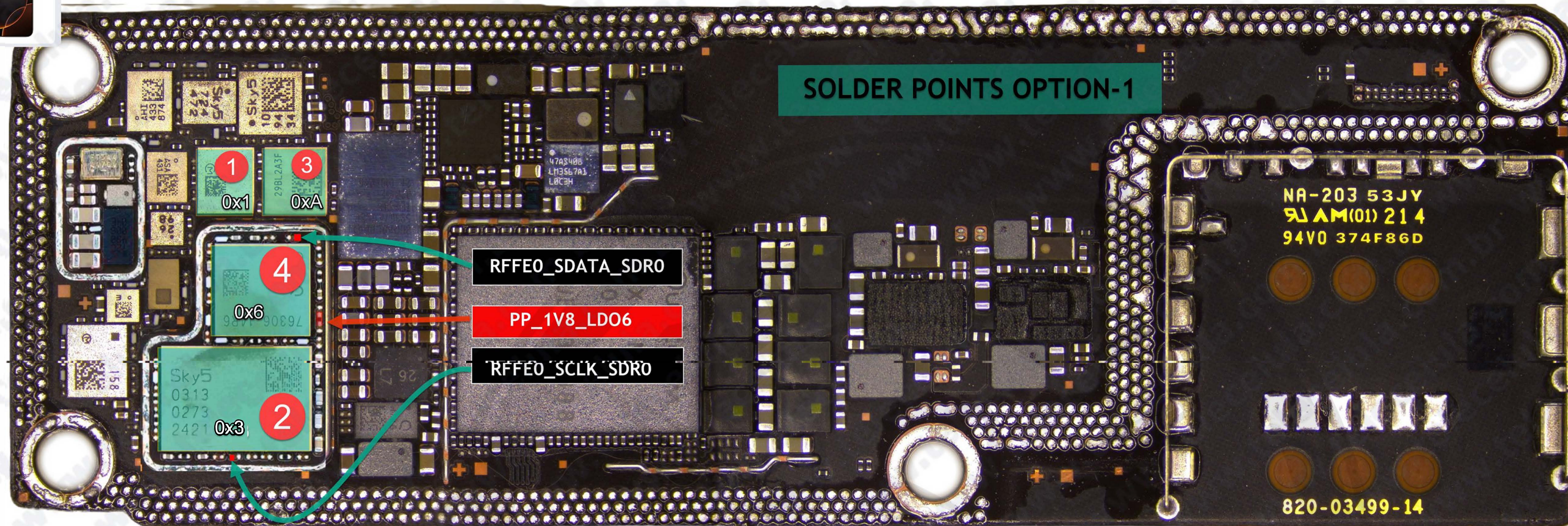
**TOP SIDE**



**FRONT END SHIELD RFFE5 SDR**

0x1	5T3	- U_MIMO_LE
0x3	76309 1H9T	- U_PAUHLB_E *
0x6	8257 KA528	- U_PA_HB_E *
0xA	SKY58480-14	- U_PA_LB_E *

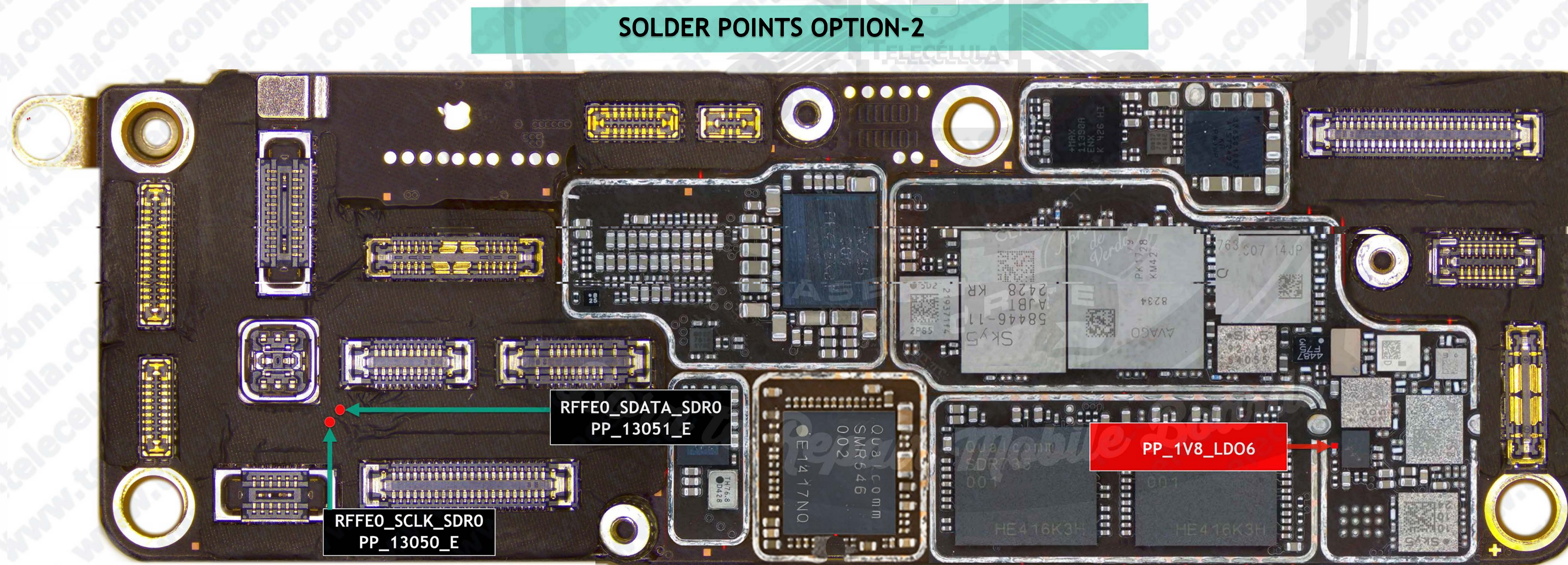
**IPHONE 16 PRO - PRO MAX**  
**XCVR0 RFFE0 SDR0**



**SOLDER POINTS OPTION-1**

**XCVR0 RFFE0**

1- U_LBDSM_E	0x1
2- U_TXDSM_E	0x3
3- U_MDSM_U_E	0xA
4- U_UHBPA_U_E	0x6

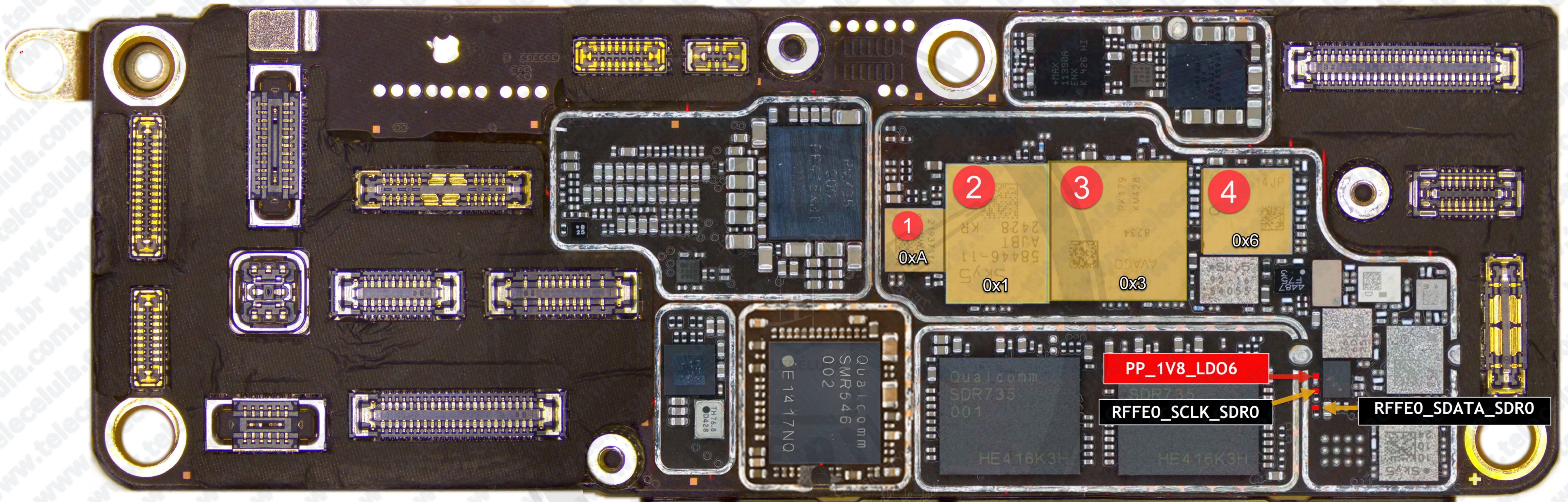


**SOLDER POINTS OPTION-2**

-RFFE VIO 1.8V	C2916_E / C2917_E (NC) / C2603_E
-RFFE SCL	C2805_E (NC) / PP_13050_E
-RFFE SDA	C2913_E (NC) / PP_13051_E
-GND (SHIELD).	

# IPHONE 16 PRO - PRO MAX

## XCVR0 RFFE5 SDR0

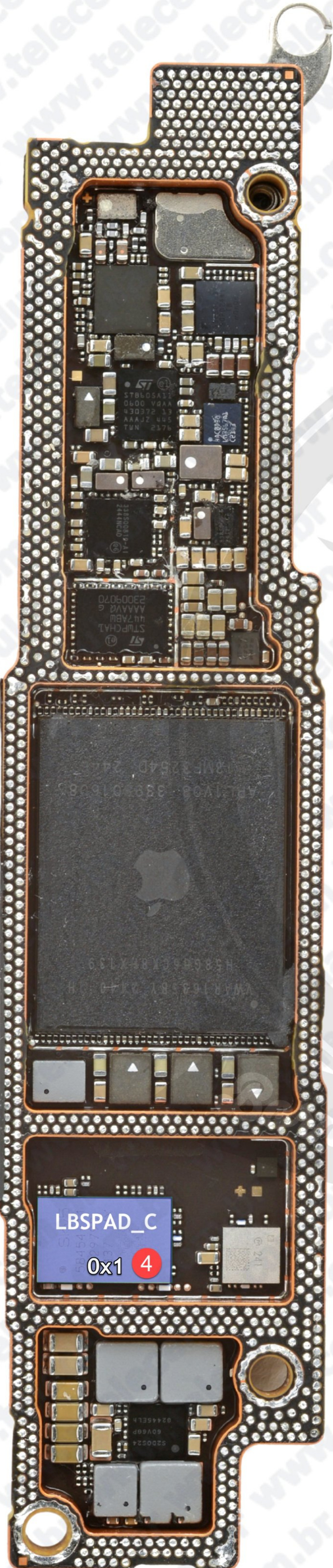


### XCVR0 RFFE5

- 1- MDSM\_L\_E 0xA
- 2- U\_LBSPAD\_E 0x1
- 3- U\_HBSPAD\_E 0x3
- 4- U\_UHBPA\_L\_E 0x6

- RFFE VIO 1.8V C2603\_E
- RFFE SCL R1506\_E
- RFFE SDA R1507\_E
- GND (SHIELD).

**IPHONE 16E - RFFE SHIELD**  
**XCVRO RFFE0 LRX SDR0**



**XCVRO\_RFFE0\_LRX**

XCVRO RFFE0 LRX\_SCLK -R1001C-SCLK  
XCVRO RFFE0 LRX\_SDAT -R1003\_C SDAT

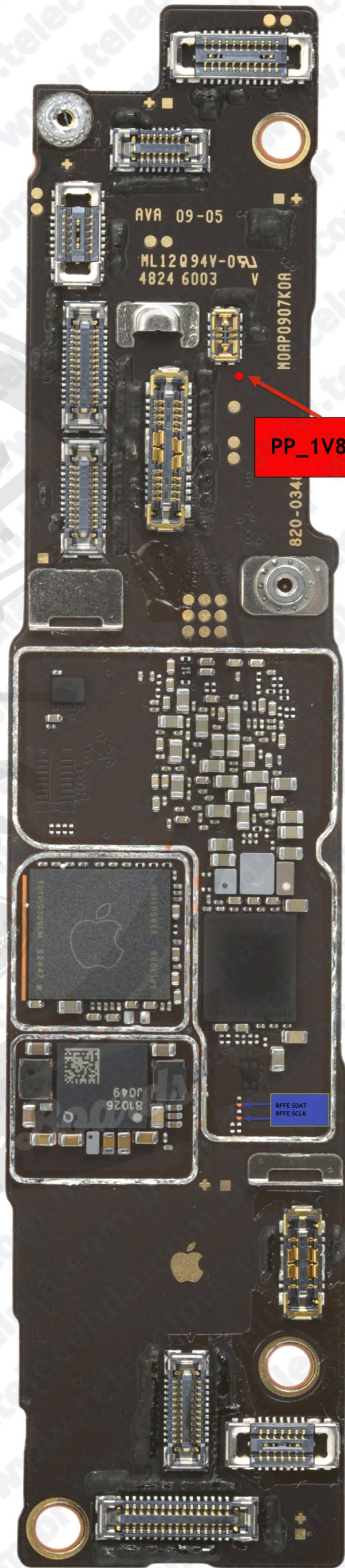
1-U\_HBSPAD\_C PAD D2-SCLK  
 AFEM 8254 AP1 PAD D1-SDAT  
 USID= 0x2

2-U\_LUHBPA\_C PAD E7-SCLK  
 AFEM-8255 AP1 PAD E6-SDAT  
 USID= 0x3

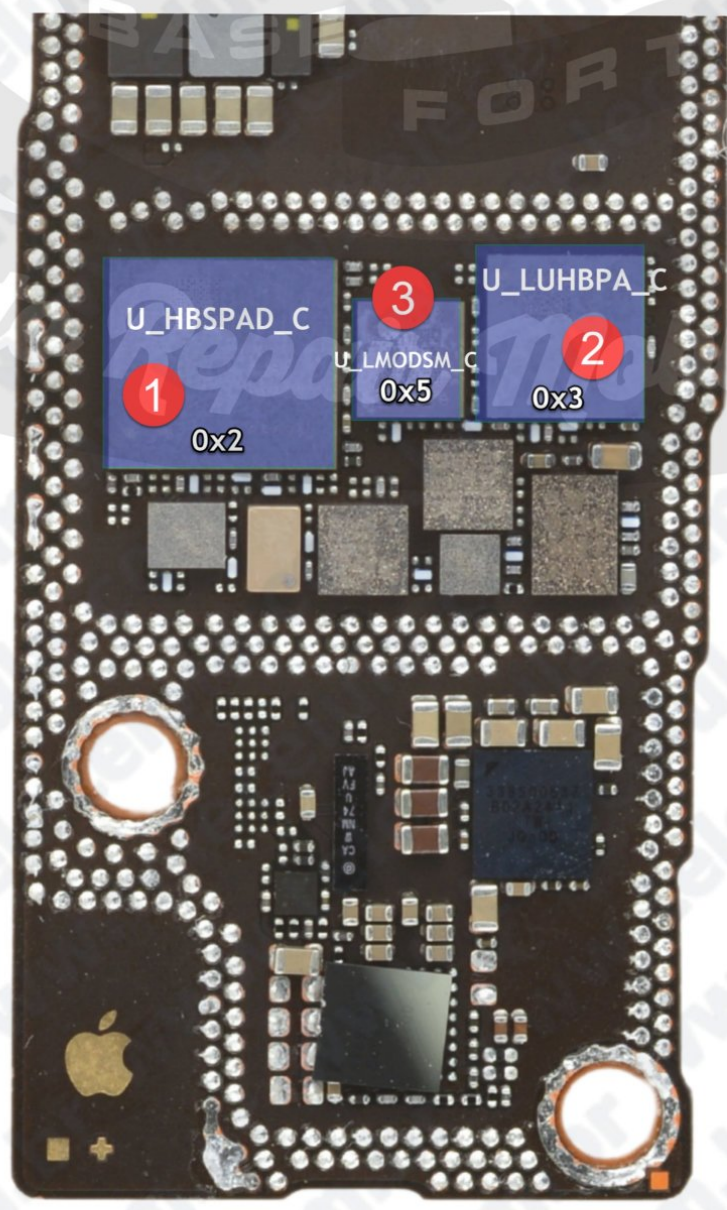
3-U\_LMODSM\_C PAD 15-SCLK  
 SKY53928 PAD 14-SDAT  
 USID= 0x5

4-U\_LBSPAD\_C PAD L10-SCLK  
 SKY 58454-11 PAD L11-SDAT  
 USID=0x1

VDD-RFFE\_VIO C1400\_C - PP\_1V8\_LDO6



**PP\_1V8\_LDO6**



1 U\_HBSPAD\_C 0x2

2 U\_LUHBPA\_C 0x3

3 U\_LMODSM\_C 0x5

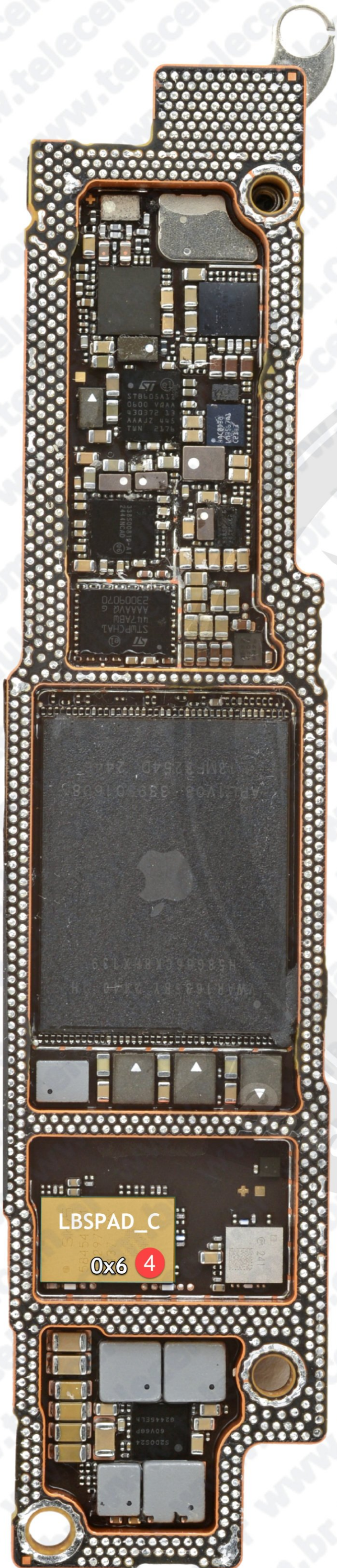
LBSPAD\_C 0x1 4

RFFE SDAT  
 RFFE SCLK

TELECÉLULA

THE TEAM  
 CLASSIC STYLE  
 Aprenda de Verdade

**IPHONE 16E - RFFE SHIELD**  
**XCVRO RFFE1 LXT SDR0**



XCVRO\_RFFE1\_LTX

XCVRO\_RFFE1\_LTX\_SCLK  
R1005\_C/C1301\_C -SCLK

XCVRO\_RFFE1\_LTX\_SDAT  
R1007\_C/C1302\_C -SDAT

1-U\_HBSPAD\_C C1409-SCLK  
AFEM 8254 AP1 C1410-SDAT  
USID= 0x7

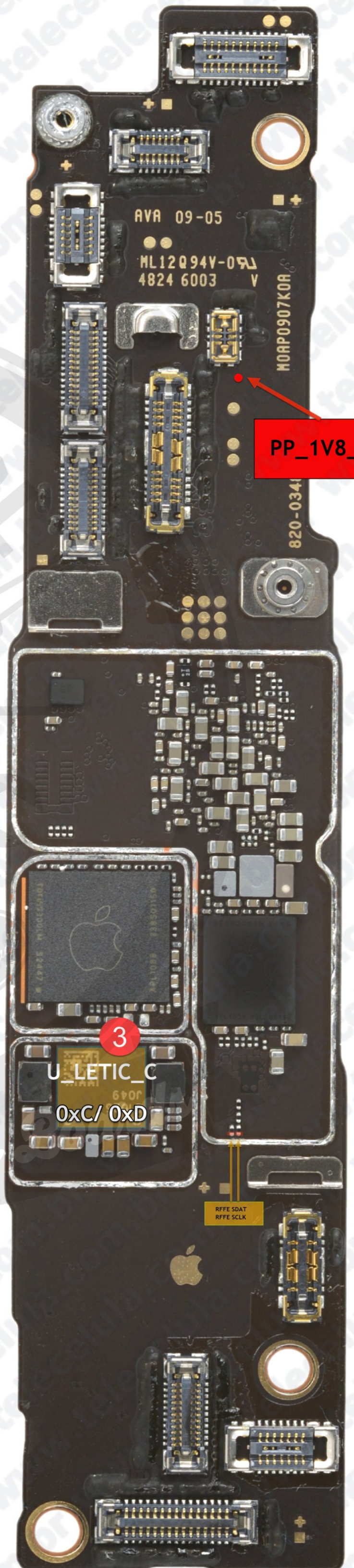
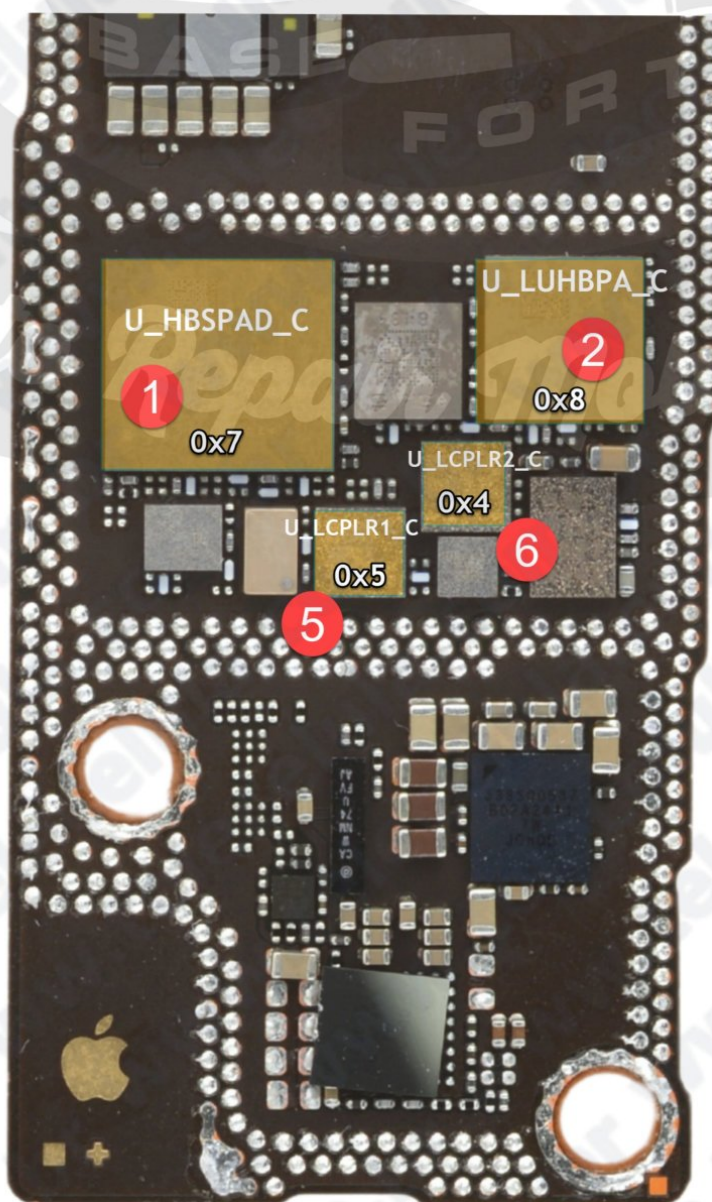
2-U\_LUHBPA\_C C1501\_C-SCLK  
AFEM-8255 AP1 C1502\_C-SDAT  
USID= 0x8

3-U\_LETIC\_C PAD G4-SCLK  
QMN81026 PAD F4-SDAT  
USID= 0xC/0xD

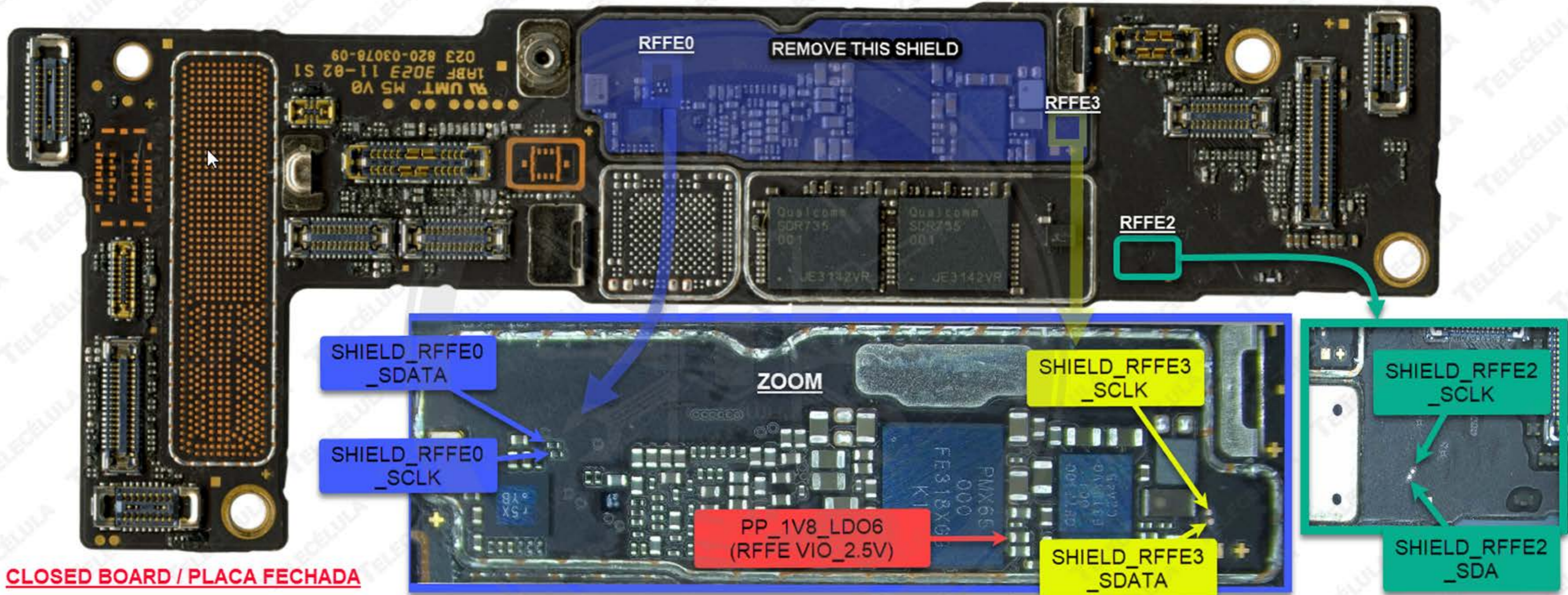
4-U\_LBSPAD\_C PAD G1-SCLK  
SKY 58454-11 PAD H1-SDAT  
USID=0x6

5-U\_LCPLR1\_C C1705\_C-SCLK  
SKY 58454-11 C1706\_C-SDAT  
USID=0x5

6-U\_LCPLR2\_C  
SKY 58454-11  
USID=0x4



**SMARTBOARD- iPhone 15 / 15 Plus RFFE (MOUTEND BOARD - NEED REMOVE SHIELD).**



**CLOSED BOARD / PLACA FECHADA**

**SHIELD\_RFFE0\_SDATA\_SDR**

U_TXDSM_E (SKY5-0313-9392)	0x3	(RF PART)
U_MDSM_U_E (SKY5-04314)	0xA	(RF PART)
U_LBDSM_E (L14)	0x1	(RF PART)
U_5G_U_W (0711-8418)	0xE	(RF PART)
*U_UHBDSM_E (AVAGO 8245)	0x7	(RF PART)

R1509\_E SDA / R1508\_E SCL

**SHIELD\_RFFE2\_SDATA\_SDR**

U_CPLR1_E (155)	0x8	(RF PART)
U_QET1_E (QET7100)	0xD/0x4	(AP PART)
U_PA_HB_E (AFEM 8233/8234)	0x3	(AP PART)

PP13055\_E SDATA / PP13054\_E SCL

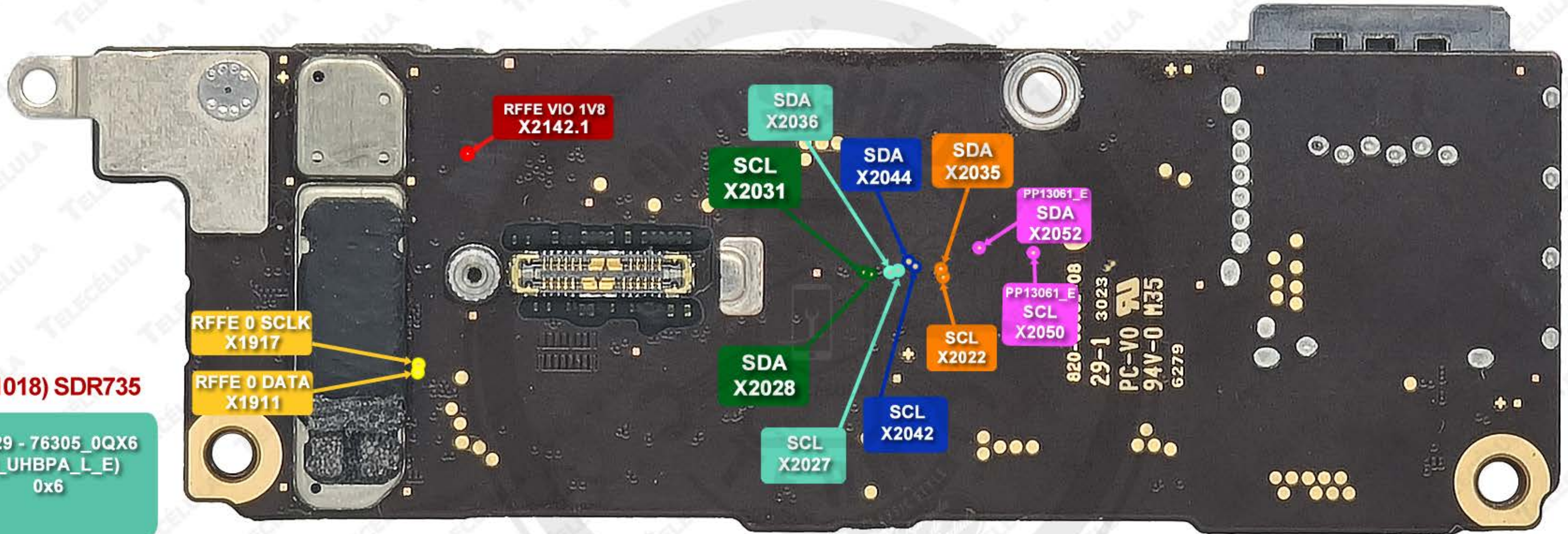
**SHIELD\_RFFE3\_SDATA\_SDR**

PA_2G_E (SKY5 8292-11)	0x5	(AP PART)
U_ETIC0_E (QET7100)	0x4	(RF PART)
U_LBSPAD_E (SKY5 58446-11)	0x1	(RF PART)

PP13057\_E SDATA / PP13056\_E SCL

# IPHONE 15 PRO / 15 PRO MAX

MOUNTED BOARD



(U1018) SDR735

U1029 - 76305\_0QX6  
(U\_UHBPA\_L\_E)  
0x6

SDR1\_RFFE1

U1035-8249\_TM025\_KA324\_  
(U\_UHBPA\_U\_E) 0xB  
U1004 - SKY5\_04516  
(U\_MDSM\_U\_E)  
X10011 - 151 (U\_7G\_U\_W)  
U1010 - L14 (U\_LBDSM\_E) - 0x1  
U1003 - SKY5\_031324452320  
(U\_TXDSM\_E) - 0x3

SDR1\_RFFE0

U1025\_SKY5 8446  
(U\_LBSPAD\_E) - 0x1  
U1026\_SKY5 921682692  
(PA\_2G\_E) - 0x5  
U1032\_QET7100 (U\_ETIC0\_E)  
(DETECTOR ENVELOPE) - 0x4

SDR1\_RFFE3

U1001\_SKY5 724-702  
(U\_CPLRU1\_E)  
U1003\_SKY5 031324452320  
(TXDSM\_E) - 0x3  
U1035\_8249\_TM025\_KA324\_  
(U\_UHBPA\_U\_E) - 0xB  
U1011 - F0CZ (U\_APTU\_E)

SDR1\_RFFE4

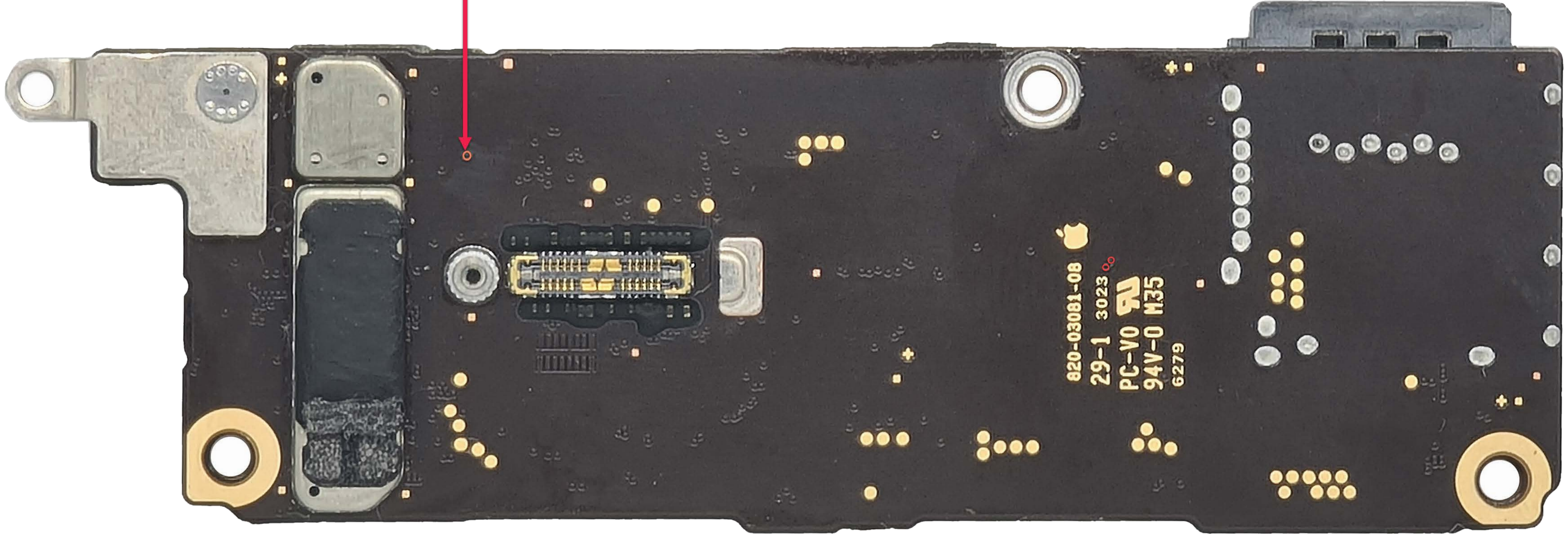
U1031\_155  
(U\_CPLRL1\_E)- 0x8  
U1021\_QET7100  
(U\_ETIC1\_E) - 0x4  
U1023\_AVAGO 8234  
(U\_HBSPAD\_E) - 0X3

SDR1\_RFFE2

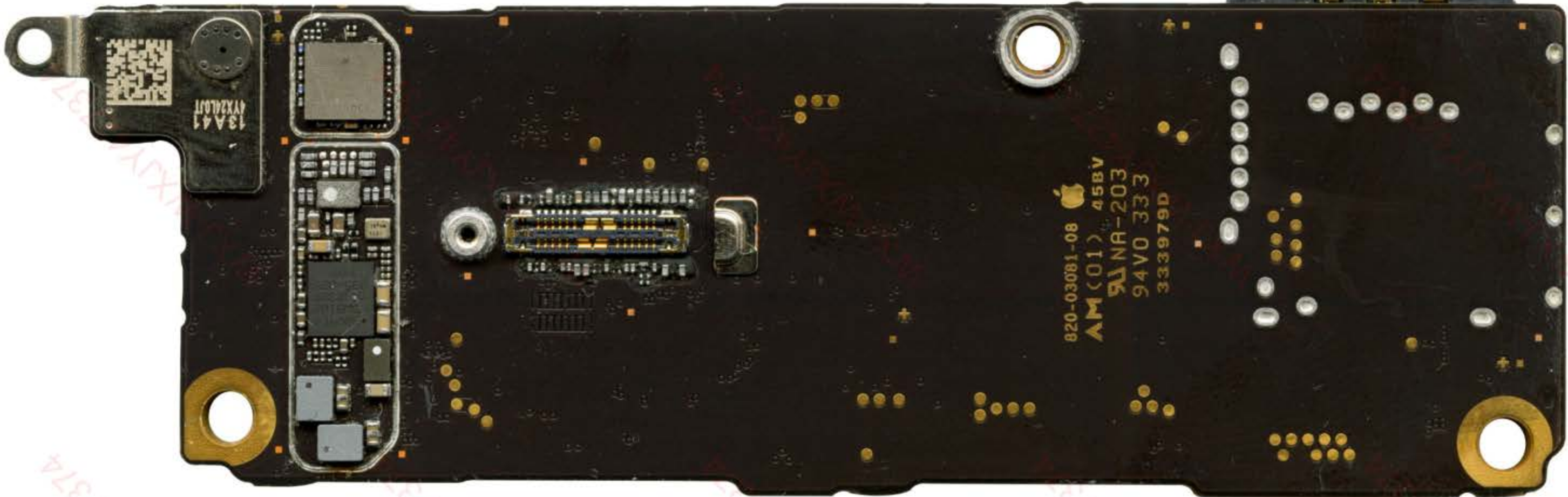
U1023 - AVAGO 8234 - 0x3  
(U\_HBSPAD\_E)  
U1024 - SKY5 04516 - 0xA  
(U\_MDSM\_L\_E)  
U1025 - SKY5 58446-11-FEM - 0x1  
(U\_LBSPAD\_E)  
U1029 - 76305-0QX6 - 0x6  
(U\_UHBPA\_L\_E)  
X10802 (TOP BOARD) 0xE  
(U\_7G\_L\_W)

SDR1\_RFFE5

RFFE VIO 1V8



820-03081-08  
29-1 3023  
PC-V0  
94V-0 M35  
6279



13A41  
4YX2L0JT

820-03081-08  
AM(01) 45BV  
94V0 333  
333979D

27374

27374

27374

27374

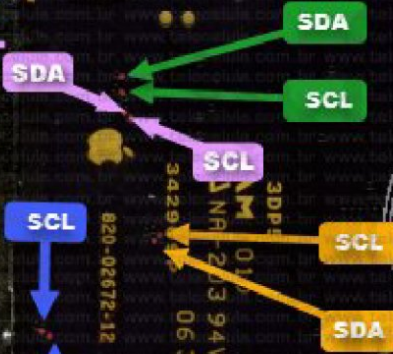
27374

# IPHONE 14 PRO MAX (RFFE - SDR)

RFFE-5SDR

RFFE-0 SDR

RFFE-1



RFFE-4 SDR

RFFE-3 SDR

RFFE-2 SDR

RFFE-1

RFFE-4

PA UHB (U232)  
IF IC (U233)

X550 - SKY5 724 866  
X239\_1 - DP08  
U0590 - SKY 853-17 25068 2225

RFFE-0 SDR

RFFE-2 SDR

RFFE-3 SDR

RFFE-5 SDR

MIMO\_U\_E 0xA RFFE7\_SDR  
DSM\_UHB 0x7 RFFE7\_SDR  
DSM\_HB\_E 0x3 RFFE5\_SDR  
DSM\_LB\_E 0x1 RFFE7\_SDR  
U\_5G\_U\_W 0xE RFFE7\_SDR

PA\_HB\_E 0x3 RFFE1\_SDR  
U\_QET0\_E 0x4 RFFE1\_SDR  
CPLR\_L\_E 0x8 RFFE1\_SDR

PA\_LMB 0x5 RFFEE6\_SDR  
PA\_LB\_E 0x1 RFFE6\_SDR  
QET\_1 0x4 RFFE6\_SDR

MIMO\_L\_E 0xA RFFE3\_SDR  
PA\_LB\_E 0x1 RFFE3\_SDR  
U\_5G\_L\_W 0xE RFFE3\_SDR  
PA\_HB\_E 0x3 RFFE3\_SDR  
PA\_UHB\_L\_E 0x6 RFFE3\_SDR

*para reparar Mobile*

# IPHONE 14 PRO (RFFE - SDR)

RFFE-5SDR

RFFE-0 SDR

RFFE-1

RFFE-4 SDR

RFFE-2 SDR

RFFE-3 SDR

RFFE-1

RFFE-4

PA UHB (U232)  
IF IC (U233)

X550 - SKY5 724 866  
X239\_1 - DP08  
U0590 - SKY 853-17 25068 2225

RFFE-0 SDR

RFFE-2 SDR

RFFE-3 SDR

RFFE-5 SDR

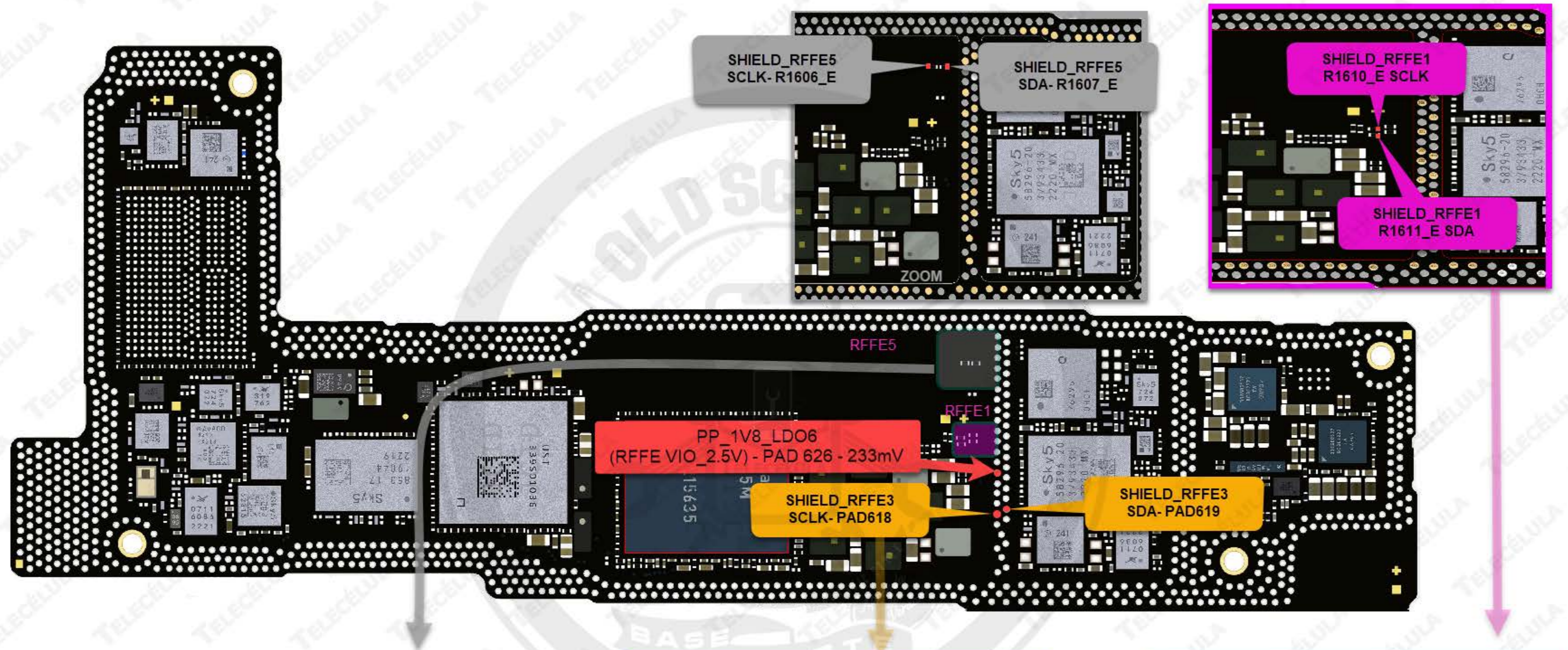
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DSM\_UHB 0x7 RFFE7\_SDR  
DSM\_HB\_E 0x3 RFFE5\_SDR  
DSM\_LB\_E 0x1 RFFE7\_SDR  
U\_5G\_U\_W 0xE RFFE7\_SDR

PA\_HB\_E 0x3 RFFE1\_SDR  
U\_QETO\_E 0x4 RFFE1\_SDR  
CPLR\_L\_E 0x8 RFFE1\_SDR

PA\_LMB 0x5 RFFEE6\_SDR  
PA\_LB\_E 0x1 RFFE6\_SDR  
QET\_1 0x4 RFFE6\_SDR

MIMO\_L\_E 0xA RFFE3\_SDR  
PA\_LB\_E 0x1 RFFE3\_SDR  
U\_5G\_L\_W 0xE RFFE3\_SDR  
PA\_HB\_E 0x3 RFFE3\_SDR  
PA\_UHB\_L\_E 0x6 RFFE3\_SDR

**SMARTBOARD- iPhone 14 / 14 Plus RFFE RF BOARD ONLY (OPEN BOARD) PART-1.**



**SHIELD\_RFFE5\_SDATA\_SDR (PARTE -1)**

PAUHBL_E (76295)	0x6	(RF PART)
PA_LB_E (SKY5-58296-20)	0x1	(RF PART)
U_5G_L_W (0711-6086)	0xE	(RF PART)

R1607\_E - PAD594 SDA  
R1606\_E - PAD592 SCL

**SHIELD\_RFFE3\_SDATA\_SDR (PARTE -1)**

PA_LB_E (SKY5-58296-20)	0xC	(RF PART)
U_QET0_E (QET7100)	0xD	(RF PART)

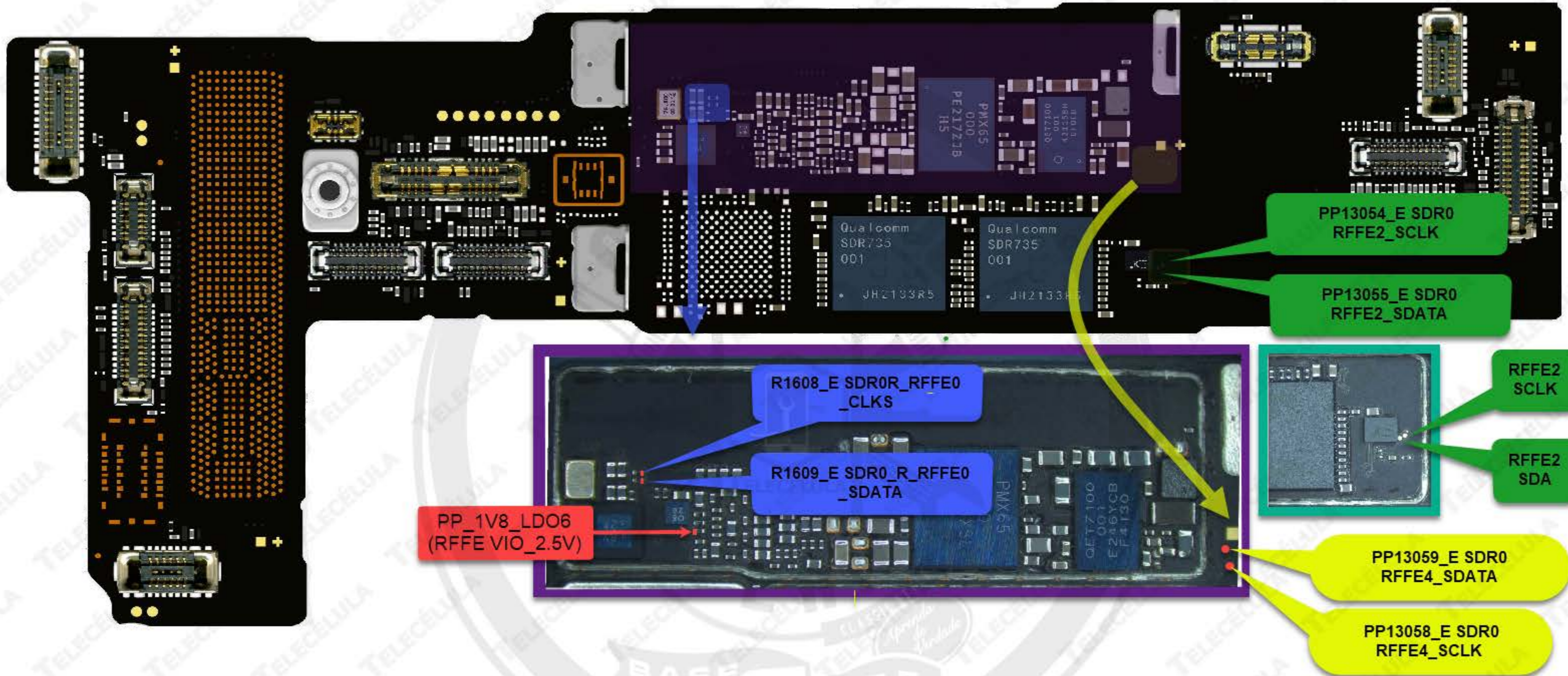
PAD619 SDA  
PAD618 SCL

**SHIELD\_RFFE1\_SDATA\_SDR**

PAUHBL_E (76295)	0x6	(RF PART)
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R1611\_E SDA  
R1610\_E SCL

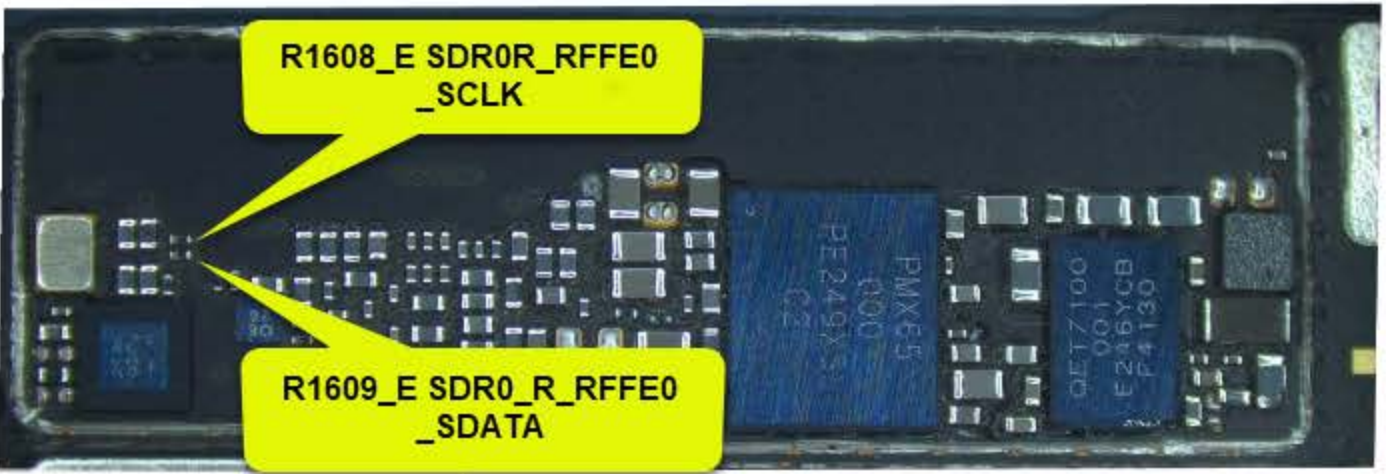
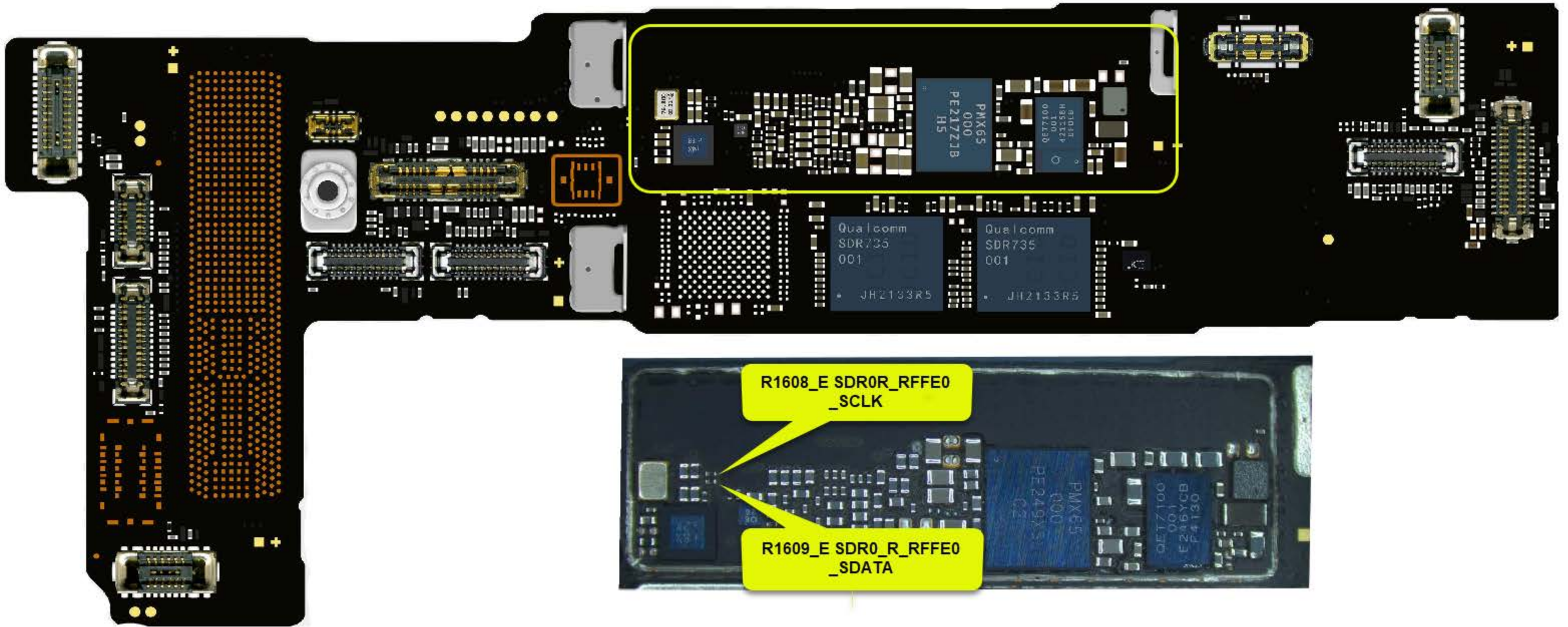
**SMARTBOARD- iPhone 14 / 14 Plus RFFE (MOUTEND BOARD - NEED REMOVE SHIELD).**



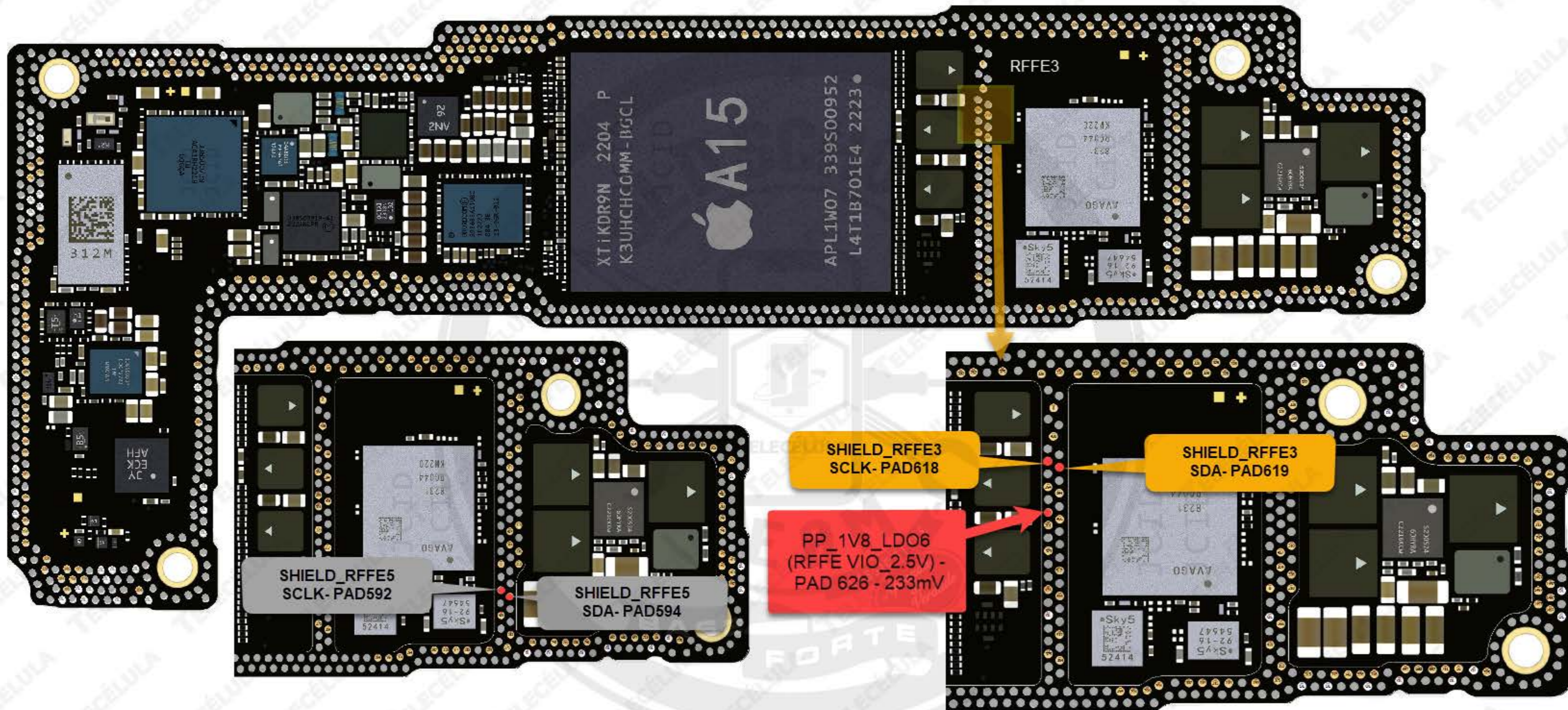
SHIELD_RFFE0_SDATA_SDR		
DSM_LB_E (L14)	0x1	(RF PART)
DSM_HB_E (SKY5-853-17)	0x3	(RF PART)
DSMUHB_E (AVAGO 82454)	0x7	(RF PART)
U_5G_U_W (0711)	0xE	(RF PART)
MIMO_U_E (SKY5-52315)	0xB	(RF PART)
R1609_E SDA / R1608_E SCL		

SHIELD_RFFE4_SDATA_SDR		
DSM_HB_E (SKY5-853-17)	0x3	(RF PART)
U_APTU_E (D9AV)	0xB	(RF PART)
CPRL_E (SKY5-724)	0x8	(RF PART)
R1605_E SDA / R1604_E SCL		

SHIELD_RFFE2_SDATA_SDR		
PA_HB_E (AVAGO 8231)	0x3/0xC	(AP PART)
CPRL_E (SKY5-724)	0x8	(RF PART)
U_QET1_E (QET7100)	0xD	(AP PART)
PP13055_E R1613_E SDA / PP13054_E R1612_E SCL		



**SMARTBOARD- iPhone 14 / 14 Plus RFFE RF BOARD ONLY (OPEN BOARD) PART-2.**

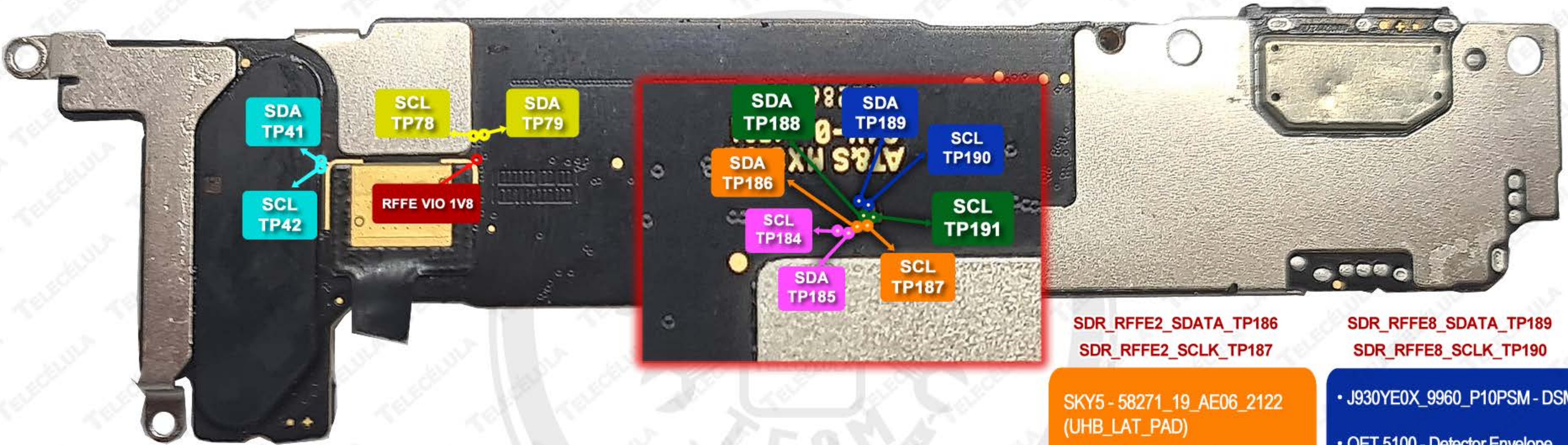


SHIELD\_RFFE5\_SDATA\_SDR (PARTE -2)  
 MIMO\_L\_E (SKY5-52414) 0xA (AP PART)  
 PA\_HB\_E (AVAGO 8231) 0x3 (AP PART)  
 PAD 594 SDA  
 PAD 592 SCL

SHIELD\_RFFE3\_SDATA\_SDR (PARTE -2)  
 PA\_2G\_E (SKY5-9216) 0x5 (AP PART)  
 PAD 619 SDA  
 PAD 618 SCL

# IPHONE 13 MINI - RFFE SDR 868

MOUNTED BOARD



SDR\_RFFE2\_SDATA\_TP186  
SDR\_RFFE2\_SCLK\_TP187

SDR\_RFFE8\_SDATA\_TP189  
SDR\_RFFE8\_SCLK\_TP190

SKY5 - 58271\_19\_AE06\_2122 (UHB\_LAT\_PAD)  
BRY\_E037\_OVL4 - ET

- J930YE0X\_9960\_P10PSM - DSM
- QET 5100 - Detector Envelope

RFFE VIO 1V8 - TP74

RFFE VIO 1V8 - TP74

SDR\_RFFE1\_SDATA\_TP188  
SDR\_RFFE1\_SCLK\_TP191

SDR\_RFFE3\_SDATA\_TP185  
SDR\_RFFE3\_SCLK\_TP184

SDR\_RFFE5\_SDATA\_TP41  
SDR\_RFFE5\_SCLK\_TP42

SDR\_RFFE7\_SDATA\_TP79  
SDR\_RFFE7\_SCLK\_TP78

- SKY5 - 7217\_7553\_2124 (PA-2G) - 0x5
- AVAGO - 8215\_RL006\_KM122 (HB PA) - 0x3
- QET 5100 - 0x4
- AT - 10 - 0x8

- (TOP) 0611-7146-2123 - 0xE
- AVAGO 8215\_RL006\_KM122-HBPA - 0x3
- SKY5 140419 - 0xA
- J930YE0X\_9960\_P10PSM - DSM - 0x6
- SKY5 58271-10-AE06\_2122 - LBPA - 0x1

- 0611-2829-2123 (TOP) CI X11 - 0xE
- SKY5\_53838\_17 - 3103273\_2125MX\_UHB\_DSM - 0x7
- AVAGO\_8225\_KM121 - DSM\_UHB\_E - 0x3
- SKY5 14 04 19 - MIMO\_LOWER\_DSM - 0xA
- K89 - DSM\_LB\_E - 0x3

- SKY5 53838\_17\_3103273\_2125MX - UHB DSM - 0x3
- BRY B057 OBOC - 0xB
- SKY5 9723\_0080 - TOP (CI X13) - 0x8

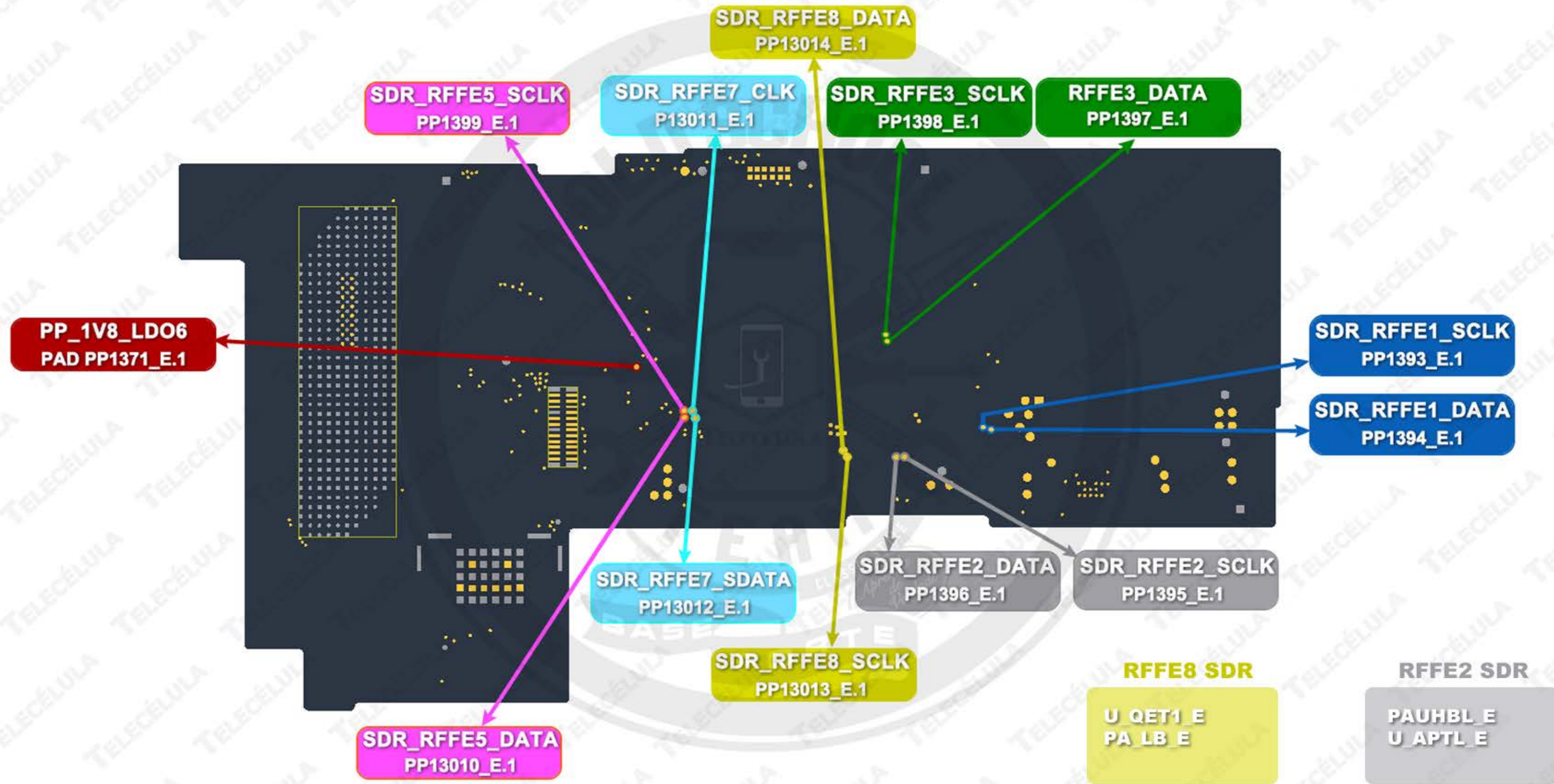
RFFE VIO 1V8 - TP74

RFFE VIO 1V8 - TP74

RFFE VIO 1V8 - TP74

RFFE VIO 1V8 - TP74

# SMARTBOARD - IPHONE 13 PRO MAX



## RFFE 1 SDR

PA_HB_E	0x3	RFFE1_SDR
PA_2G_E	0x5	RFFE1_SDR
CPLR_L_E	0x8	RFFE1_SDR
U_QET0_E	0x4	RFFE1_SDR

## RFFE 3 SDR

PA_HB_E	0x3	RFFE3_SDR
PA_UHB_L_E	0x6	RFFE3_SDR
MIMO_L_E	0xA	RFFE3_SDR
PA_LB_E	0x1	RFFE3_SDR
U_5G_L_W	0xE	RFFE3_SDR

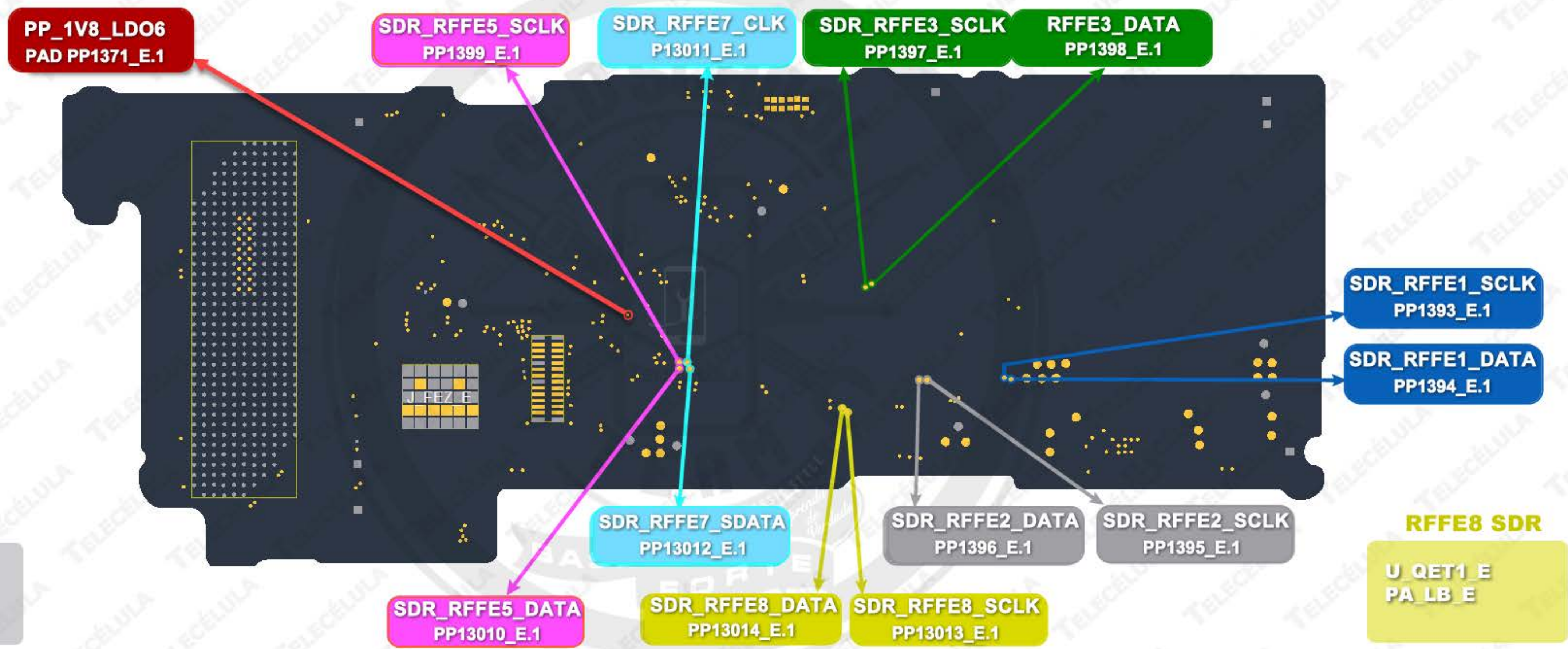
## RFFE 5 SDR

DSM_LB_E	0x1	RFFE5_SDR
DSM_HB_E	0x3	RFFE5_SDR
U_5G_U_W	0xE	RFFE5_SDR
MIMO_U_E	0xA	RFFE5_SDR
DSM_UHB_E	0x7	RFFE5_SDR

## RFFE 7 SDR

U_APTU_E	0xB	RFFE7_SDR
CPLR_U_E	0x8	RFFE7_SDR
DSM_HB_E	0x3	RFFE7_SDR

# SMARTBOARD - IPHONE 13 PRO



**RFFE2 SDR**  
 PAUHBL\_E  
 U\_APTL\_E

**RFFE8 SDR**  
 U\_QET1\_E  
 PA\_LB\_E

**RFFE 1 SDR**

PA_HB_E	0x3	RFFE1_SDR
PA_LMB_2G_E	0x5	RFFE1_SDR
CPLR_L_E	0x8	RFFE1_SDR
U_QET0_E	0x4	RFFE1_SDR

**RFFE 3 SDR**

PA_HB_E	0x3	RFFE3_SDR
PA_UHB_L_E	0x6	RFFE3_SDR
MIMO_L_E	0xA	RFFE3_SDR
PA_LB_E	0x1	RFFE3_SDR
U_5G_L_W	0xE	RFFE3_SDR

**RFFE 7 SDR**

UAPT_L_E	0xB	RFFE7_SDR
CPLR_U_E	0x8	RFFE7_SDR
DSM_HB_E	0x3	RFFE7_SDR

**RFFE 5 SDR**

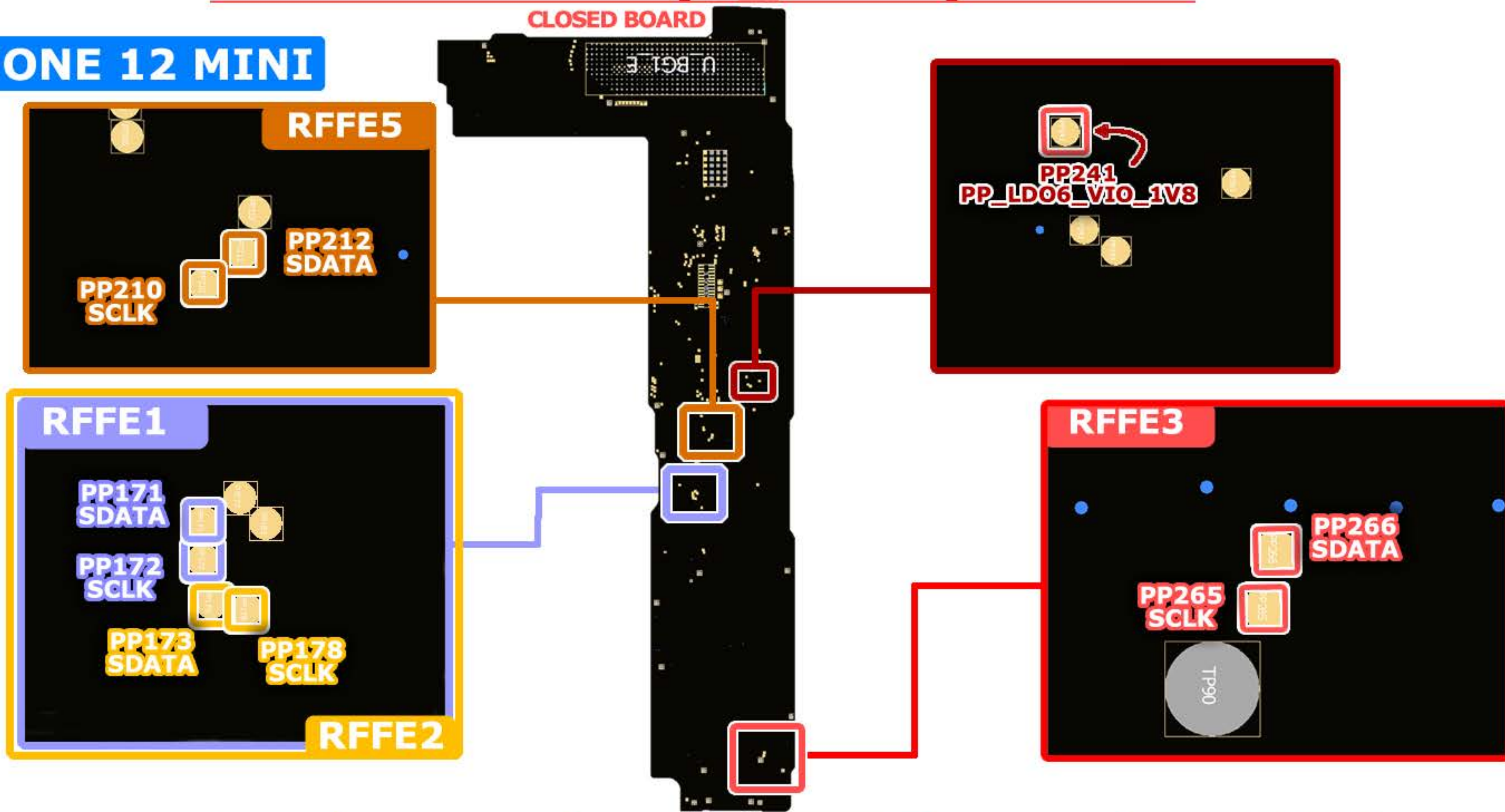
U_5G_U_W	0xE	RFFE5_SDR
DSM_UHB_E	0x7	RFFE5_SDR
DSM_LB_E	0x1	RFFE5_SDR
DSM_HB_E	0x3	RFFE5_SDR
MIMO_U_E	0xA	RFFE5_SDR

BOARD TOP  
 BOARD BOTTOM

# RFFE - (U\_SDRE)

## IPHONE 12 MINI

CLOSED BOARD



### RFFE1\_SDR

PA H B E 0x3

PA L M B E 0x5

C P L R L E 0x6

U Q E T O E 0x4

PP\_LD06\_VIO\_1V8  
PP241

### RFFE2\_SDR

U\_A P T L \_ E

P A U H L B \_ E

PP\_LD06\_VIO\_1V8  
PP241

Necessary test points to read RFFE

- SLCK
- SDATA
- GND
- 1V8

### RFFE3\_SDR

PA H B E 0x3

PA U H B L E 0x6

PA L M B E 0x5

PA L B E 0x1

U 5 G L 0xE

M I M O L E 0xA

PP\_LD06\_VIO\_1V8  
PP241

### RFFE5\_SDR

DSM U H B E 0x6

DSM L B E 0x1

DSM H B E 0x3

M I M O U E 0xA

U 5 G U 0xE

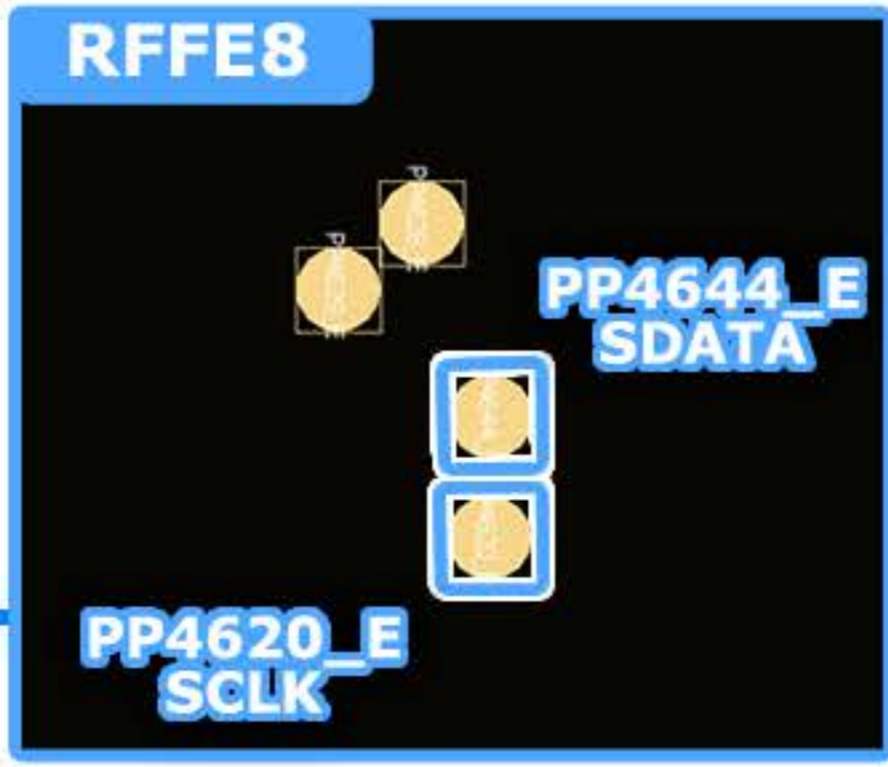
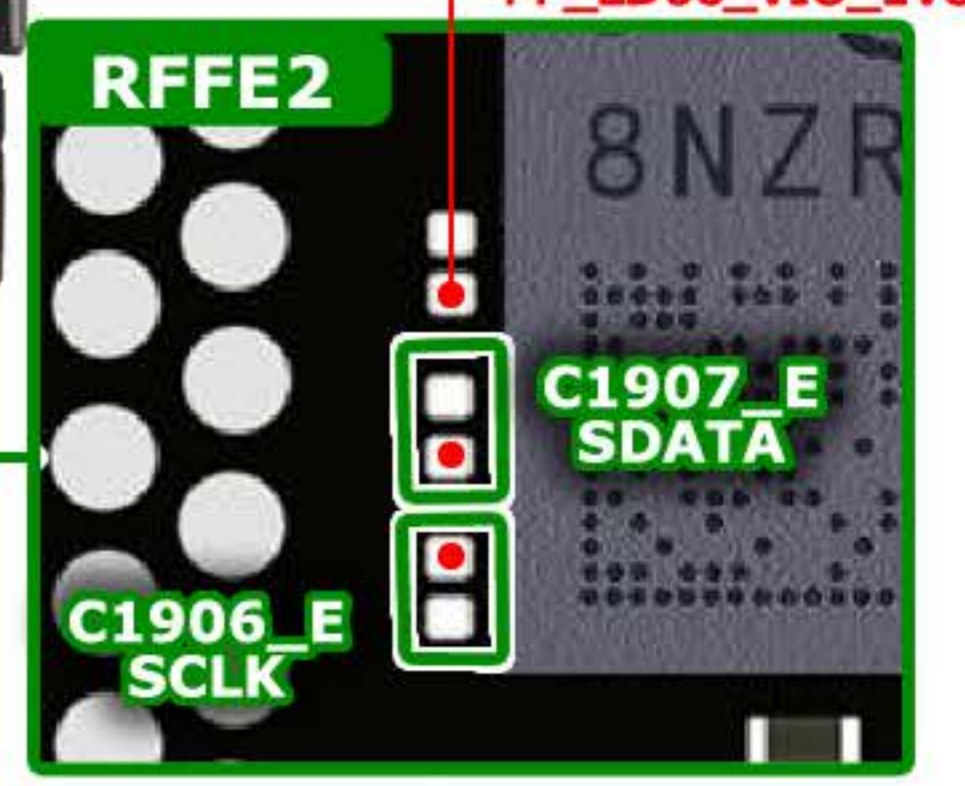
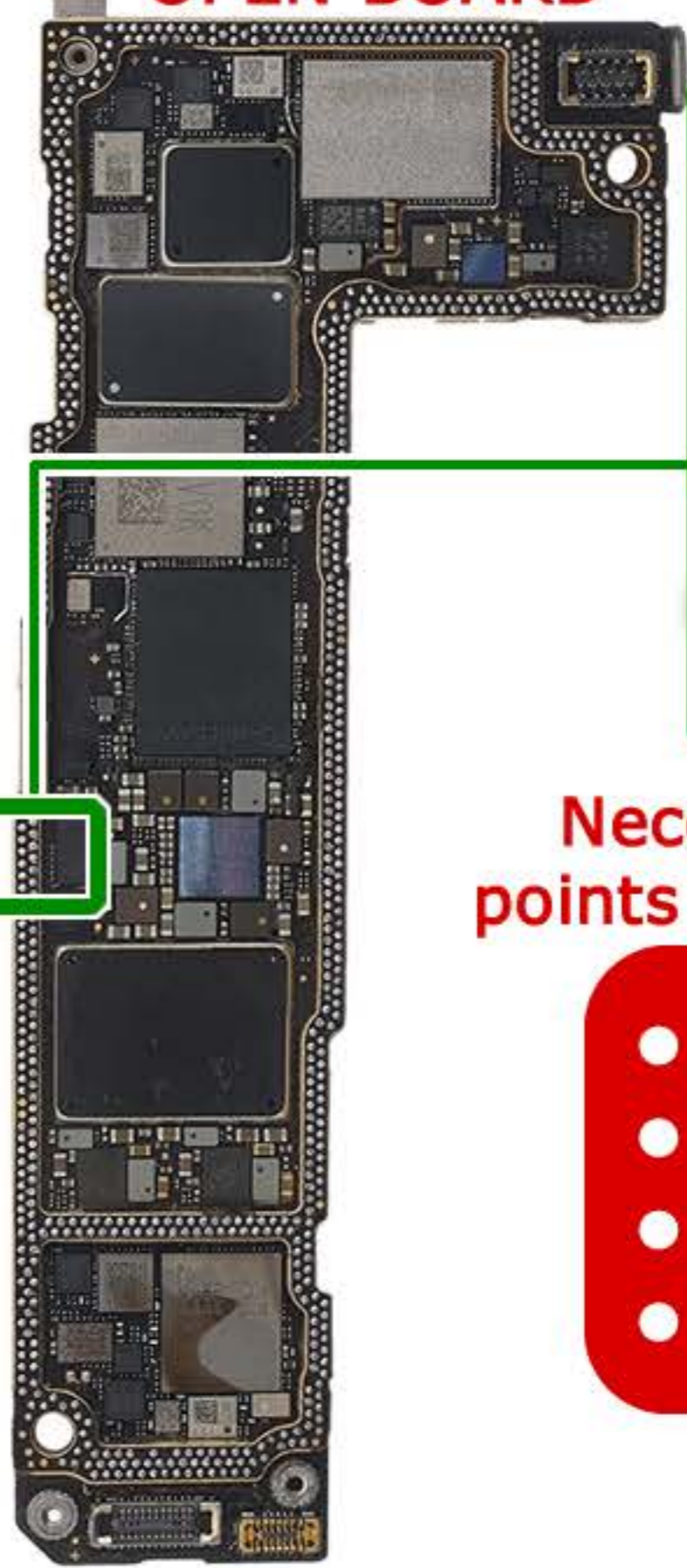
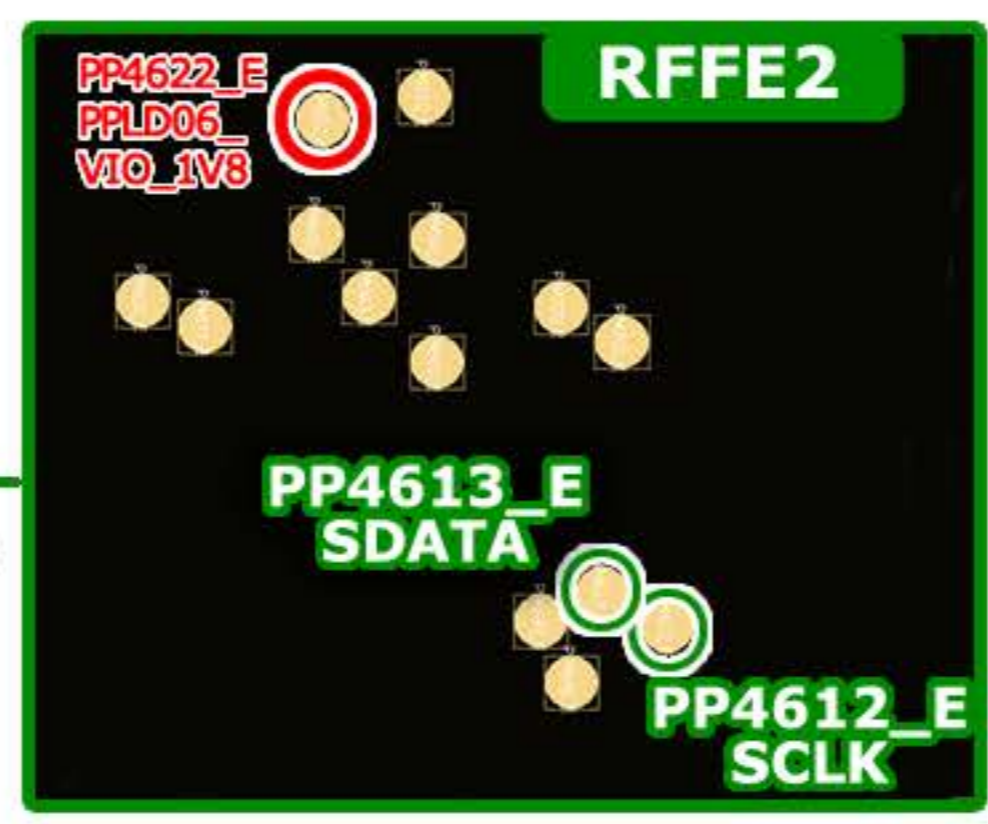
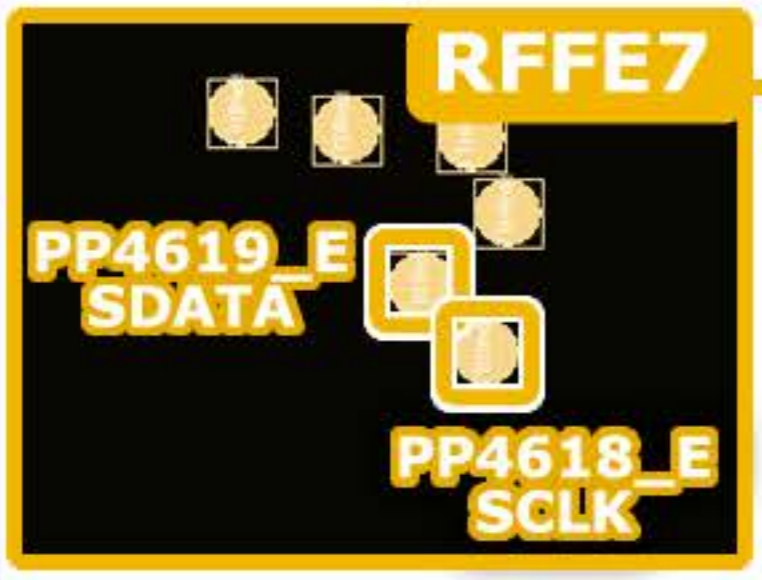
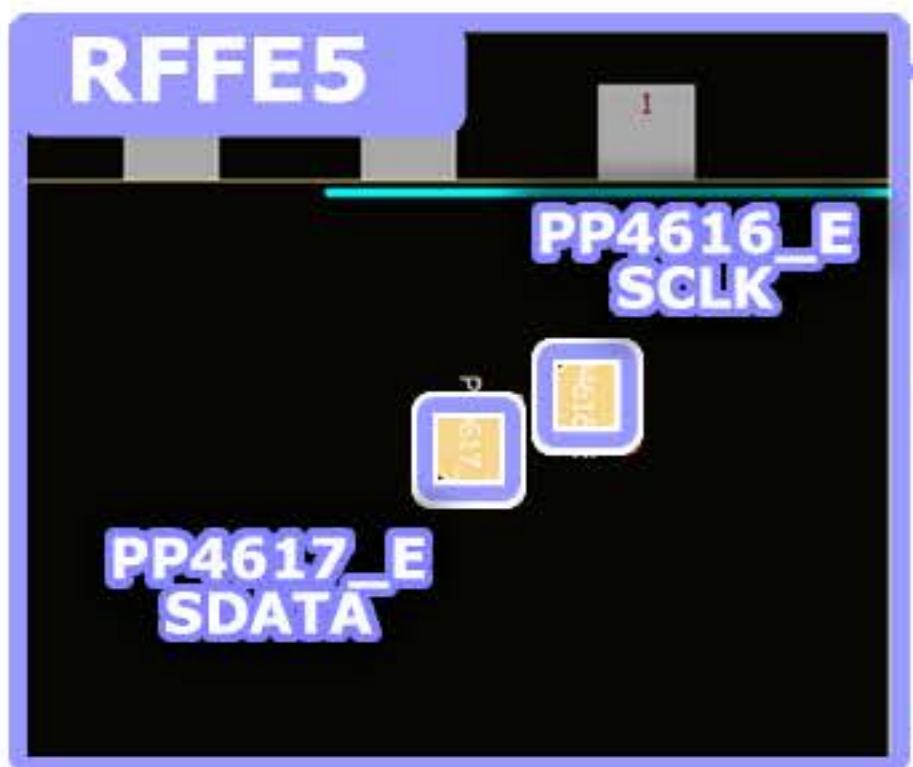
PP\_LD06\_VIO\_1V8  
PP241

# RFFE - SDR

## IPHONE 12 / 12 PRO

### CLOSED BOARD

### OPEN BOARD

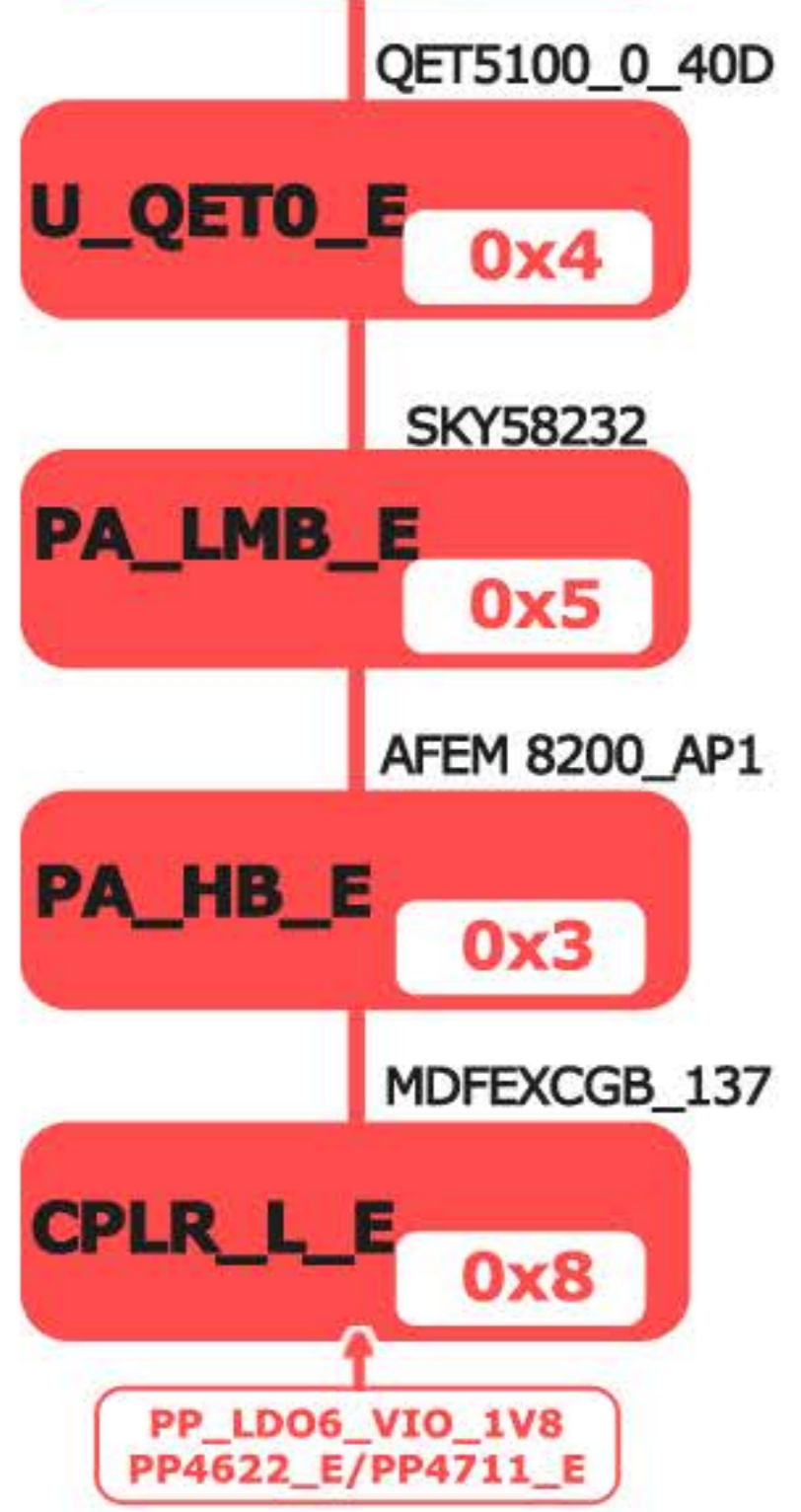


Necessary test points to read RFFE

- SCLK
- SDATA
- GND
- 1V8

- LB: 2G
- MB: 3G
- HB: 4G
- N77/N79: 5G

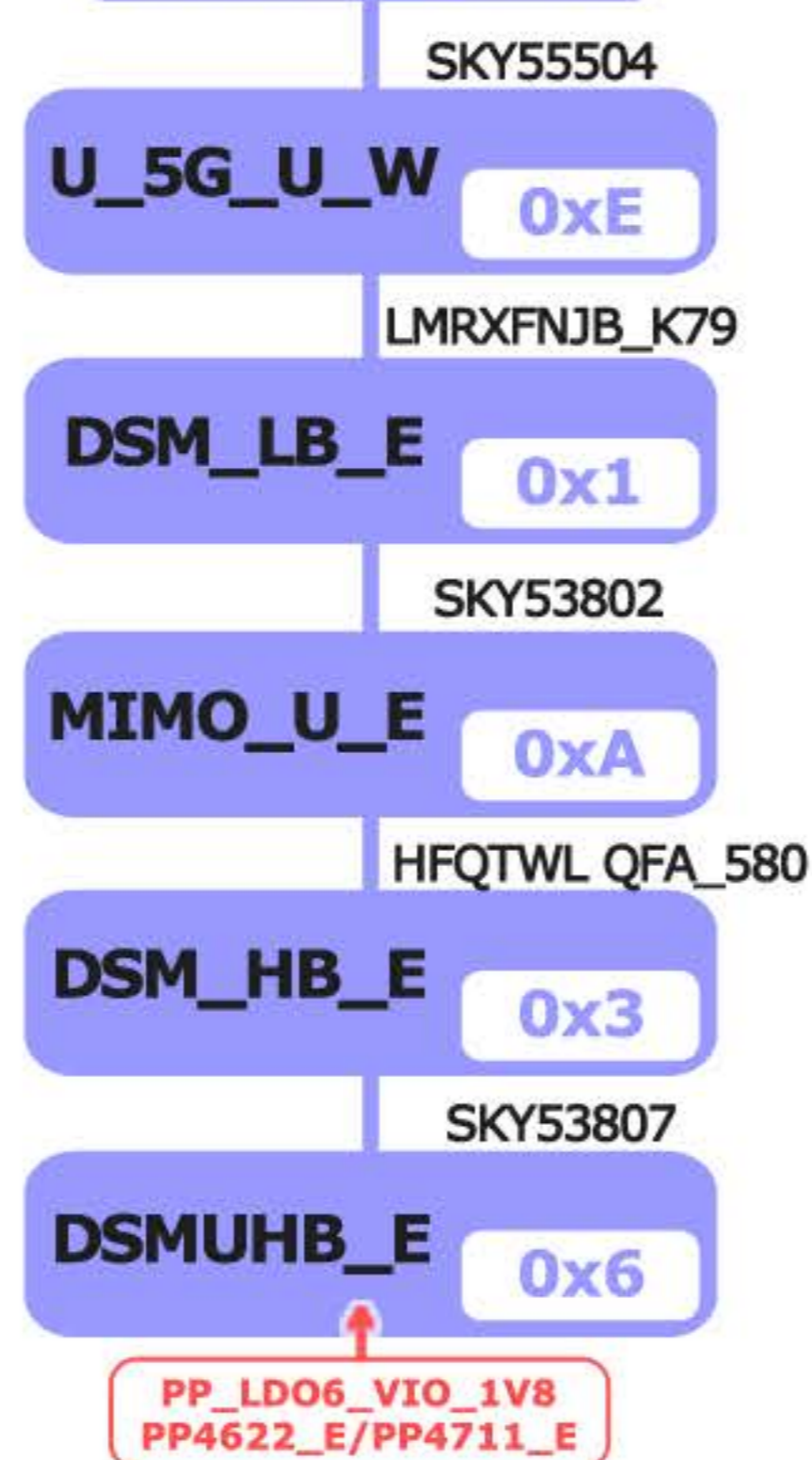
### RFFE1\_SDR



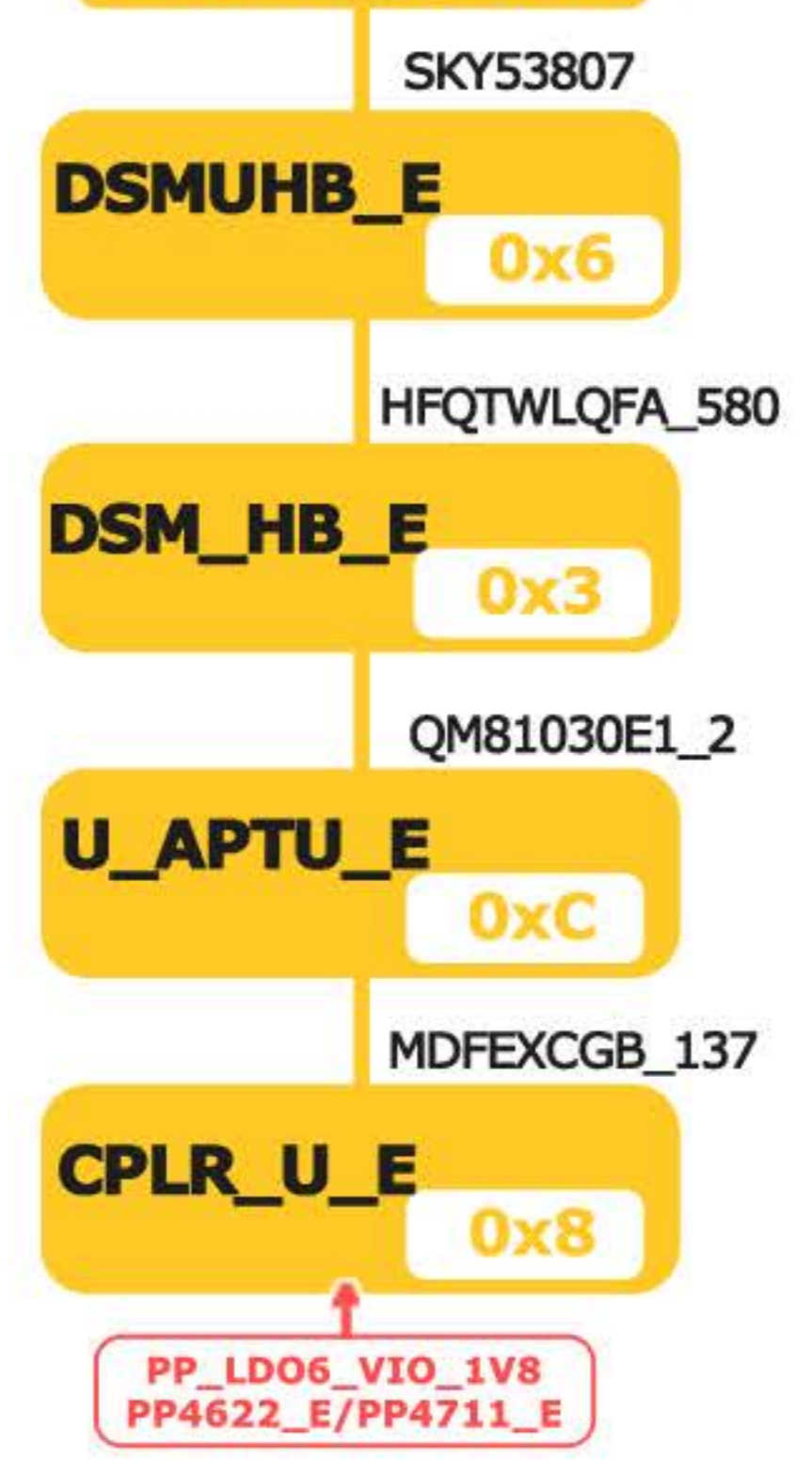
### RFFE3\_SDR



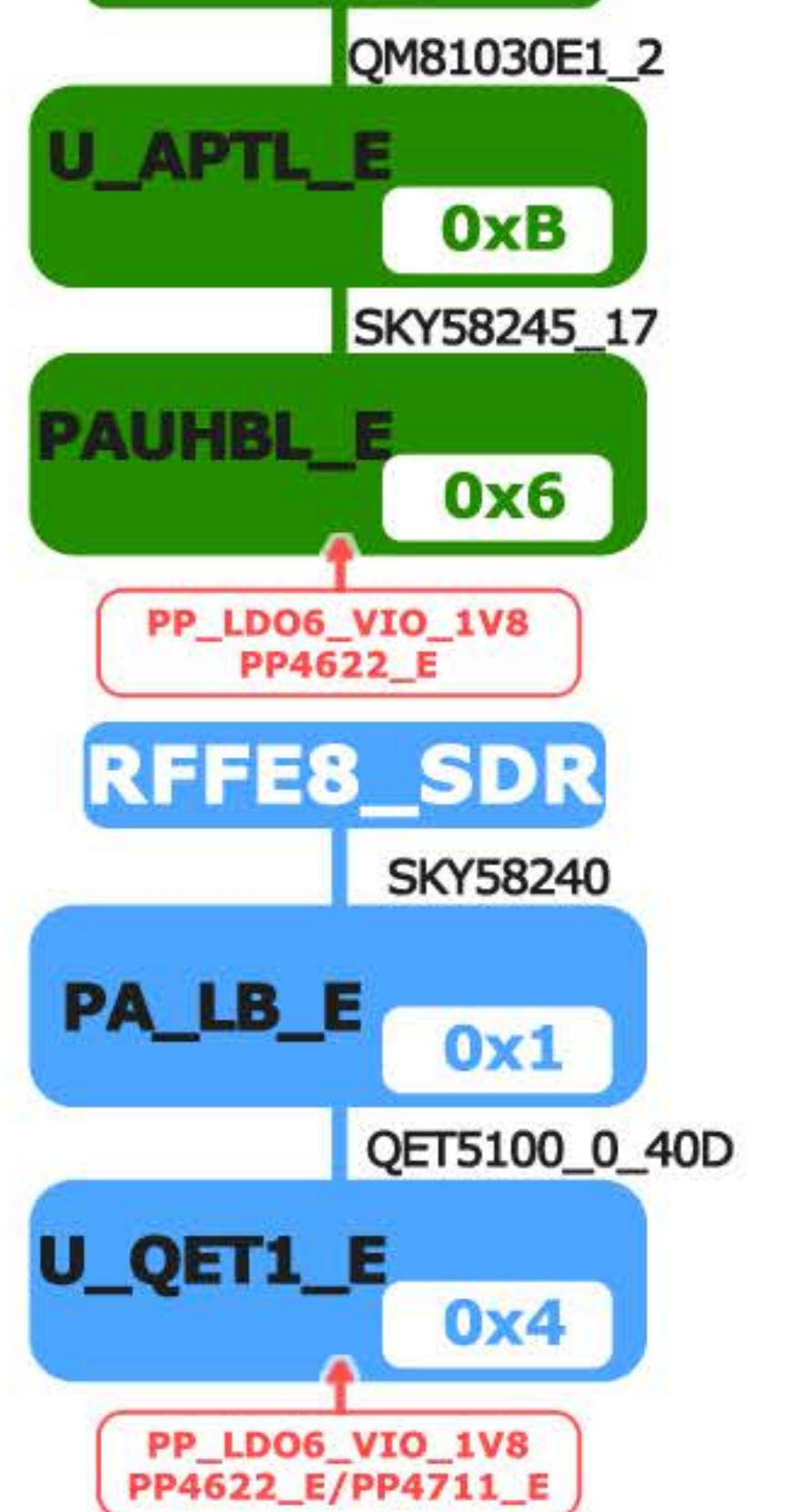
### RFFE5\_SDR



### RFFE7\_SDR

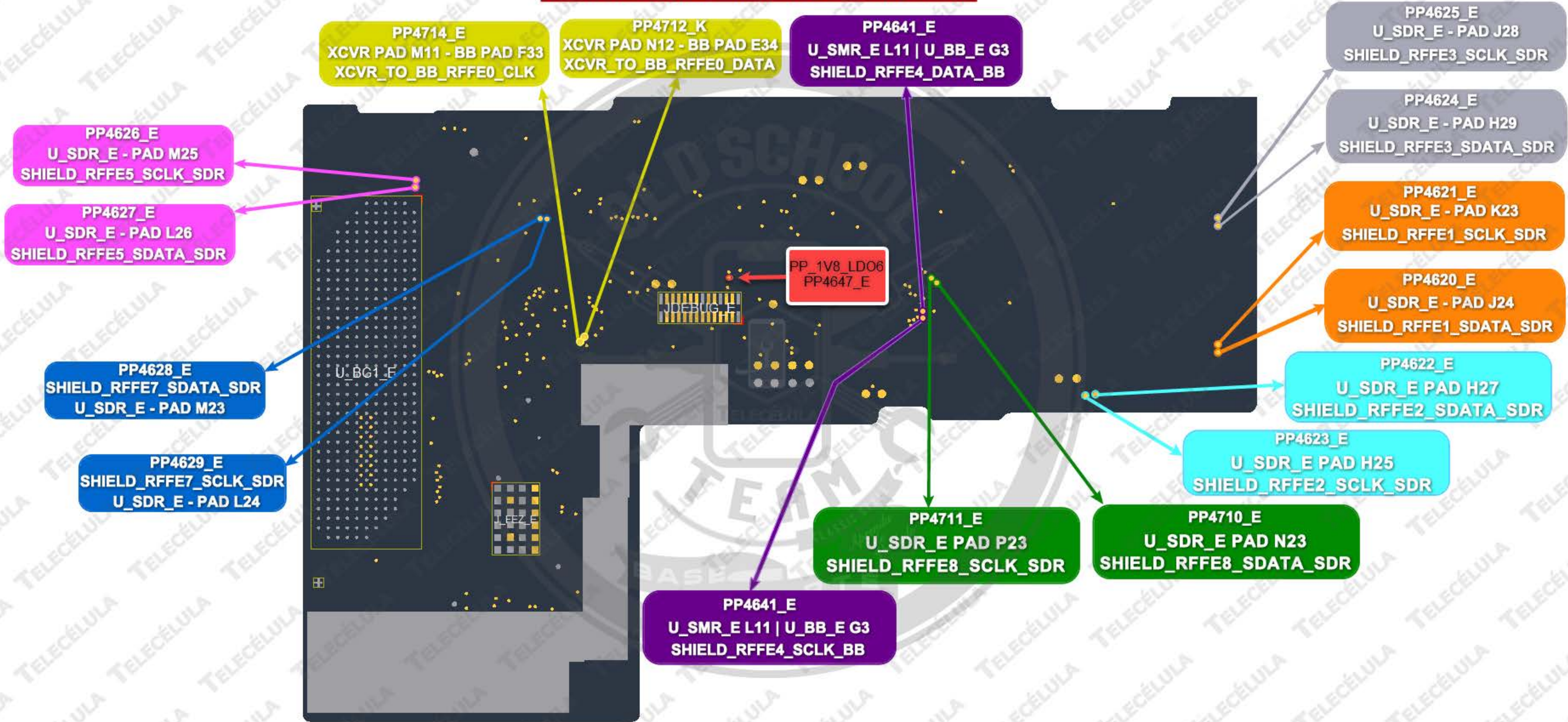


### RFFE2\_SDR

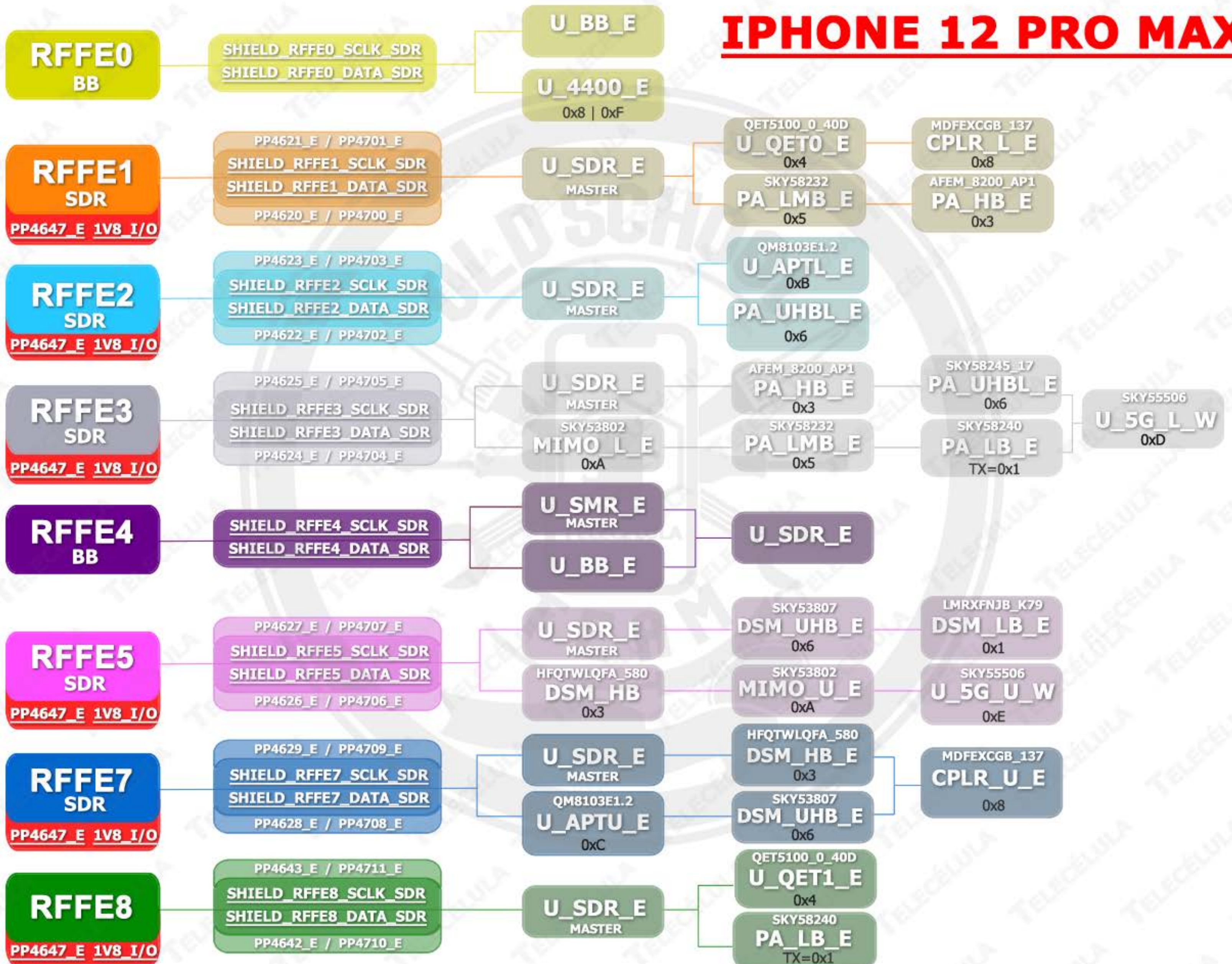




# SMARTBOARD - IPHONE 12 PRO MAX



# IPHONE 12 PRO MAX



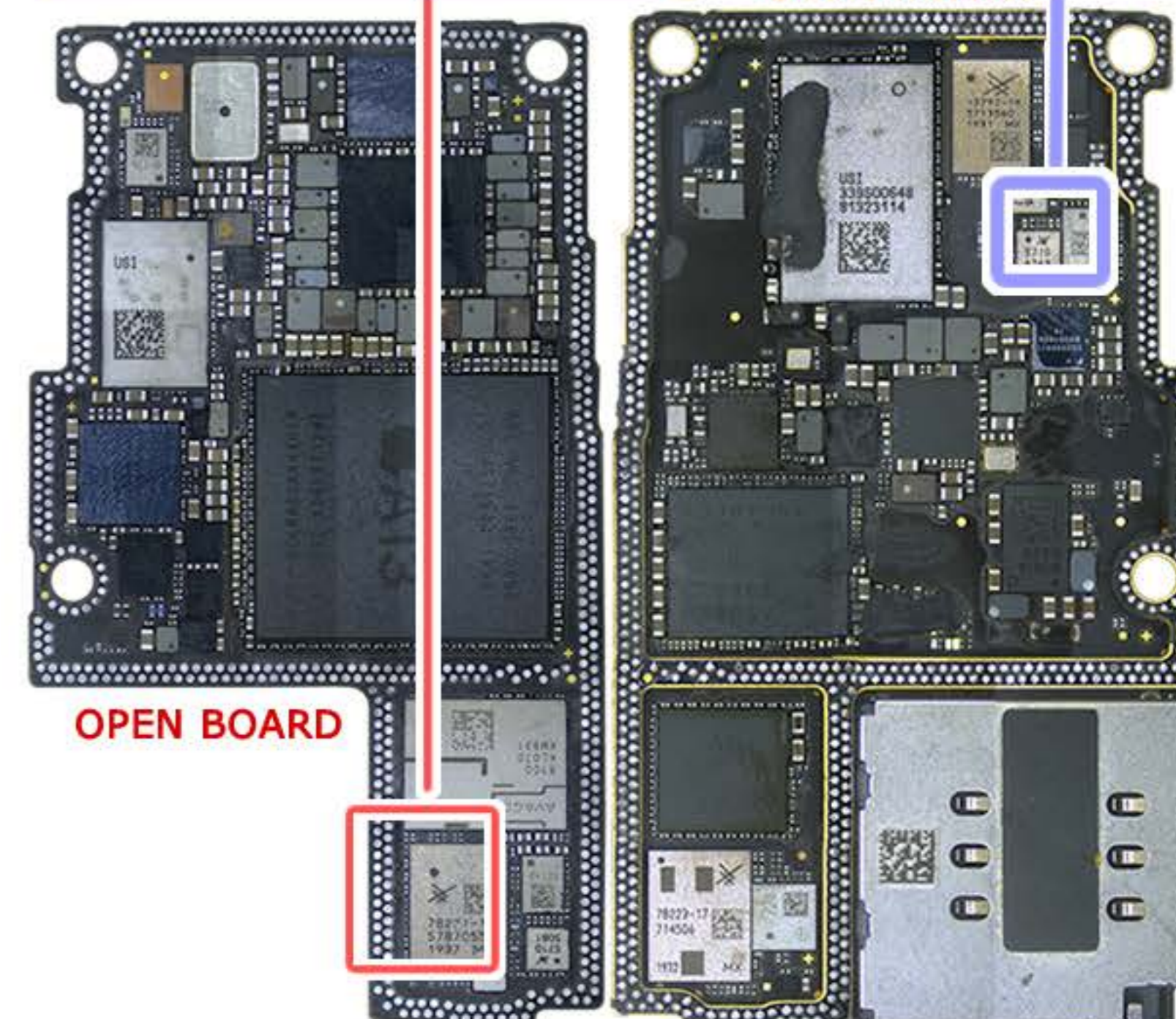
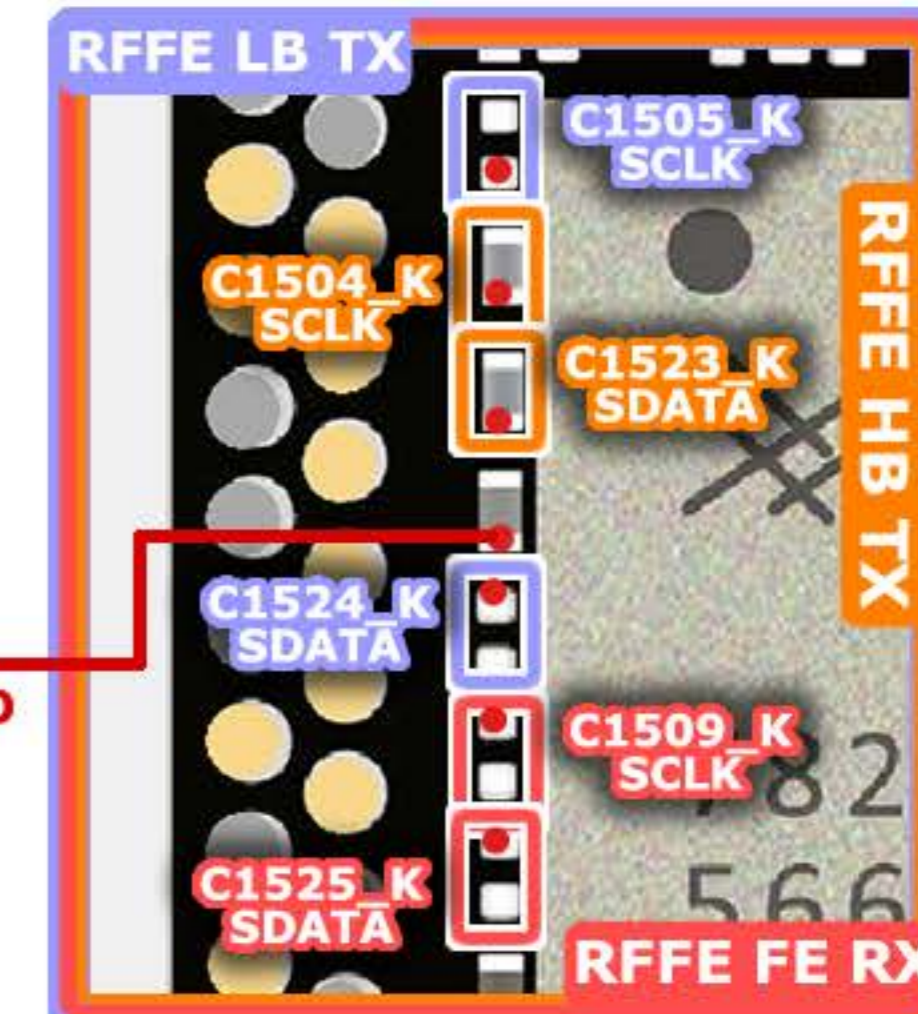
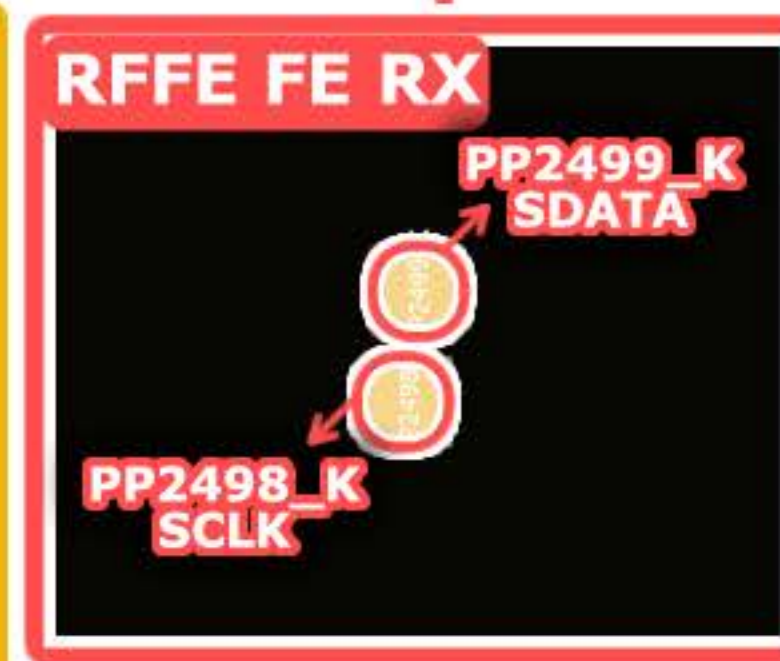
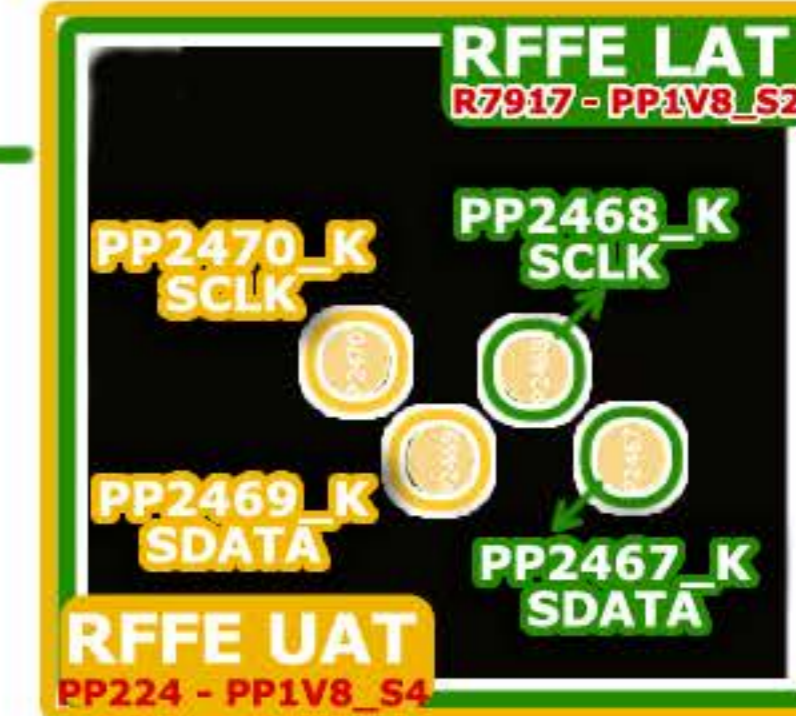
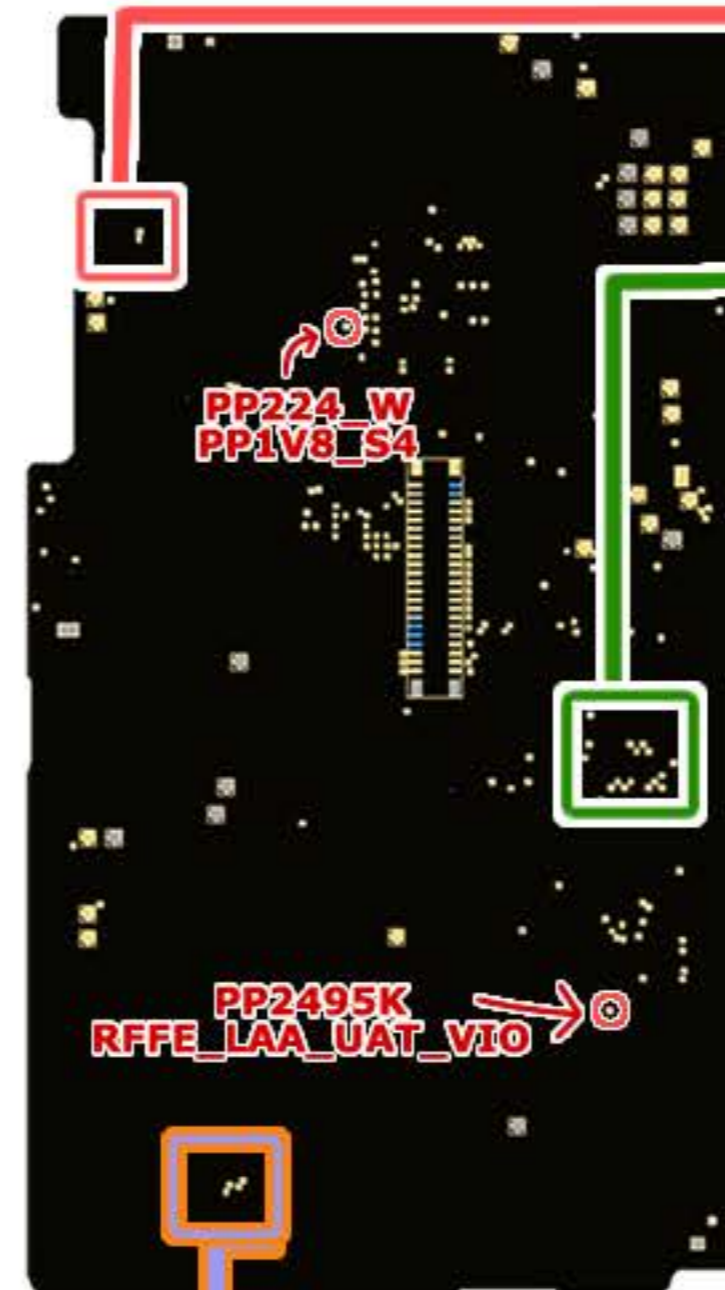
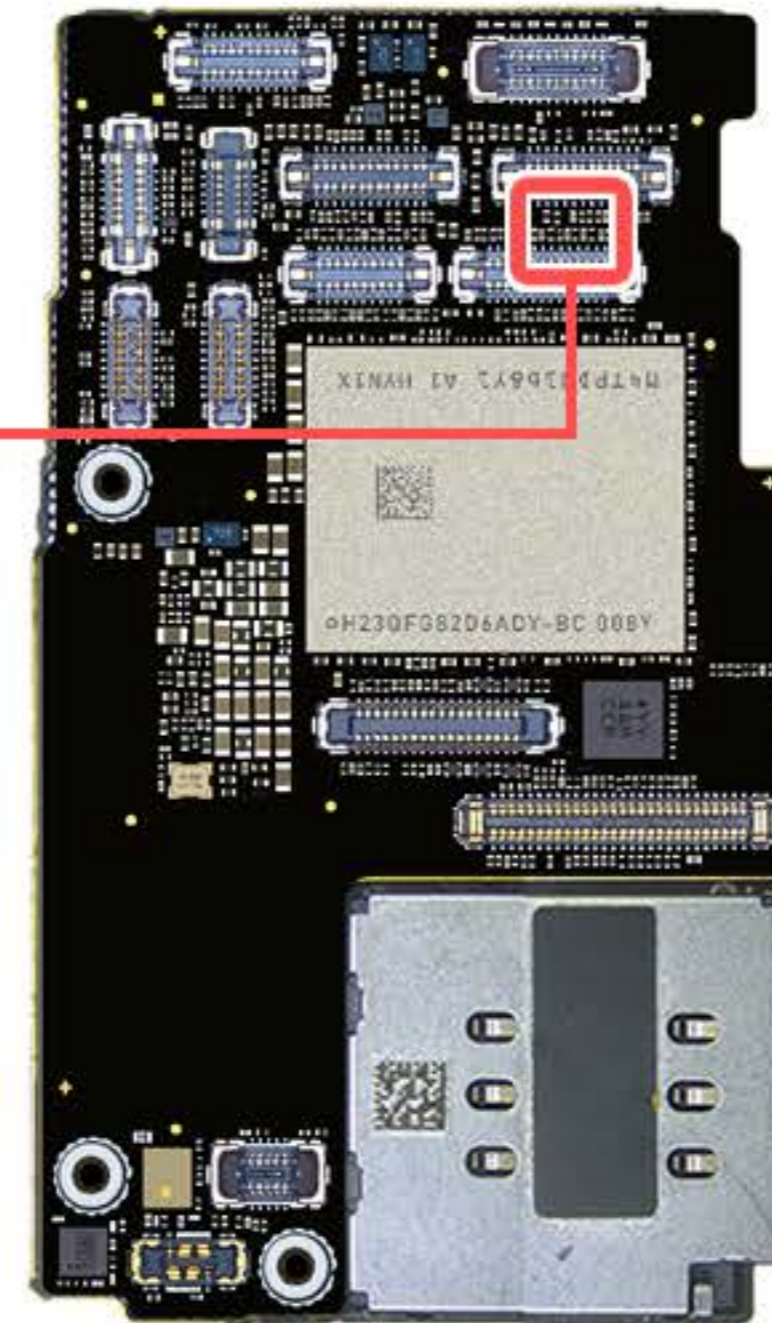
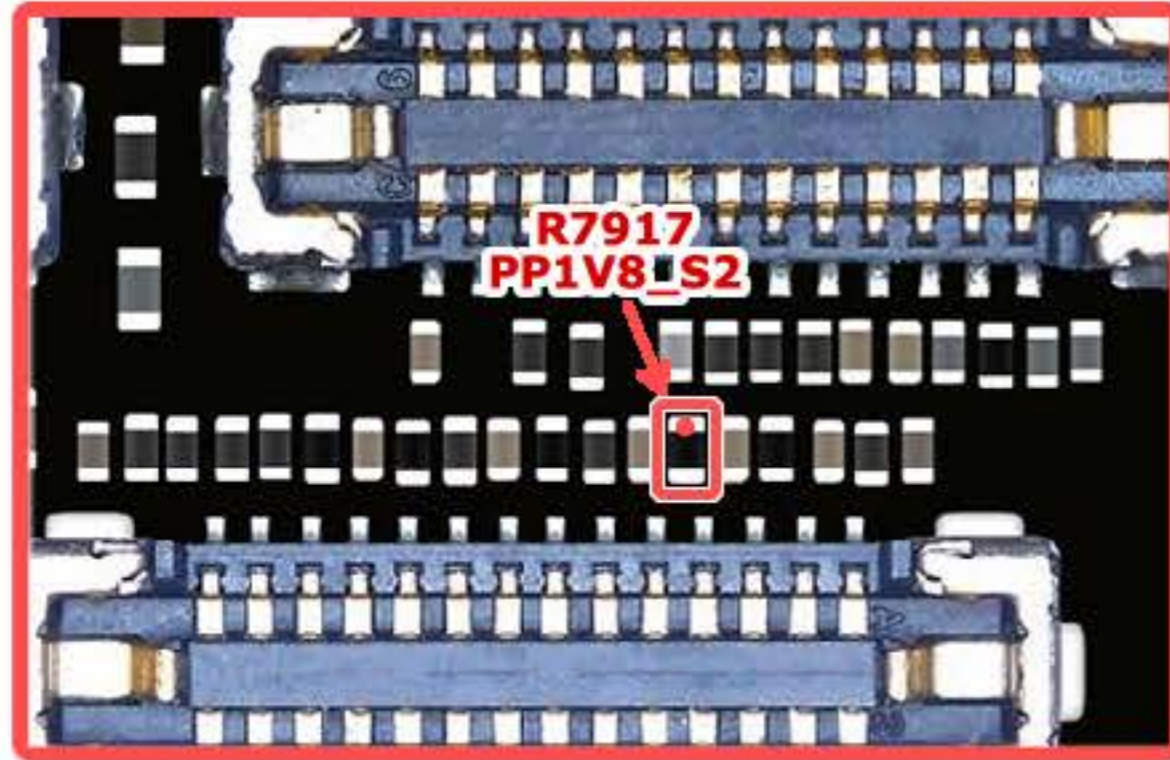


# IPHONE 11 PRO/ PRO MAX

APN: 820-01682-08 | APN: 820-00189-A

# RFFE - XCVR

CLOSED BOARD



## RFFE XCVR TO FE RX CLK

SKY78220  
PA LB K 0xD

HFQXRJDB 728  
MIMODS K 0x7

AFEM 8100\_AP1  
PA HB K 0xE

UHB\_2GS\_PAD  
PA UHB K 0xF

MDFEGFFB\_126  
U 5G L W 0x41  
WI-FI/5G 0x5

SKY13787  
DSM HB K 0xB  
HB LNA

LMRXFRJB\_K57  
DSM LB K 0xA

MDFEGFFB\_126  
U 5G U W 0x41  
FEM 0x6

PP2495\_K RFFE\_LAA\_UAT\_VIO

- SLCK
- SDATA
- GND
- 1V8\*

Necessary test points to read RFFE

## RFFE XCVR TO LB TX DATA

QM81013  
ETIC\_K 0xC

SKY78220  
PA LB K 0x1

SKY16710  
CPLR\_U\_K 0x9  
COUPLER

SKY16710  
CPLR\_L\_K 0x8  
COUPLER

UHB\_2GS\_PAD  
PA\_UHB\_K 2G 0x3

PP2495\_K RFFE\_LAA\_UAT\_VIO

## RFFE BB TO LAT DATA RFFE BB TO LAT SCK

QM18833  
LAT\_SUBUS  
LATTUN\_K 0x8

R7917 - PP1V8\_S2

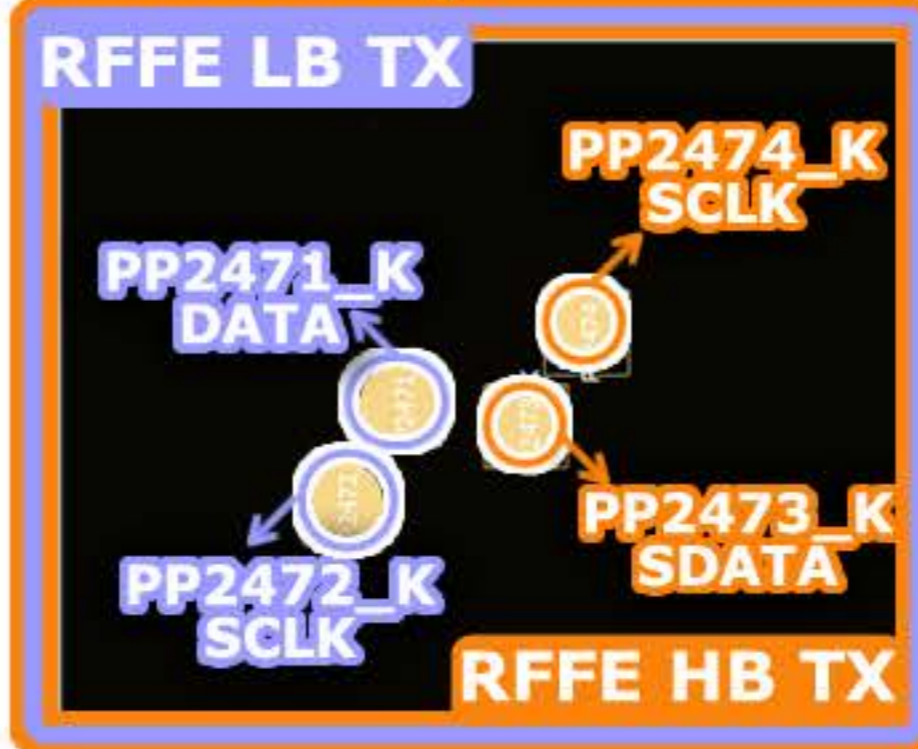
## RFFE XCVR TO HB TX DATA RFFE XCVR TO HB TX SCL

UHB\_2GS\_PAD  
PA\_UHB\_K 0x3 0xF

ATEM\_8100\_AP1  
PA\_HB\_K 0x2

QM81013  
ETIC\_K 0xC

PP2495\_K RFFE\_LAA\_UAT\_VIO



RFFE BB TO UAT  
QM18833  
UATTUN\_K 0x8  
PP224\_W VDD1V8\_S4

C1503\_K RFFE\_LAA\_UAT\_VIO (PP2495\_K)

RFFE HB TX

RFFE FE RX

RFFE LB TX

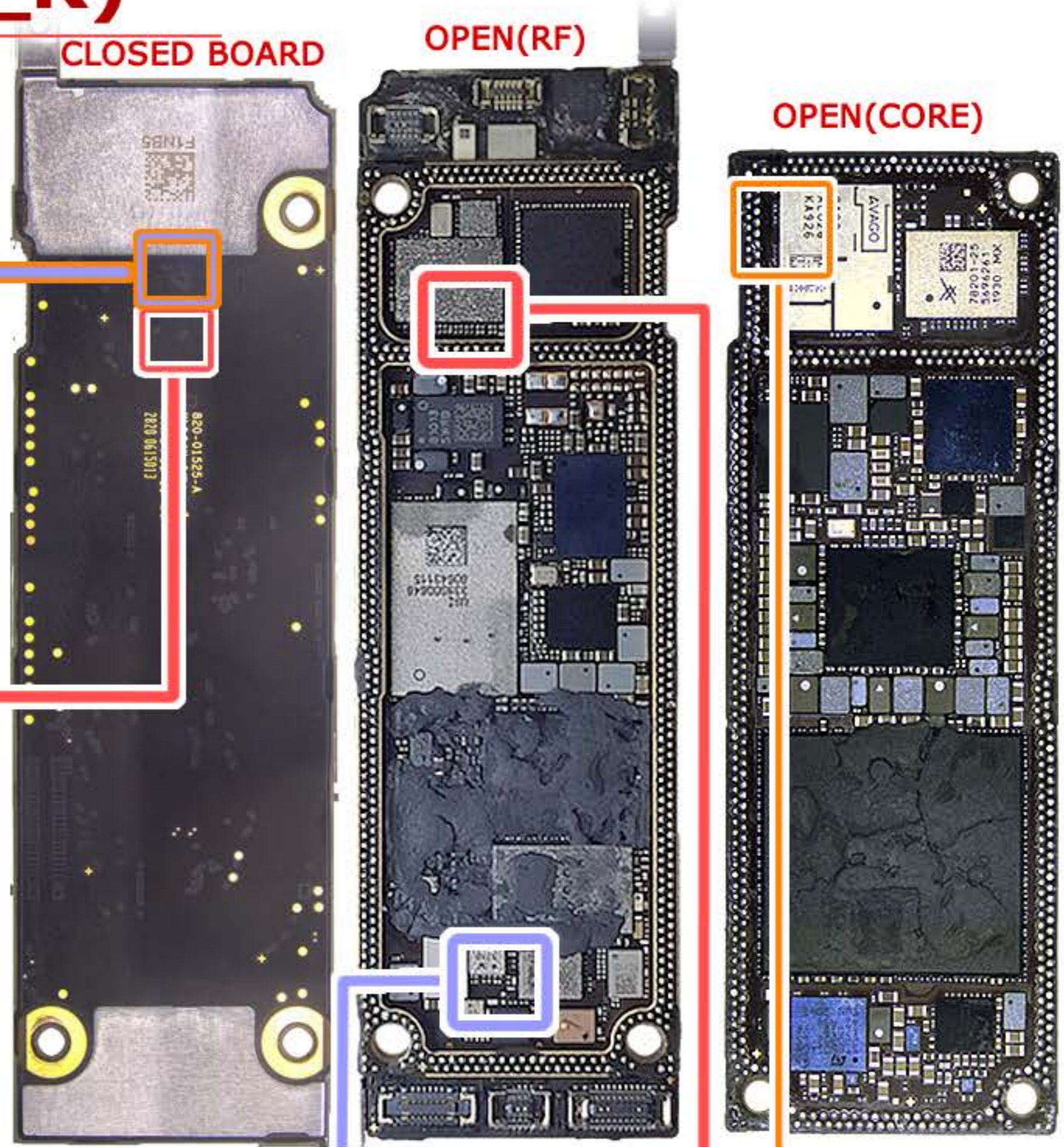
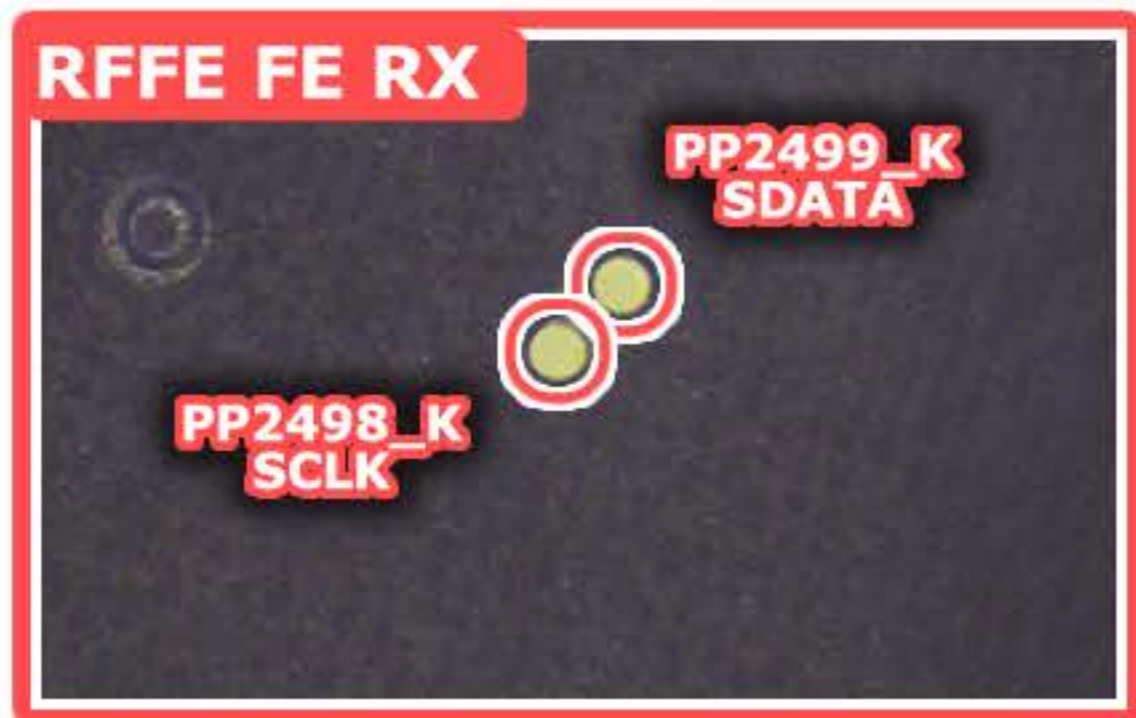
RFFE HB TX

RFFE FE RX

# RFFE (XCVR\_K)

**IPHONE 11**

APN: 820-01523-A



RFFE\_LAA\_UAT / RFFE\_LAA\_LAT  
RFFE XCVR TO FE RX CLK

SKY78220  
PA LB K  
0xD

AFEM 8100\_AP1  
PA HB K  
0xE

PA UHB K  
2G  
0xF

MDFEGFFB\_126  
U 5G L W  
LAT/WI-FI/5G  
0x41  
0x5

SKY13789  
DSM HB K  
HB LNA  
0xB

LMRXFRJB\_K57  
DSM LB K  
0xA

UAT\_5G MDFEGFFB\_126  
U 5G U W  
FEM  
0x6

PP2495\_K - PP1V8\_VIO

RFFE XCVR TO LB TX DATA

QM81013  
ET  
ETIC\_K  
0xC

SKY78220  
PA LB K  
0x1

SKY16710  
CPLR U K  
UAT  
0x9

SKY16710  
CPLR L K  
LAT  
0x8

UHB\_MLB\_2GS\_PAD  
PA UHB K  
0xF

PP2495\_K - PP1V8\_VIO

- SLCK
- SDATA
- GND
- 1V8

Necessary test points to read RFFE

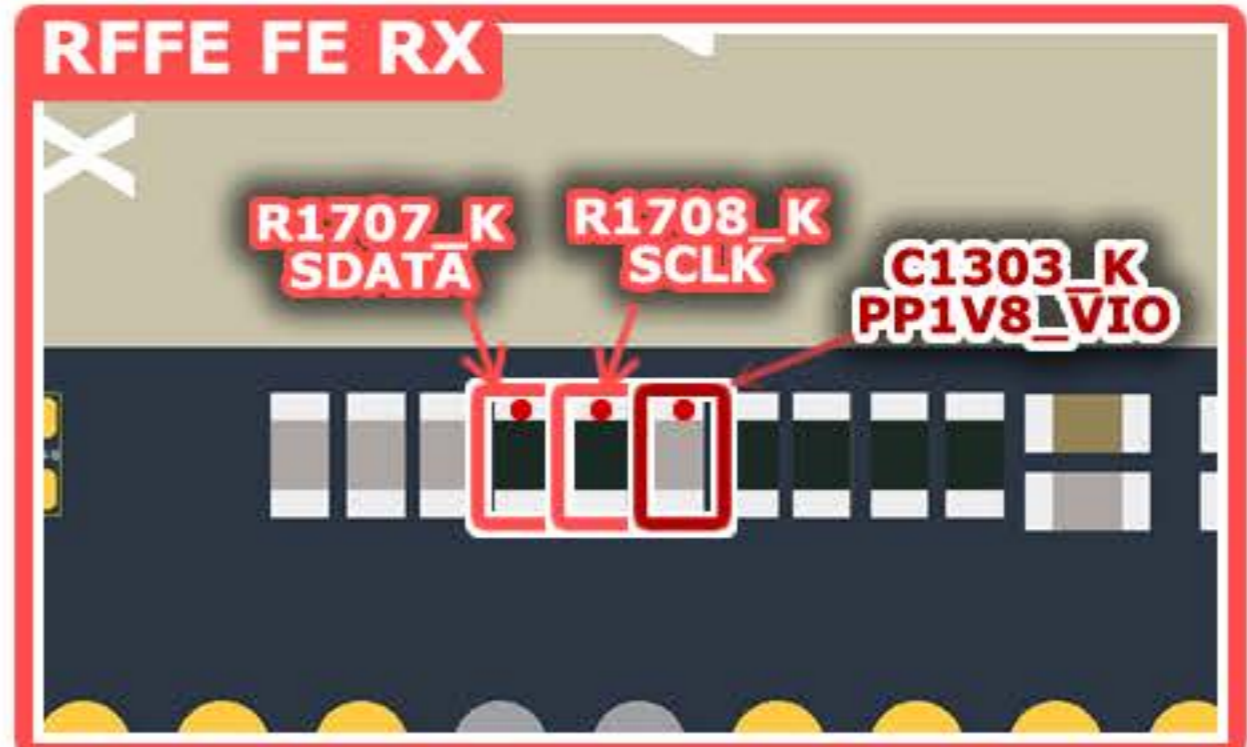
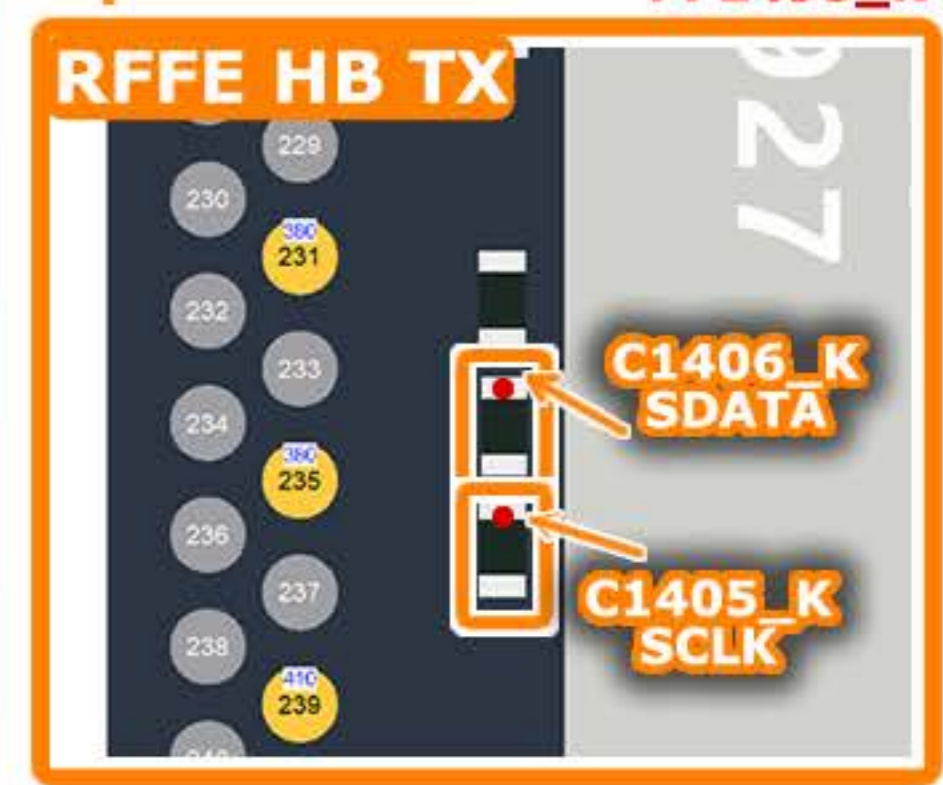
RFFE XCVR TO HB TX DATA  
RFFE XCVR TO HB TX SCL

UHB\_MLB\_2GS\_PAD  
PA\_UHB\_K  
2G  
0x3

ATEM 8100\_AP1  
PA\_HB\_K  
0x2

QM81013  
ETIC\_K  
0xC

PP2495\_K - PP1V8\_VIO

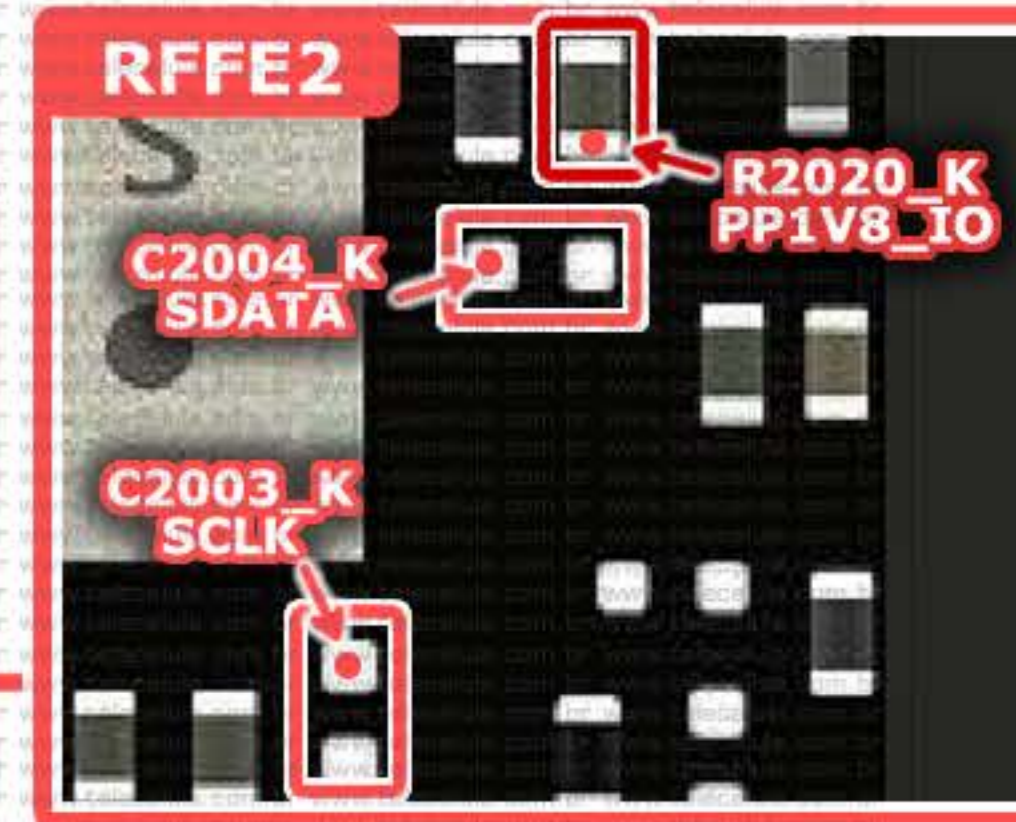
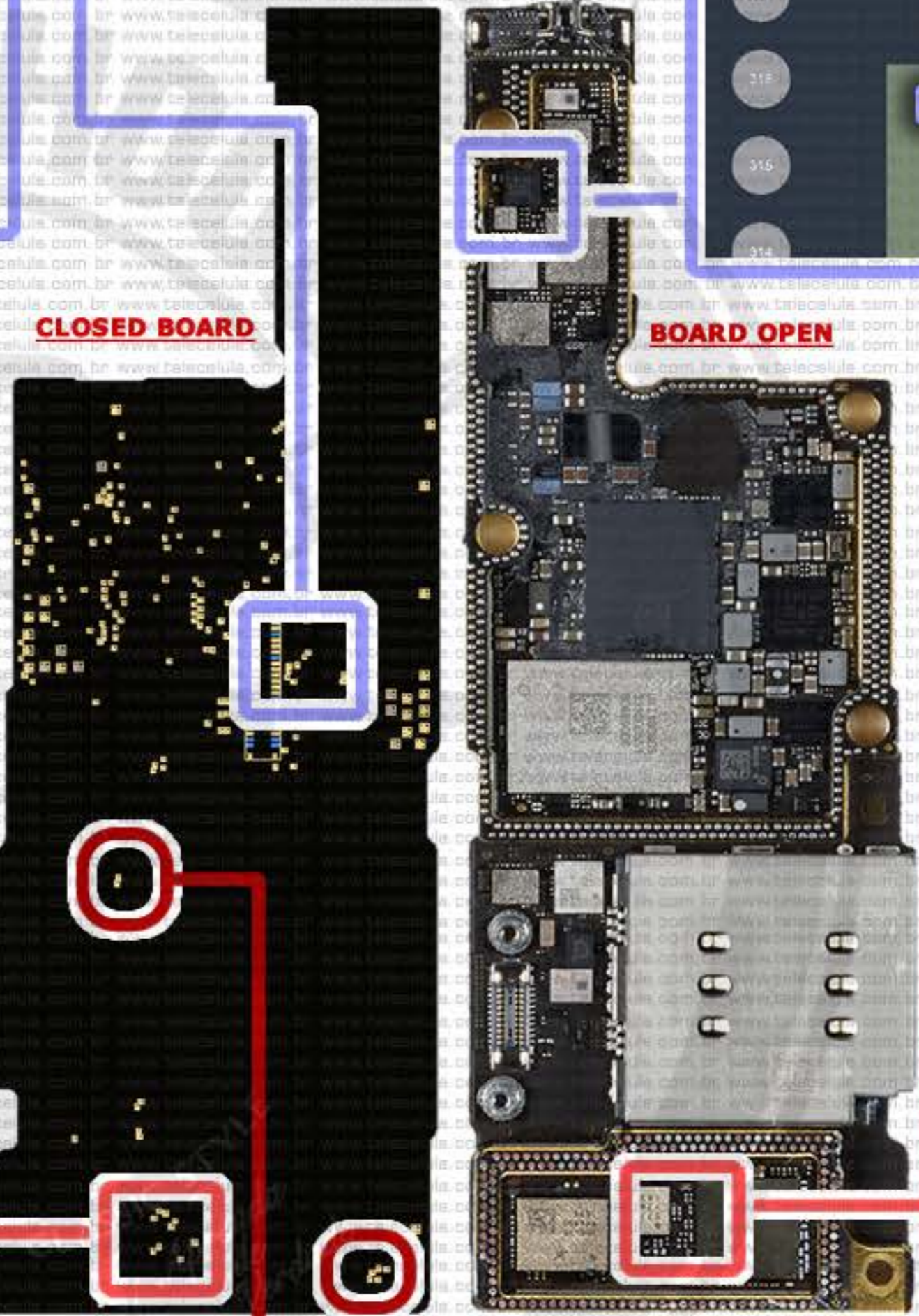
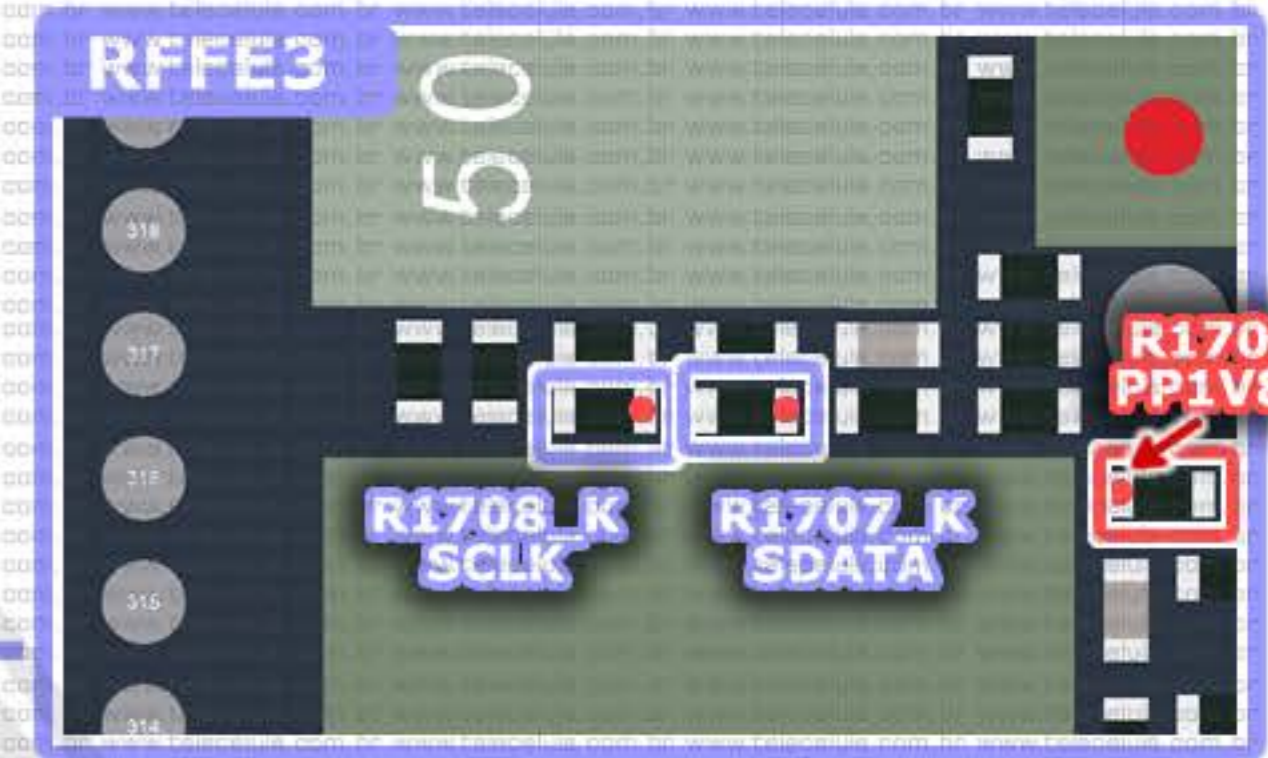
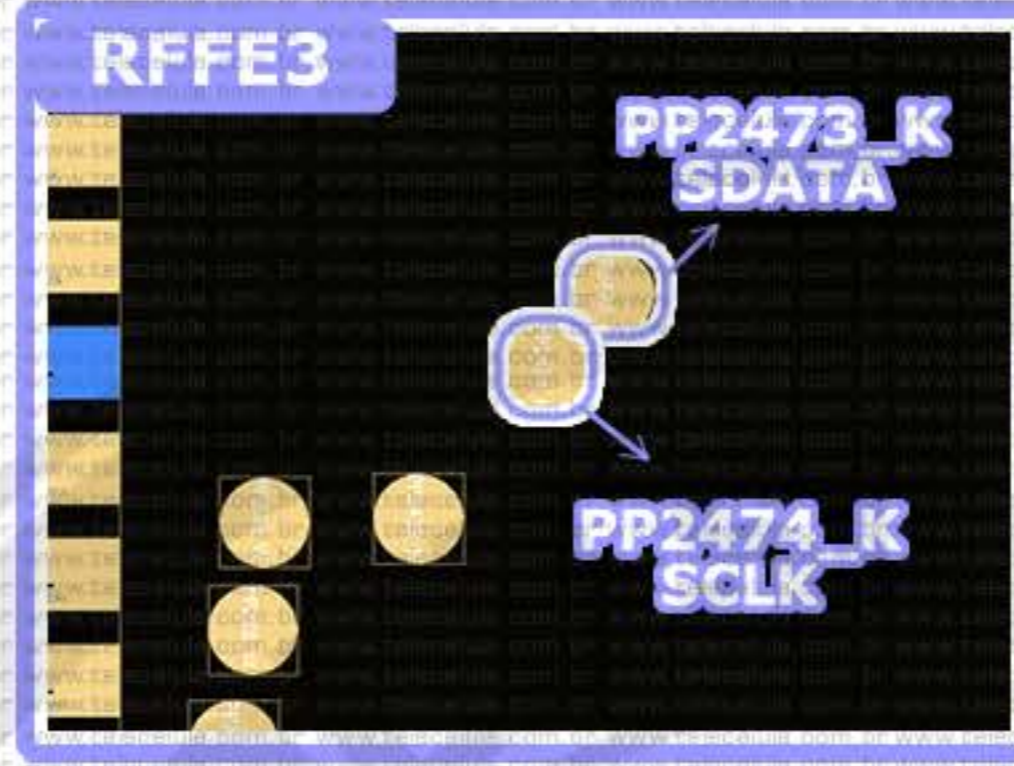


PP2495\_K

# RFFE

## IPHONE XS MAX

APN: 820-001063-A



### RFFE 2 SHIELD RFFE TX SCLK XCVR TO FE RX RFFE 3

<b>SKY13775</b>	<b>SKY78170</b>	<b>SKY13768</b>
CPL_K 0x6	PA_LB_L 0xD	DSM_HB_K LNA 0xA
<b>QM81019</b>	<b>AFEM 8092_AP1</b>	<b>SKY13765</b>
U_ET2_K 0xC	PA_HB_K 0xE	DSM_LB_K 0x9
<b>AFEM 8092_AP1</b>	<b>HRPDAF092</b>	<b>HFQRXRCJB_500</b>
PA_HB_K 2G 0x3	PA_UHB_K 0xC	DSM44U_K MIMO RDM 0x4
<b>SKY78170</b>	<b>PP1V8_IO</b> PP24J2_K / PP24E8_K	<b>SKY85759</b>
PA_LB_L 0x2		U_5G U_W UAT 0x6
<b>HRPDAF092</b>		<b>SKY85759</b>
PA_UHB_K 0x5		U_5G L_W LAT MURATA 0x41 0x5 MURATA
		<b>HFQRXRCJB_500</b>
		DSM44L_K RPM MIMO 0x3

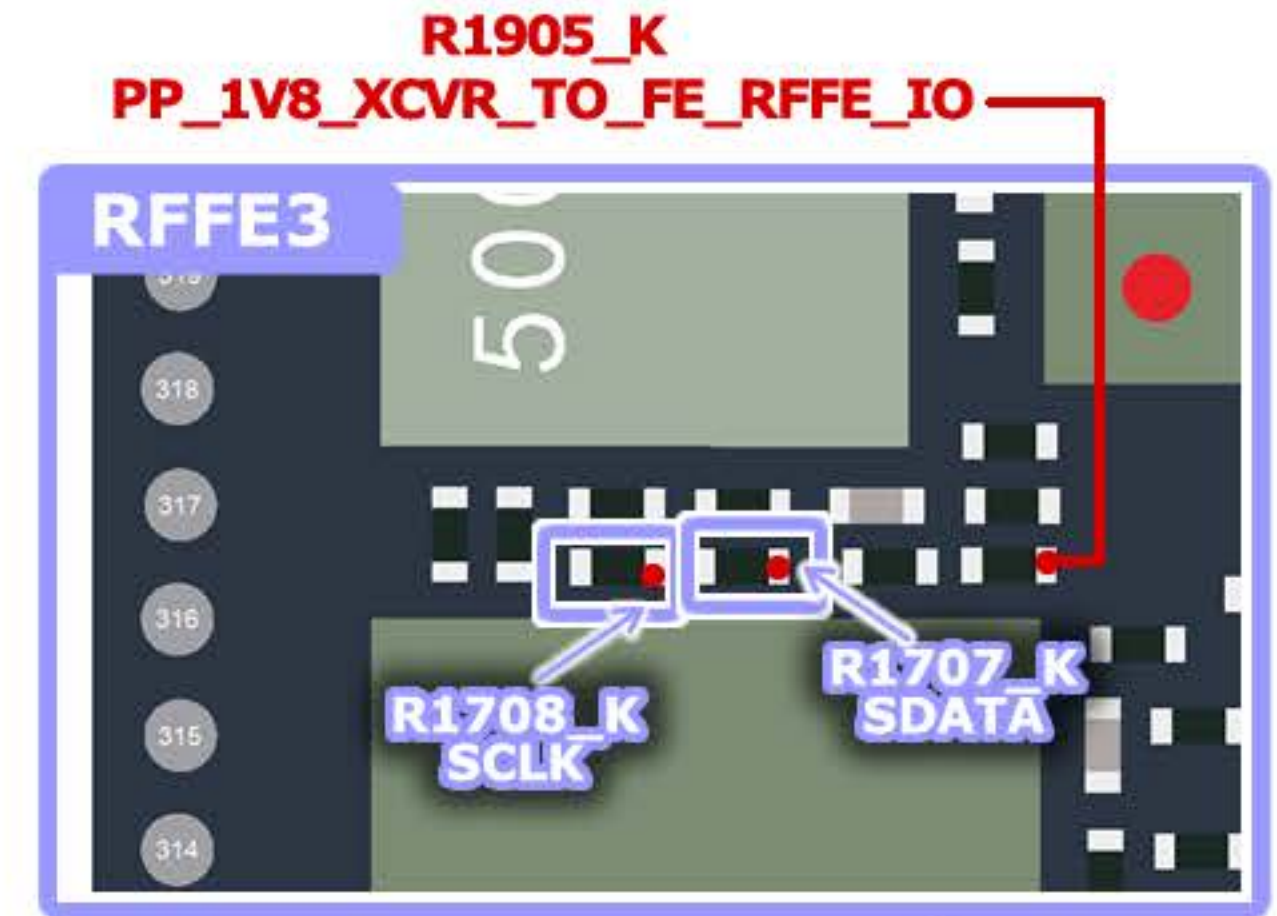
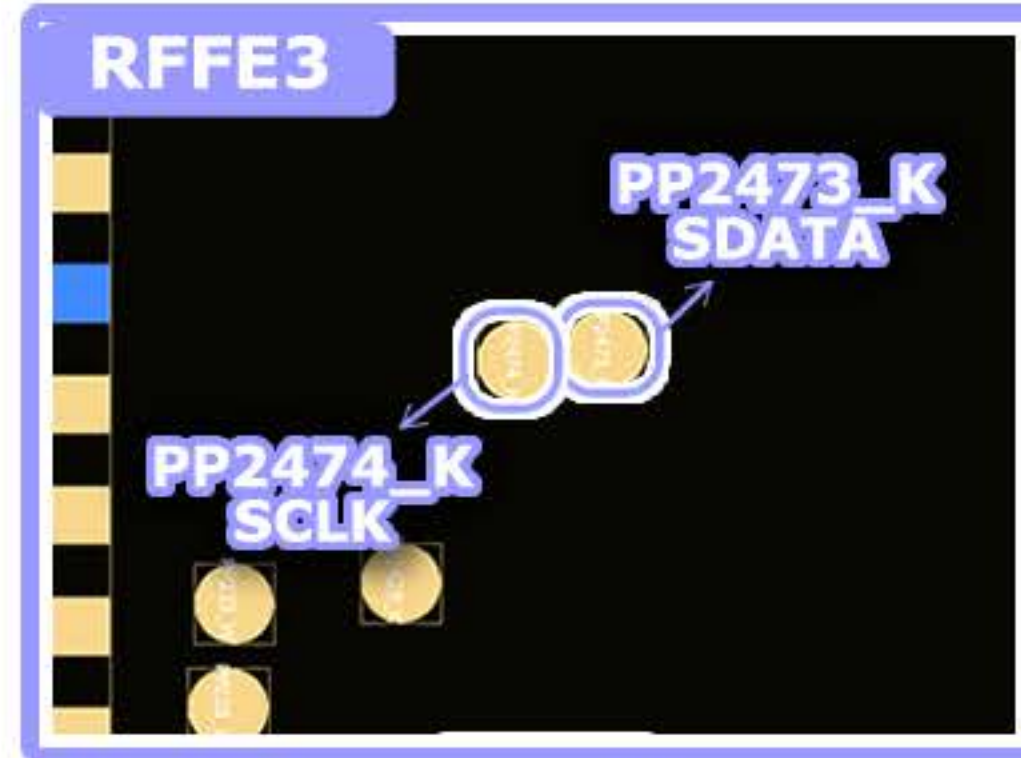
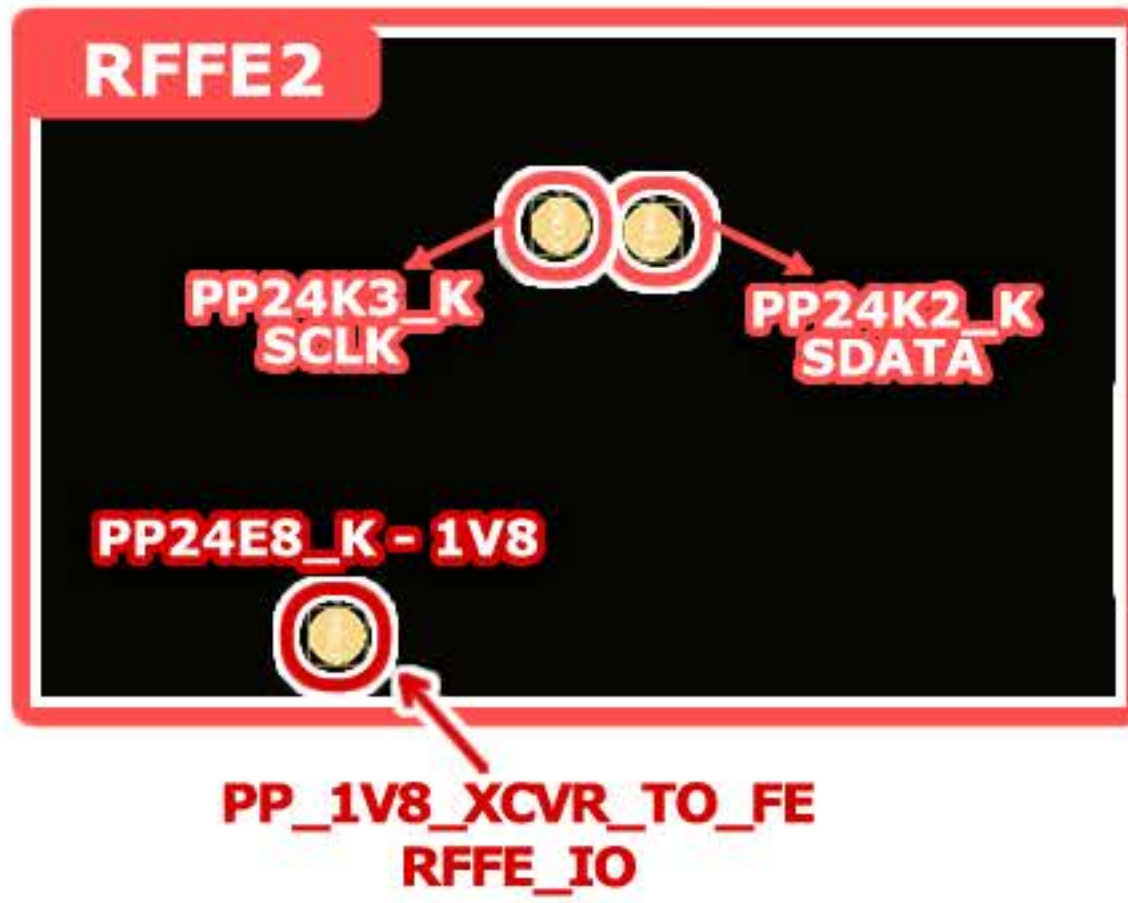
- SLCK
- SDATA
- GND
- 1V8

Necessary test points to read RFFE

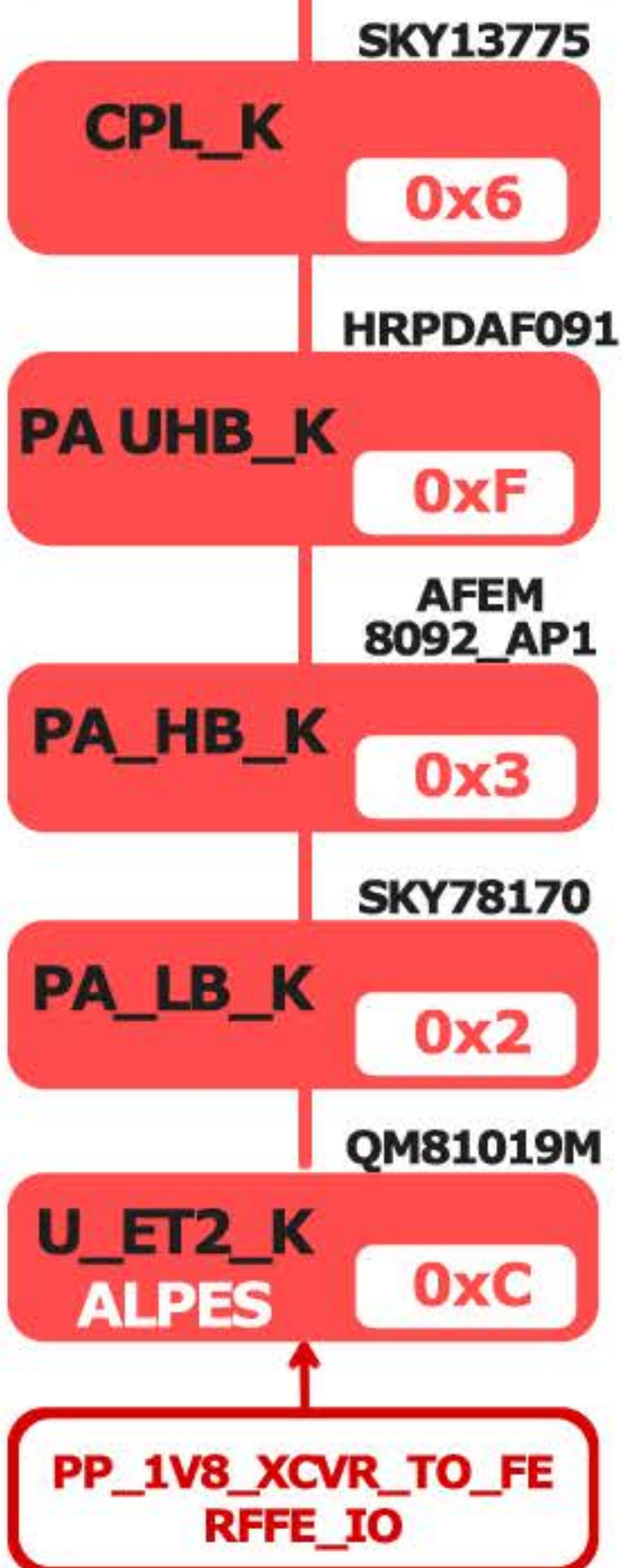
# RFFE -XCVR

## IPHONE XS

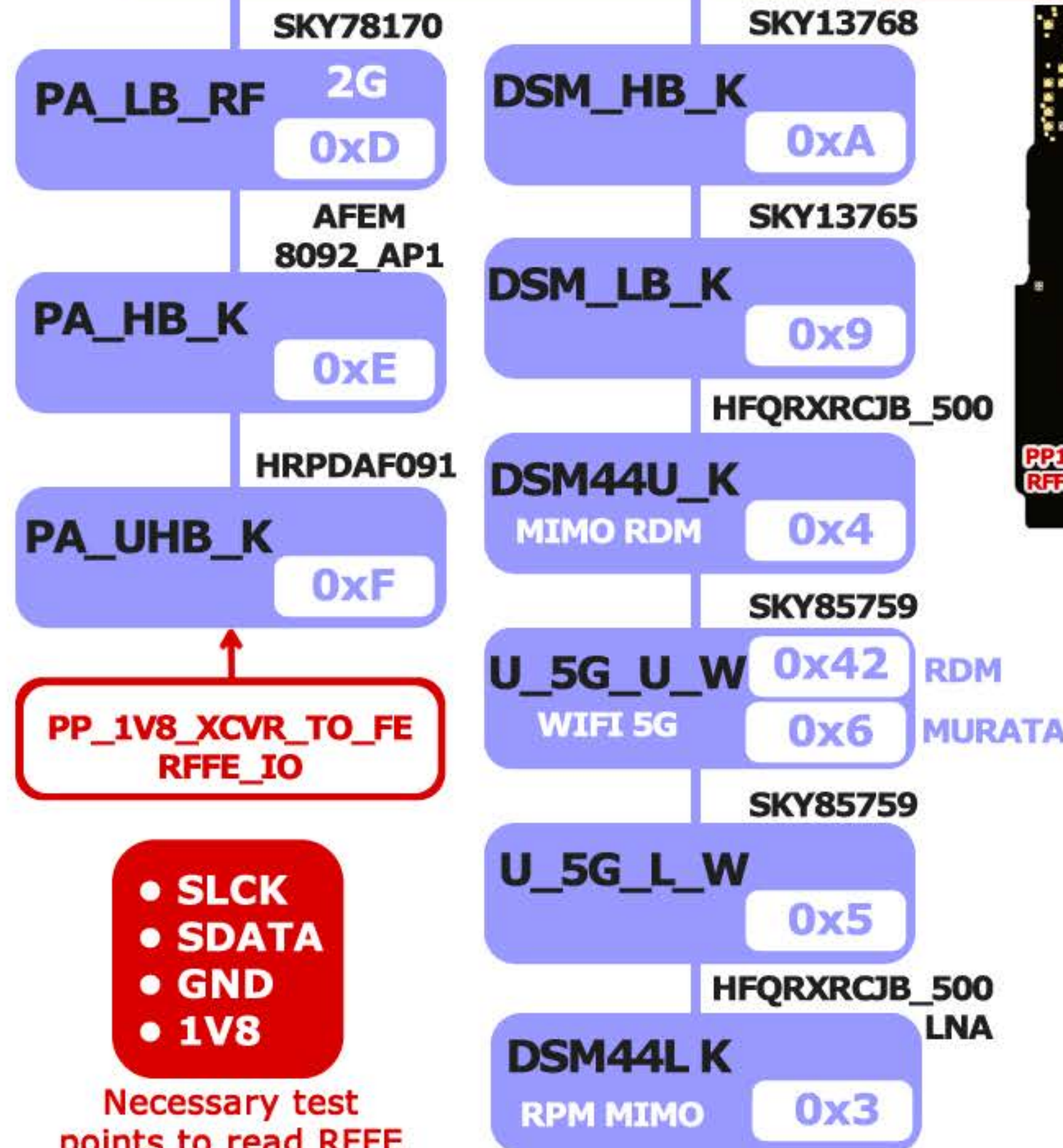
APN: 820-0997-A



### RFFE2/XCVR

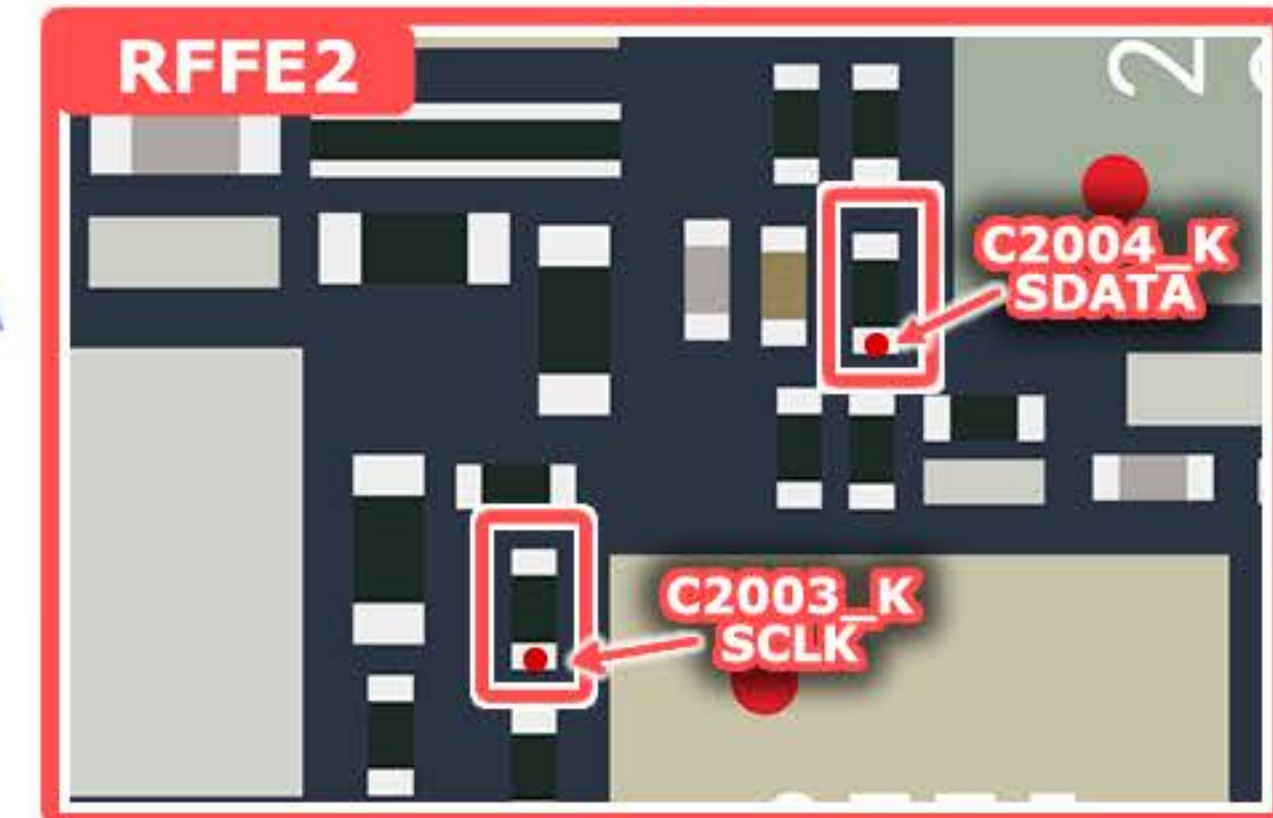
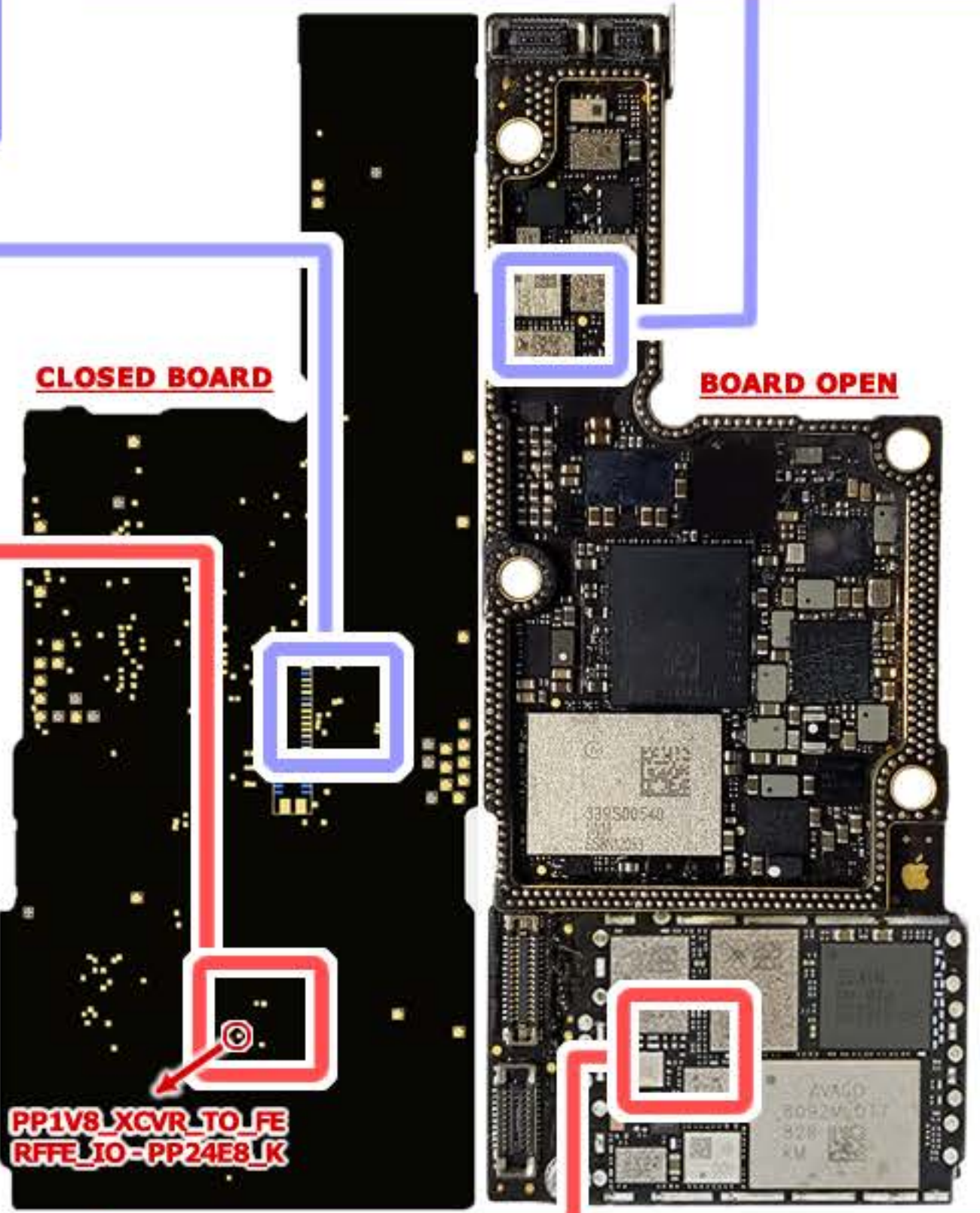


### XCVR TO FE RX RFFE 3



- SCLK
- SDATA
- GND
- 1V8

Necessary test points to read RFFE



# RFFE - XCVR (U\_XCVR\_K)

## IPHONE XR

APN: 820-01209-A



### RFFE2

### RFFE3

U\_XCVR\_K (TX)

XCVR\_TO\_FE\_RX\_RFFE

QM76018

SKY13768

PA\_HB\_K

DSM\_HB\_K

0x3

0xA

HRPDAF092

SKY13765

PA\_UHB\_K

DSM\_LB\_K

0x5

0x9

SKY78170

HRPDAF092

PA\_LB\_K

PA\_UHB\_K

2G

0x2

0xC

QM81019

QM76018

U\_ET2\_K

PA\_HB\_K

0xC

0xE

HFQFEGVGB

SKY78170

CPL\_K

PA\_LB\_K

0x6

2G

0xD

PP\_1V8\_VIO\_TX

PP1V8\_LBDSM\_RFFE\_IO\_FILT

### RFFE2

### RFFE3

Necessary test points to read RFFE

- SLCK
- SDATA
- GND
- 1V8\*

C1405\_K  
SCLK

C1406\_K  
SDATA

C1404\_K  
PP\_1V8\_VIO\_TX

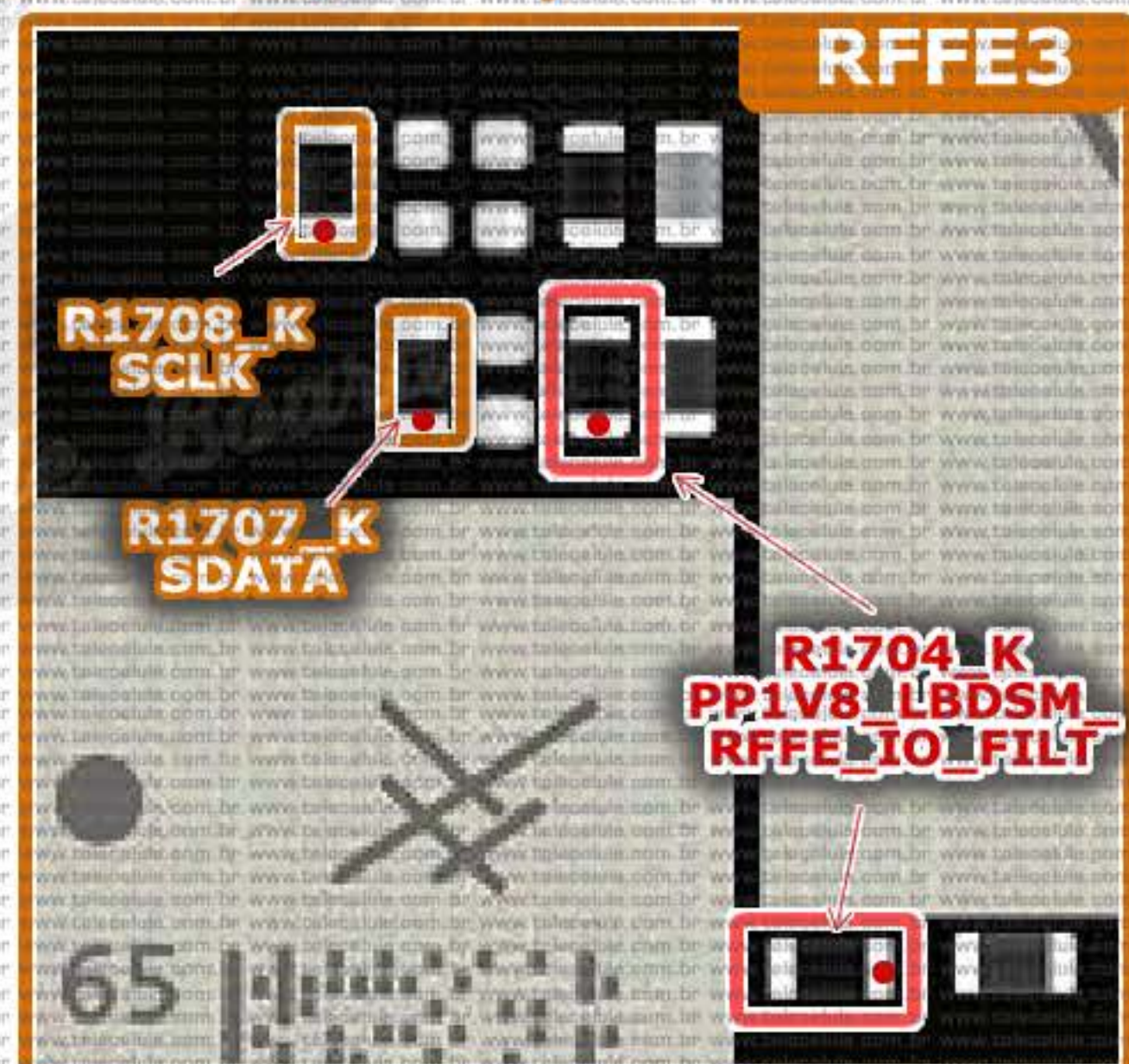
R1708\_K  
SCLK

R1707\_K  
SDATA

R1704\_K  
PP1V8\_LBDSM\_RFFE\_IO\_FILT

PP1V8\_LBDSM\_RFFE\_IO\_FILT

PP\_1V8\_VIO\_TX

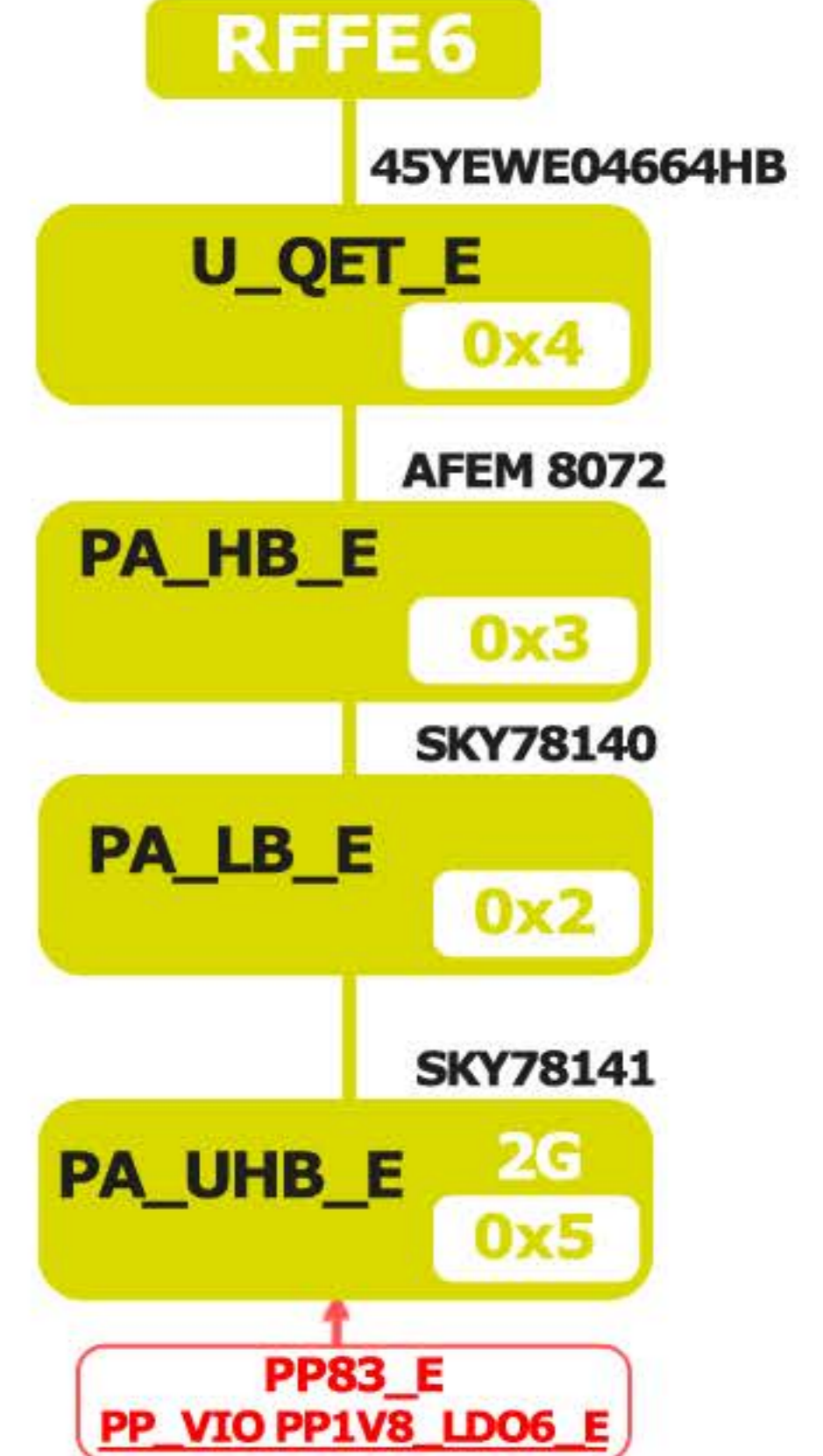
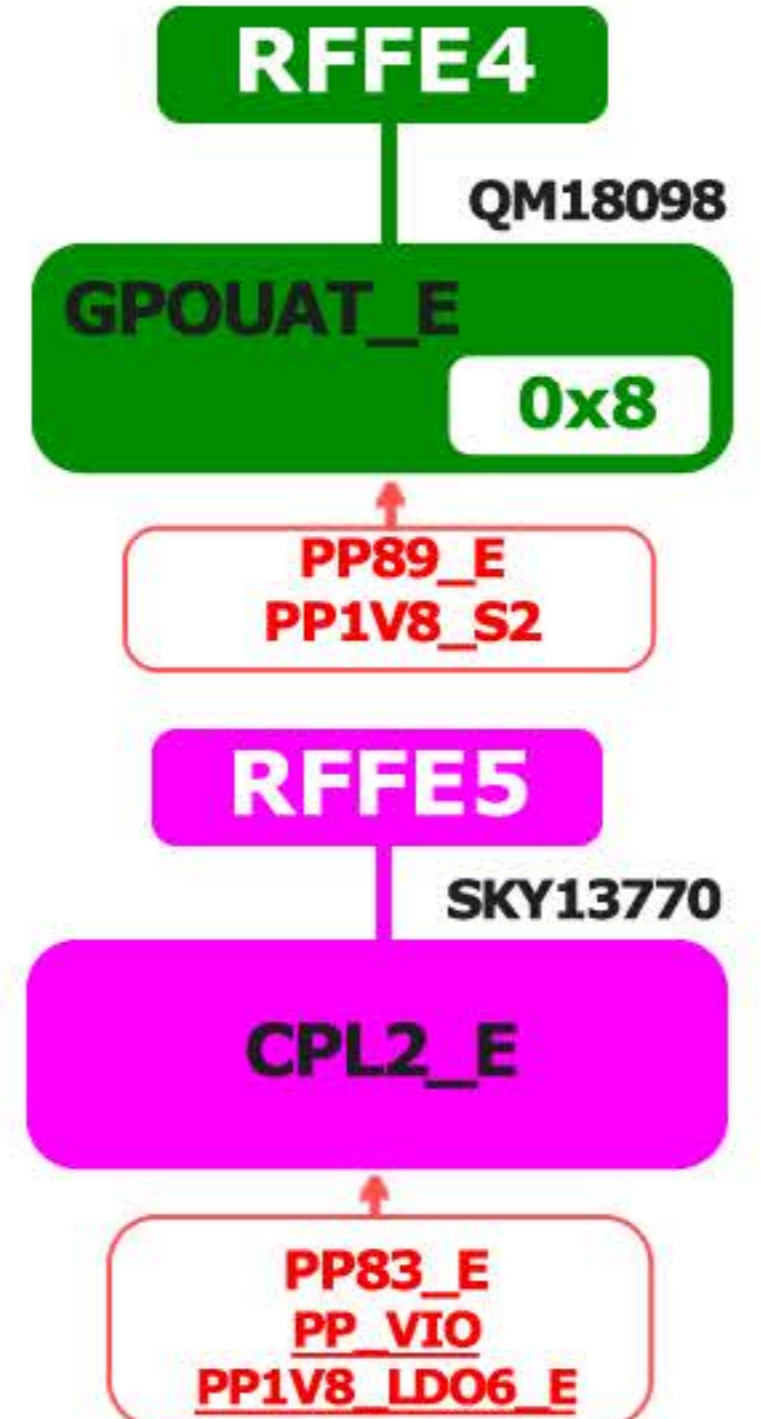
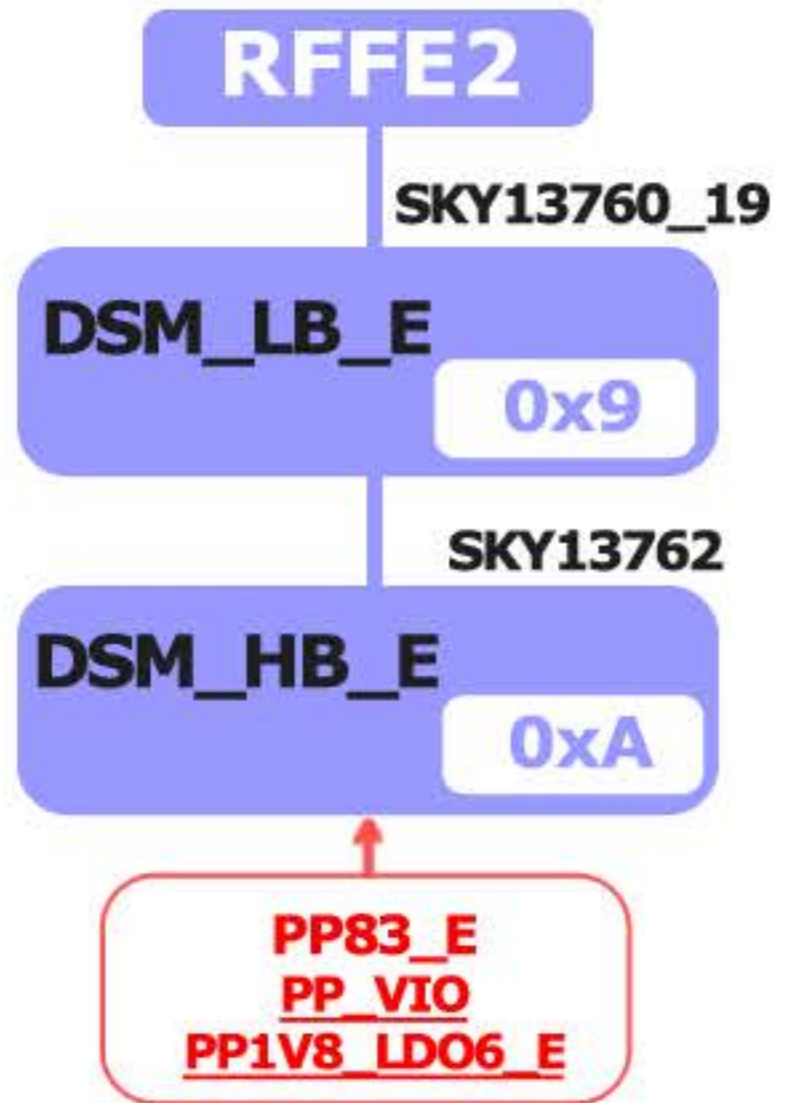
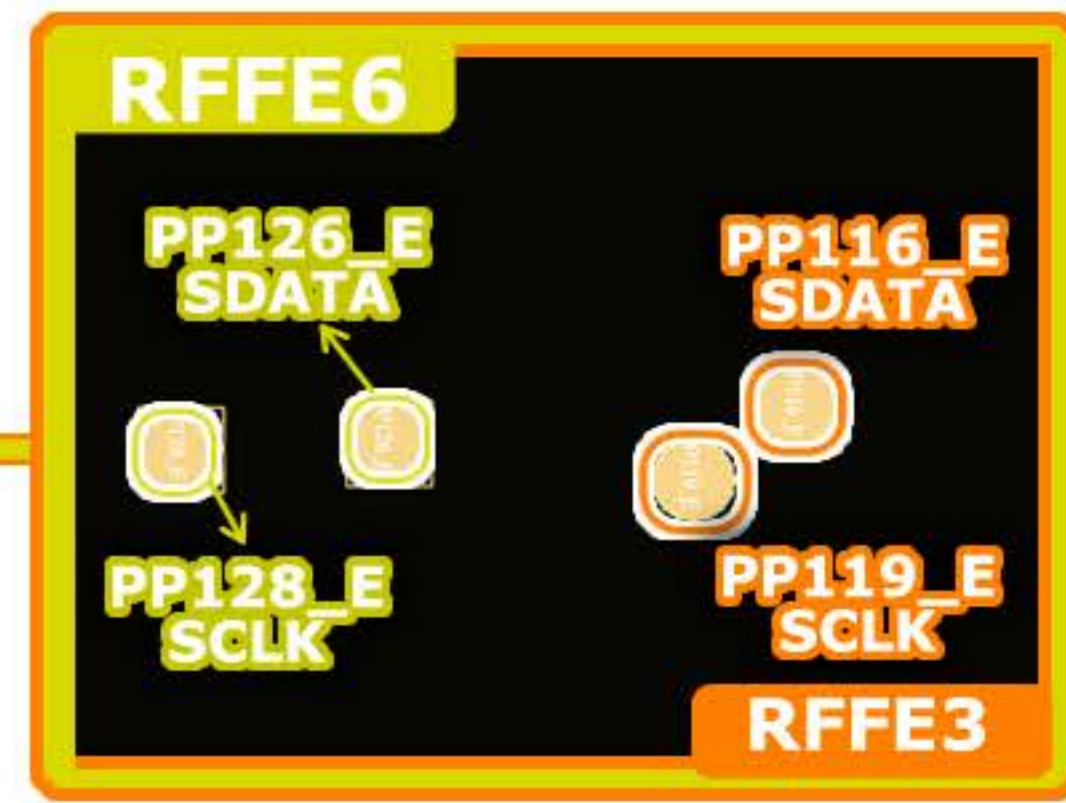
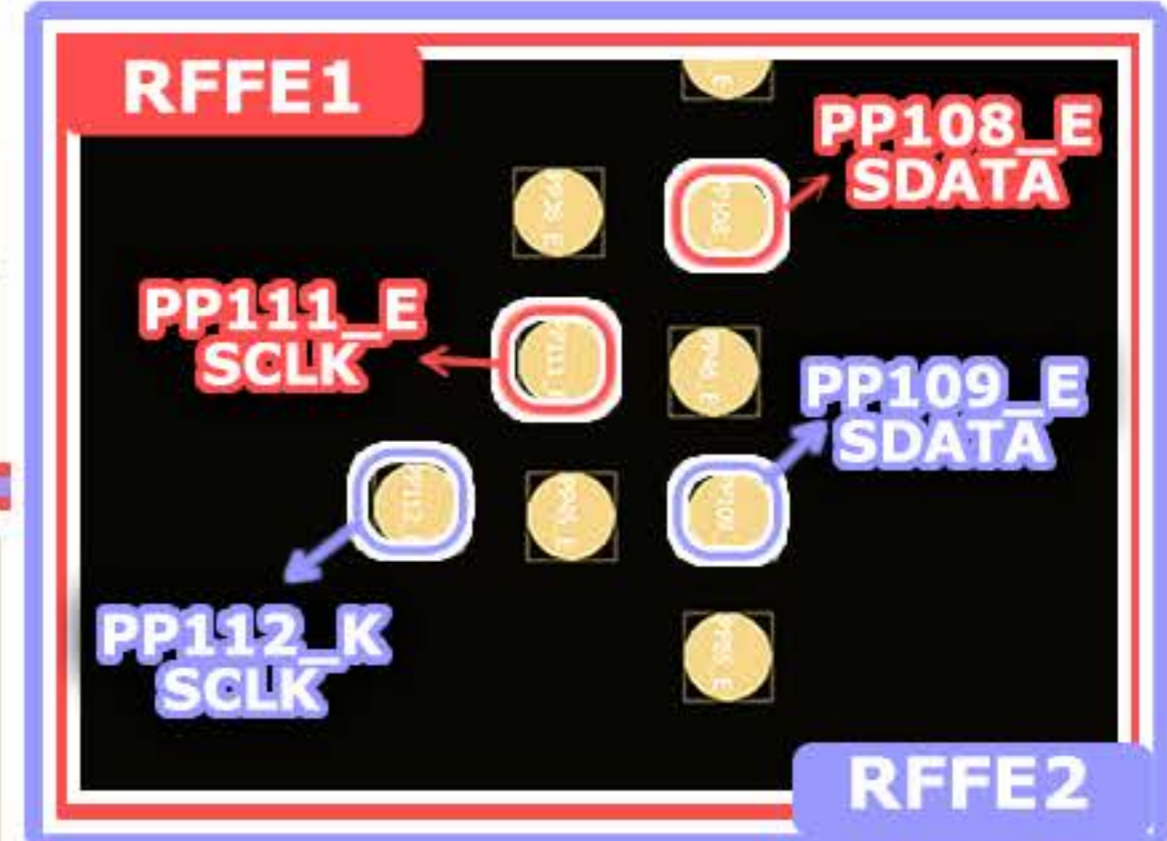
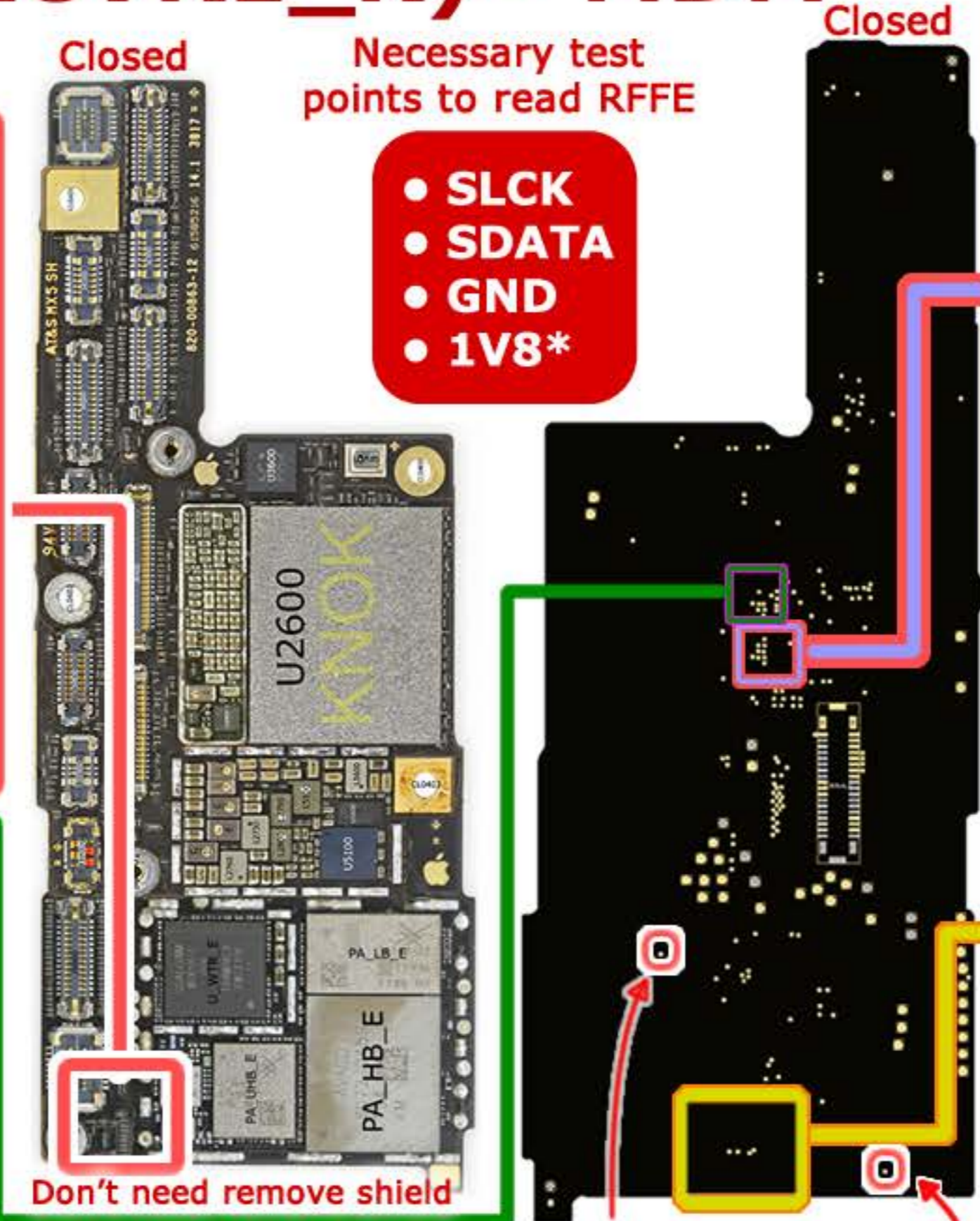
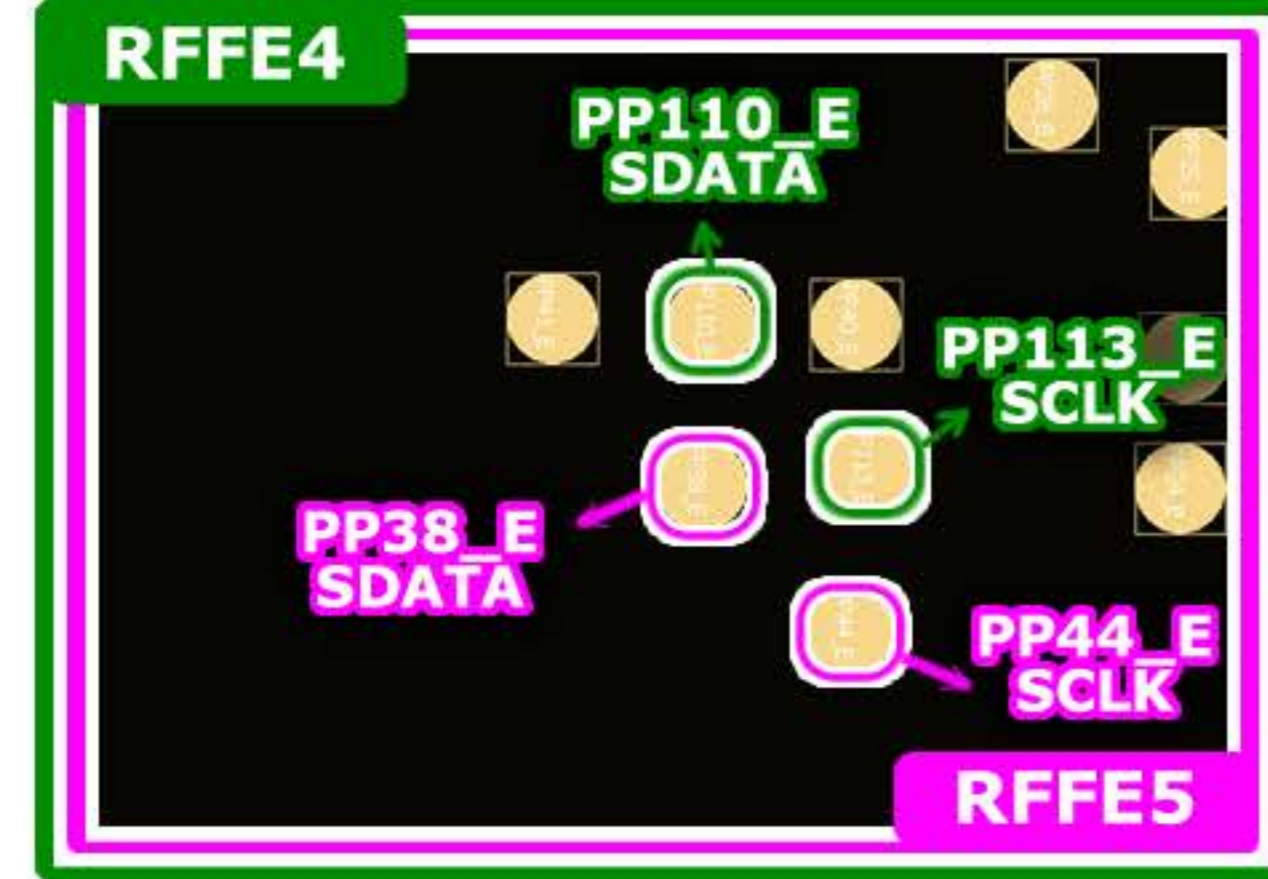
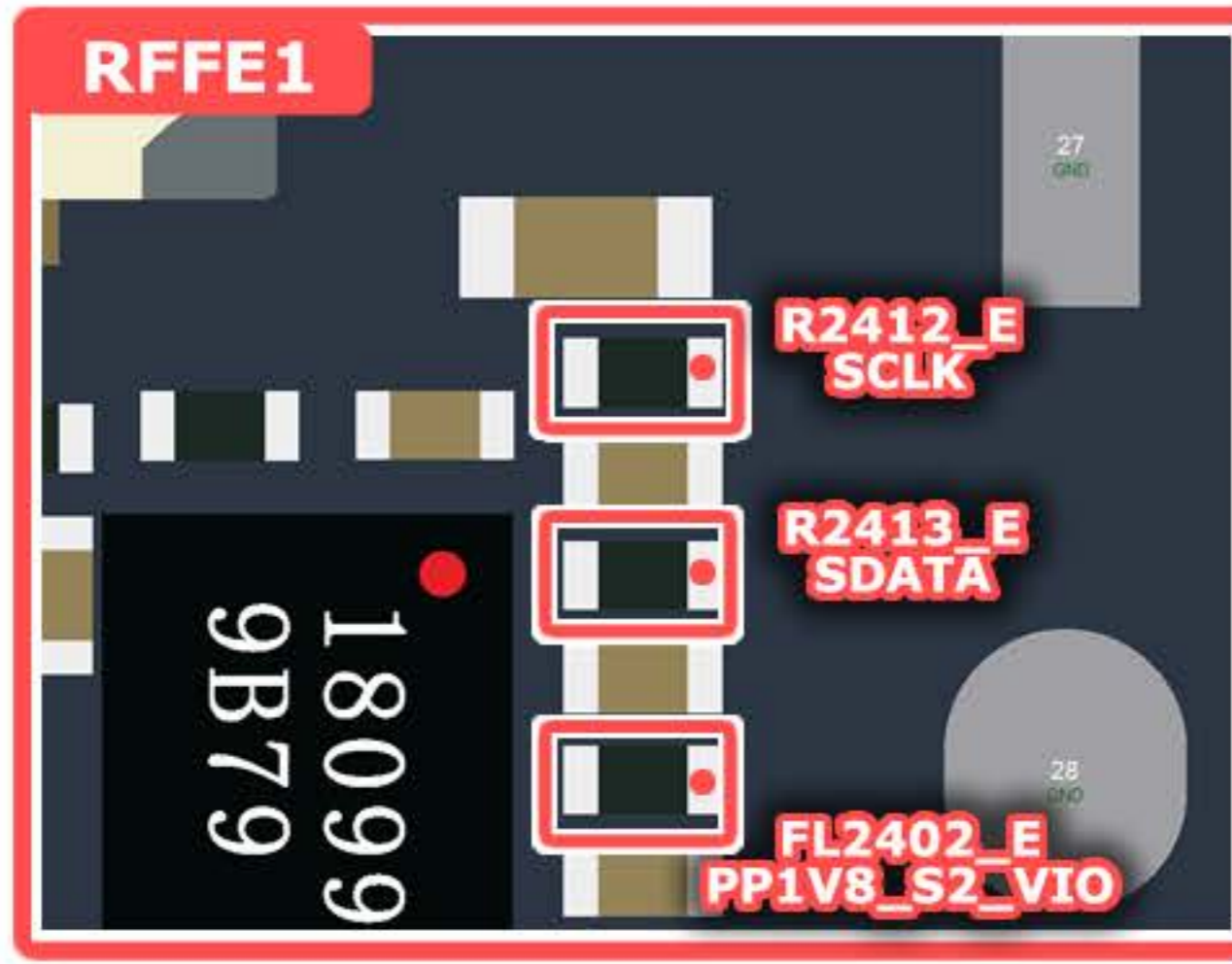


# IPHONE X QUALCOMM

APN: 820-0864-A

# RFFE - (XCVRO\_K) - MDM (XCVR1\_K) - MDM

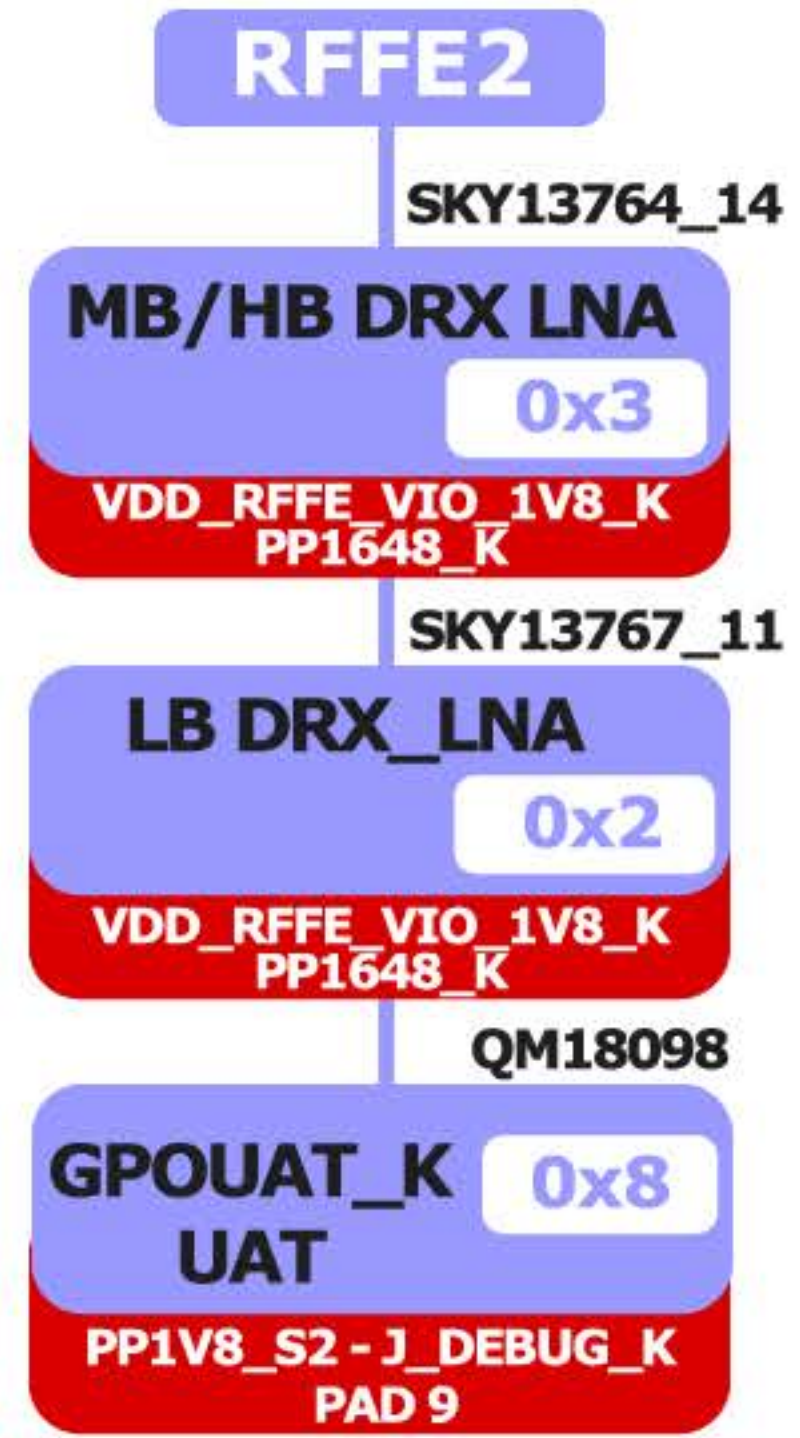
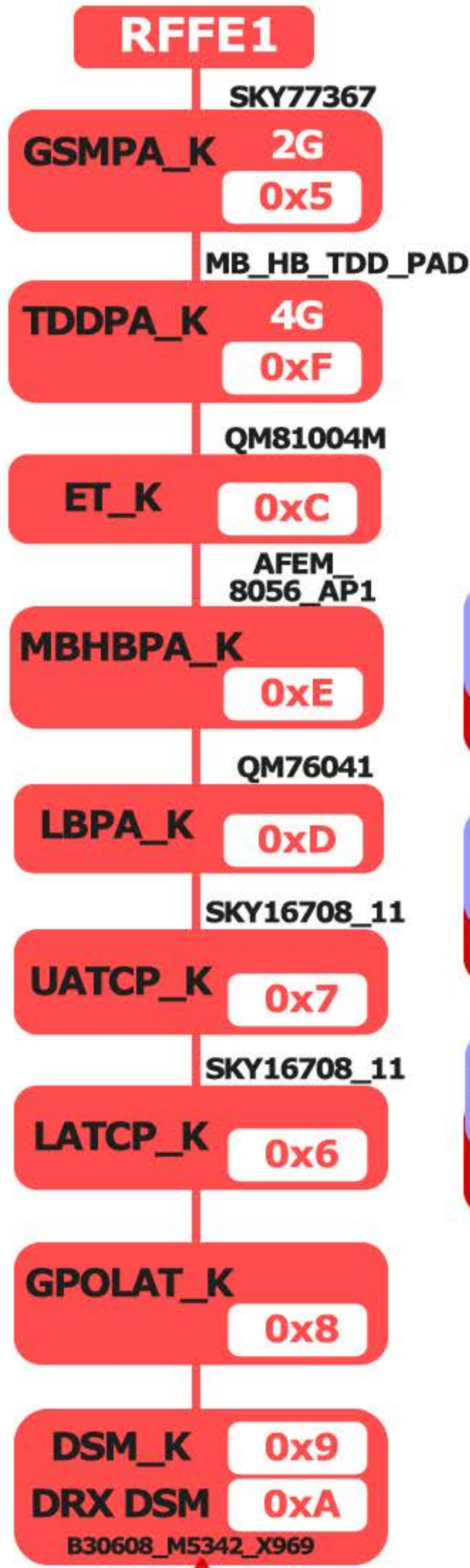
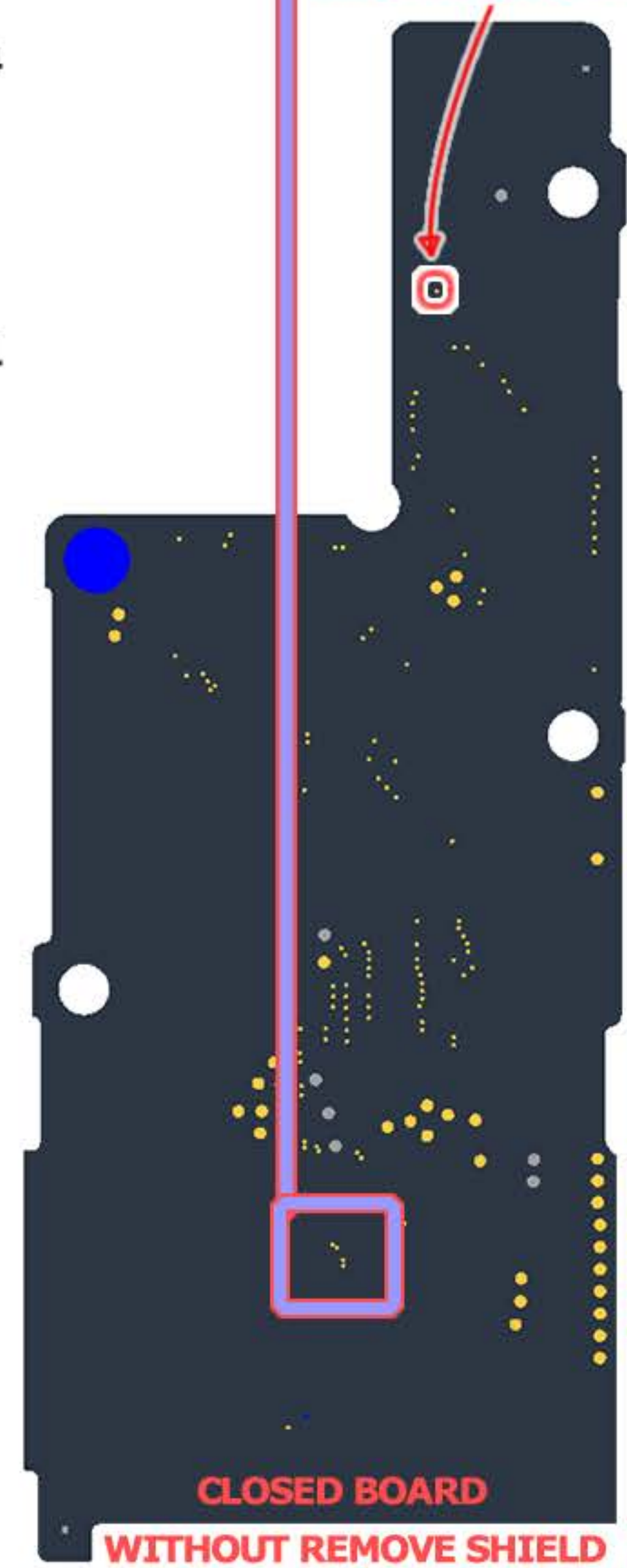
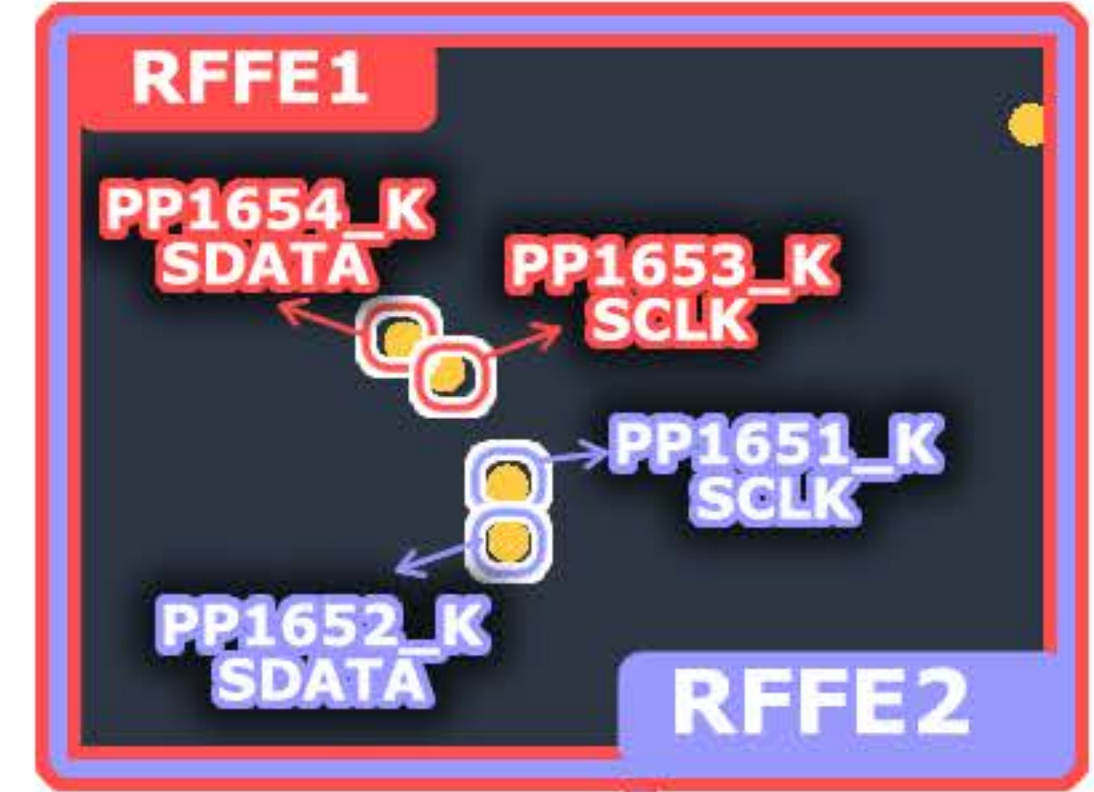
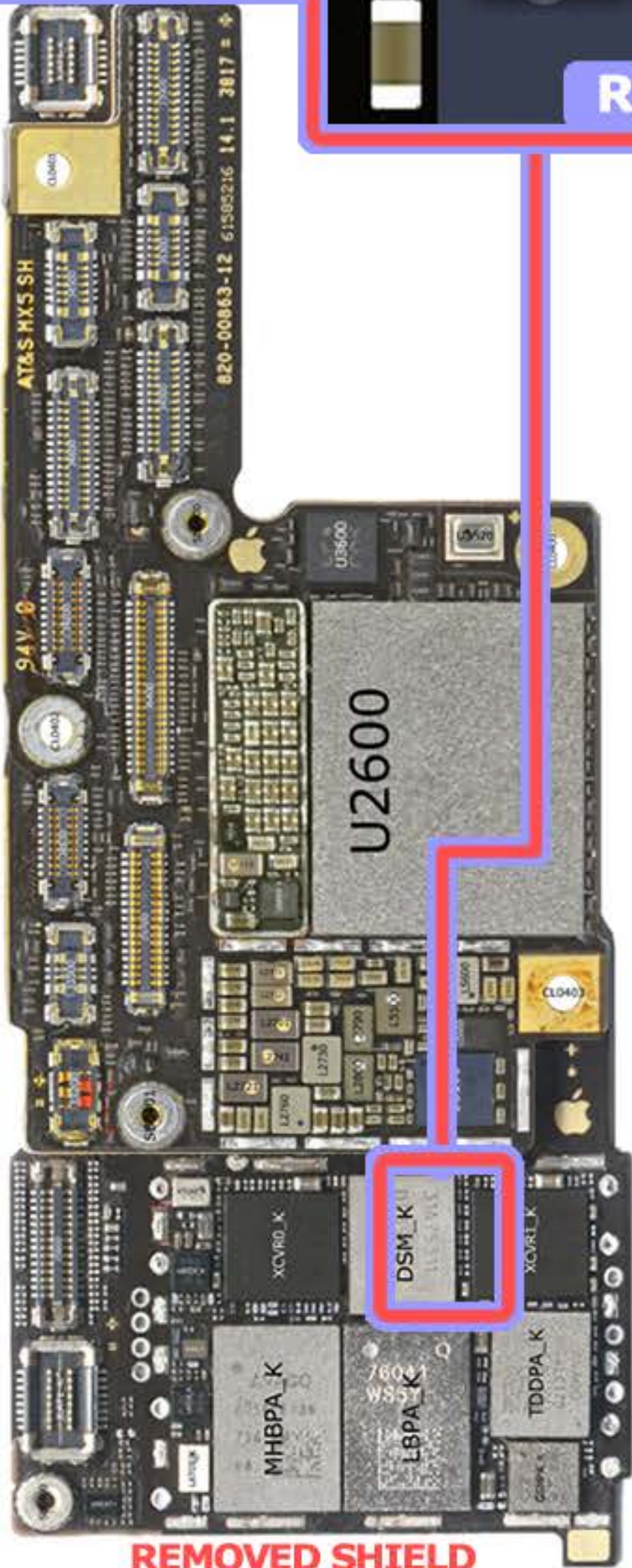
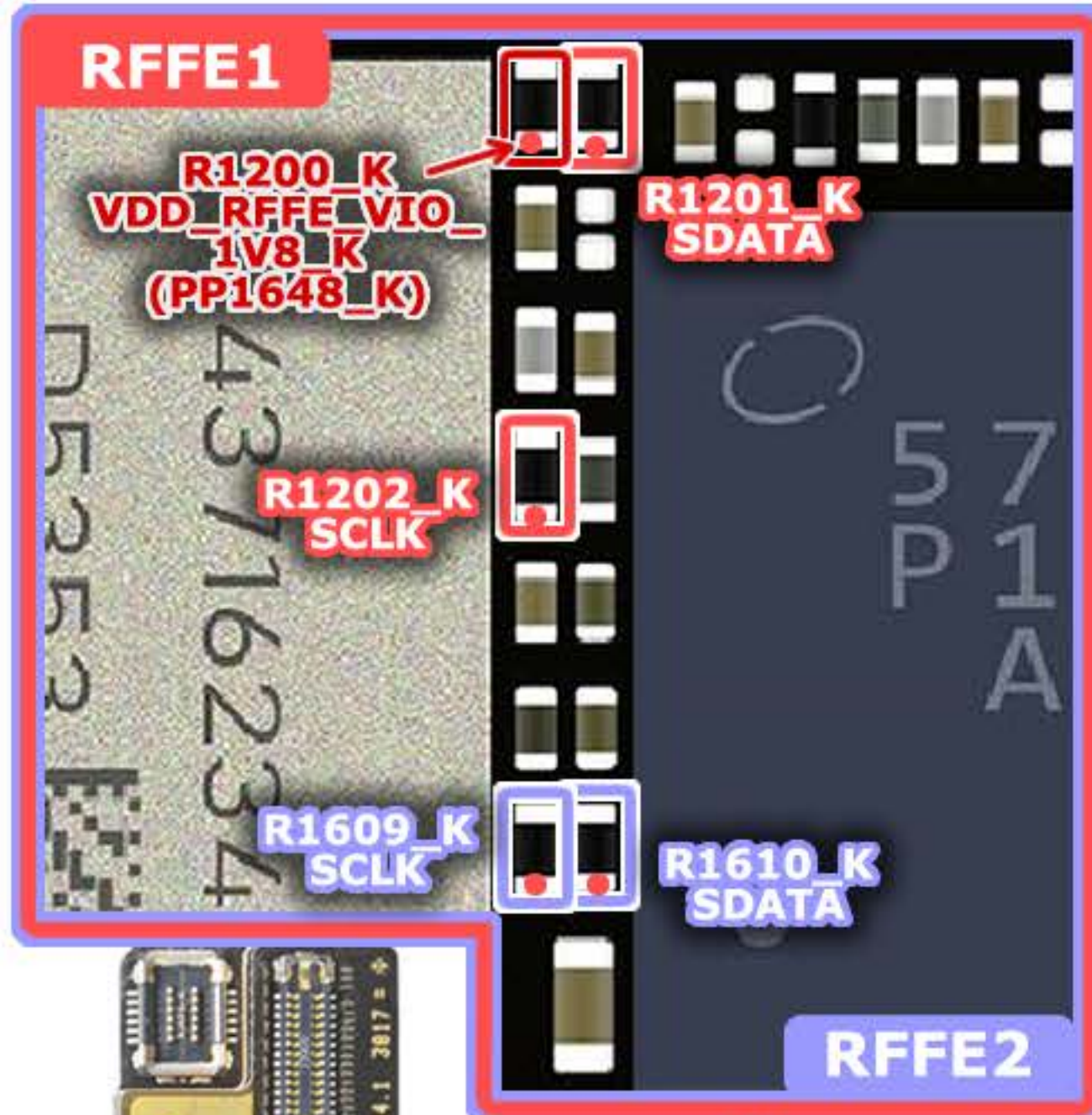
RFFE MAP	
<b>RFFE1:</b>	WTR, LATGPO, LATUNE
<b>RFFE2:</b>	HB DSM, LB DSM
<b>RFFE3:</b>	UHB, HB, LB PAD LNA
<b>RFFE4:</b>	UATGPO, UATUNE
<b>RFFE5:</b>	CPL
<b>RFFE6:</b>	QET, 2G PA/UHB, HB, LA PAD



# IPHONE X INTEL

APN: 820-0863-12

## RFFE - (XCVR0\_K) (XCVR1\_K)



Necessary test points to read RFFE

- SCLK
- SDATA
- GND
- 1V8\*

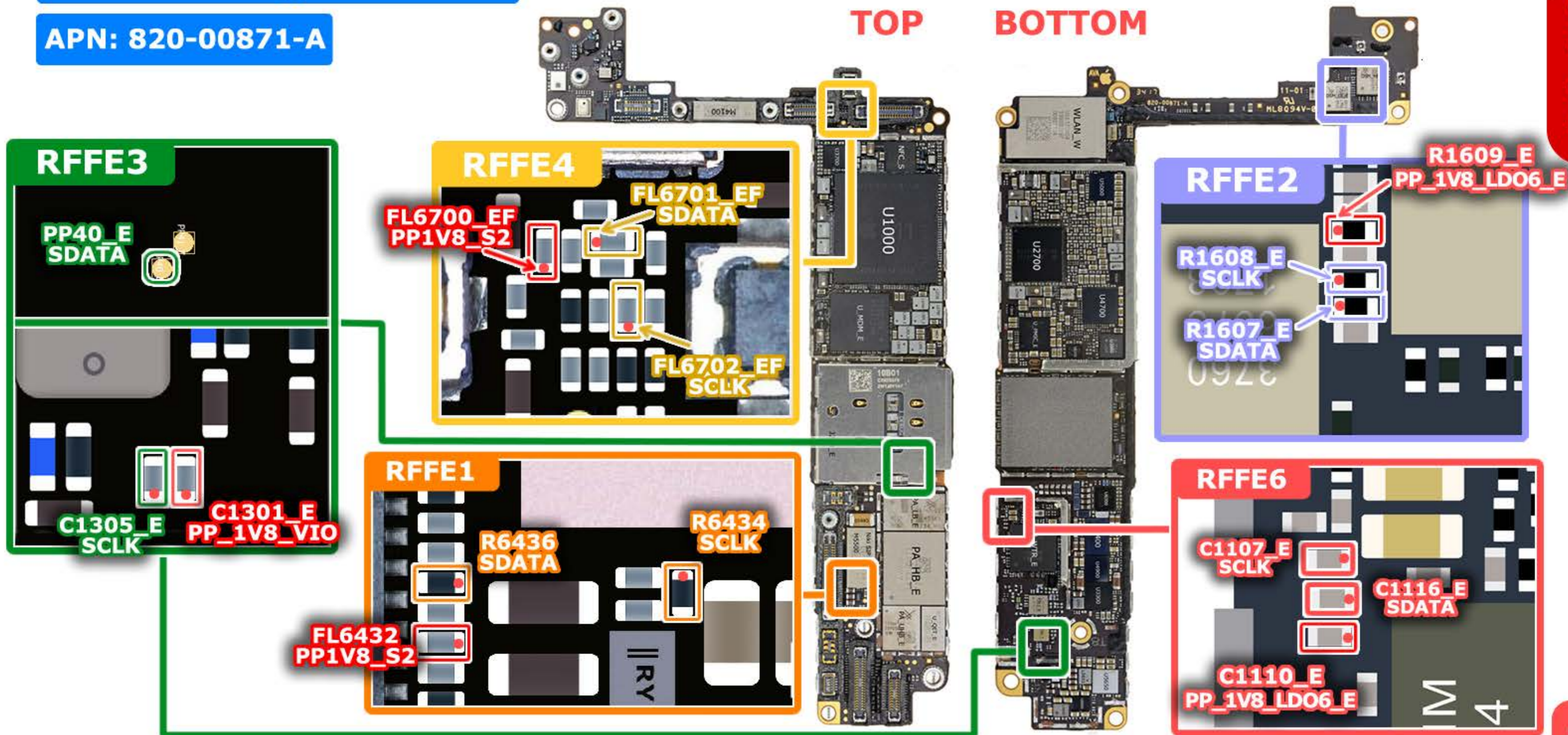
VDD\_RFFE\_VIO\_1V8\_K - PP1648\_K

# RFFE - BB (MDM)

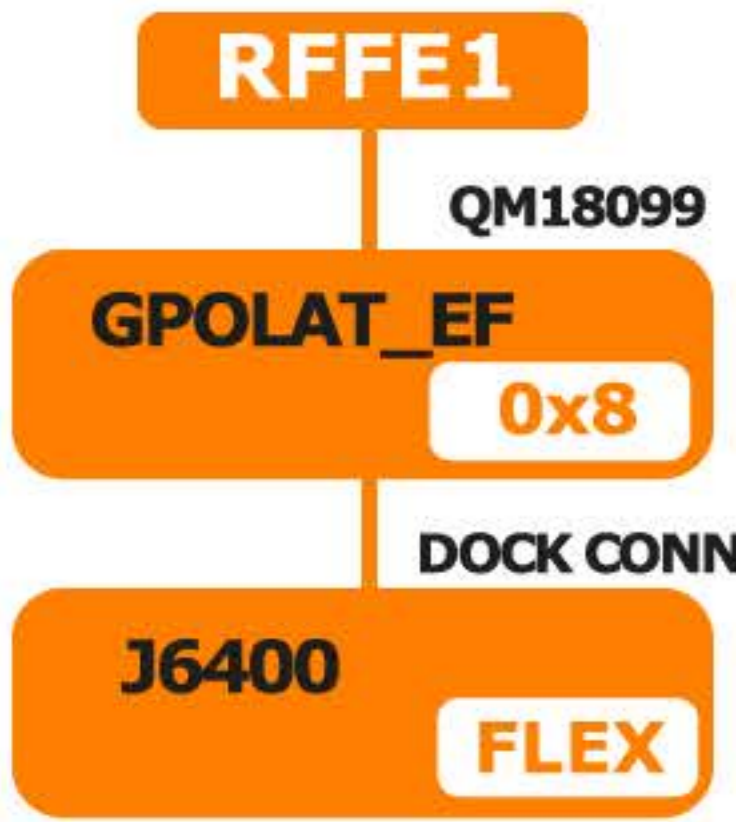
Necessary test points to read RFFE

## IPHONE 8 QUALCOMM

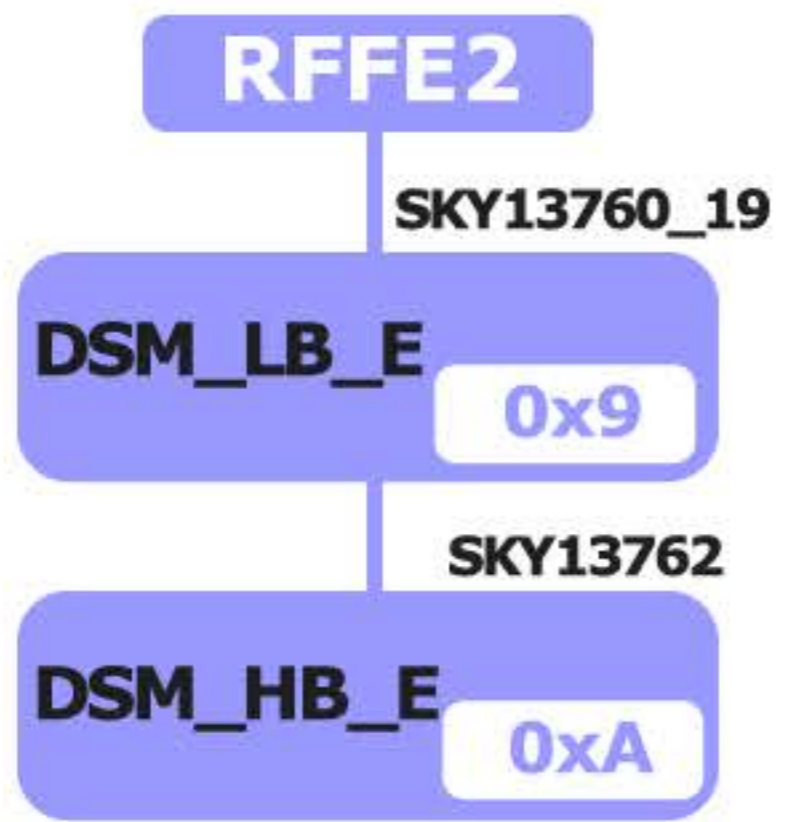
APN: 820-00871-A



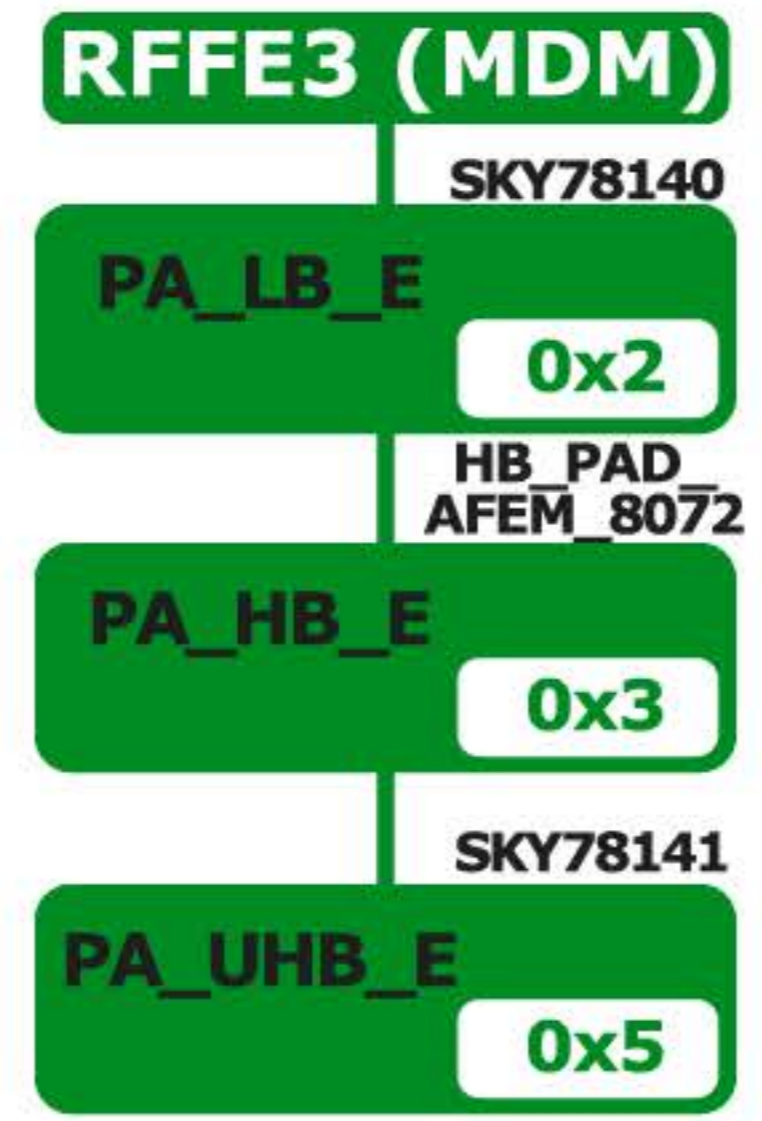
- SLCK
- SDATA
- GND
- 1V8\*



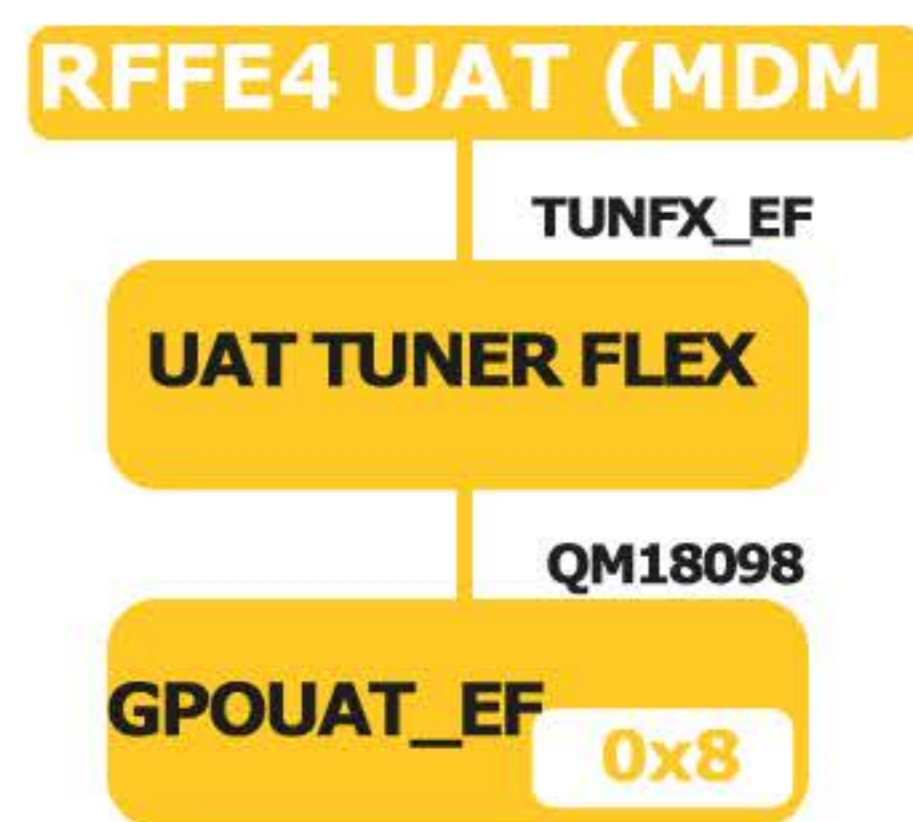
FL6432  
FL6902 EF  
PP1V8\_S2



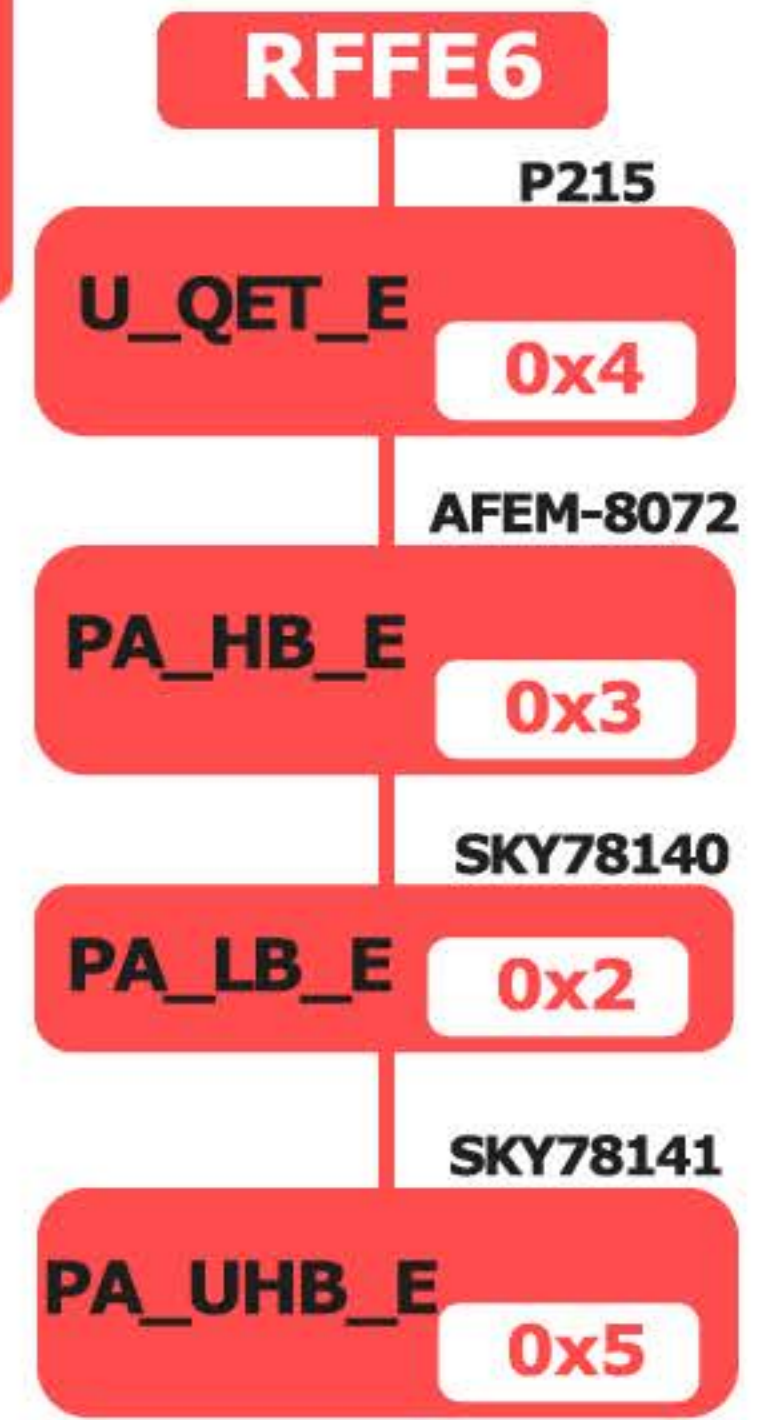
R1609\_E  
PP\_1V8\_LDO6\_E



R1301\_E  
PP\_1V8\_VIO = PP\_1V8\_LDO6\_E



FL6700\_EF  
PP1V8\_S2



C1110\_E  
PP\_1V8\_LDO6\_E

# RFFE - (XCVR0\_K)

## (XCVR1\_K)

**IPHONE 8 INTEL**

**APN: 820-00872-A**

### RFFE1

SKY77367

**GSM PA\_K** 2G PA  
0x5

MB\_HB\_TDD  
S\_PAD

**TDD PA\_K** 4G  
0xF

QM 81004M

**ET\_K** 0xC

AFEM\_8056  
AP1

**MBHBPA\_K** 0xE

QM 76041

**LBPA\_K** 0xD

SKY16708\_11

**UATCP\_K** 0x7

SKY16708\_11

**LATCP\_K** 0x6

**DRX\_DSM**

0x9 0xA  
LB\_MB\_HB\_DRX\_ASM

QM18099

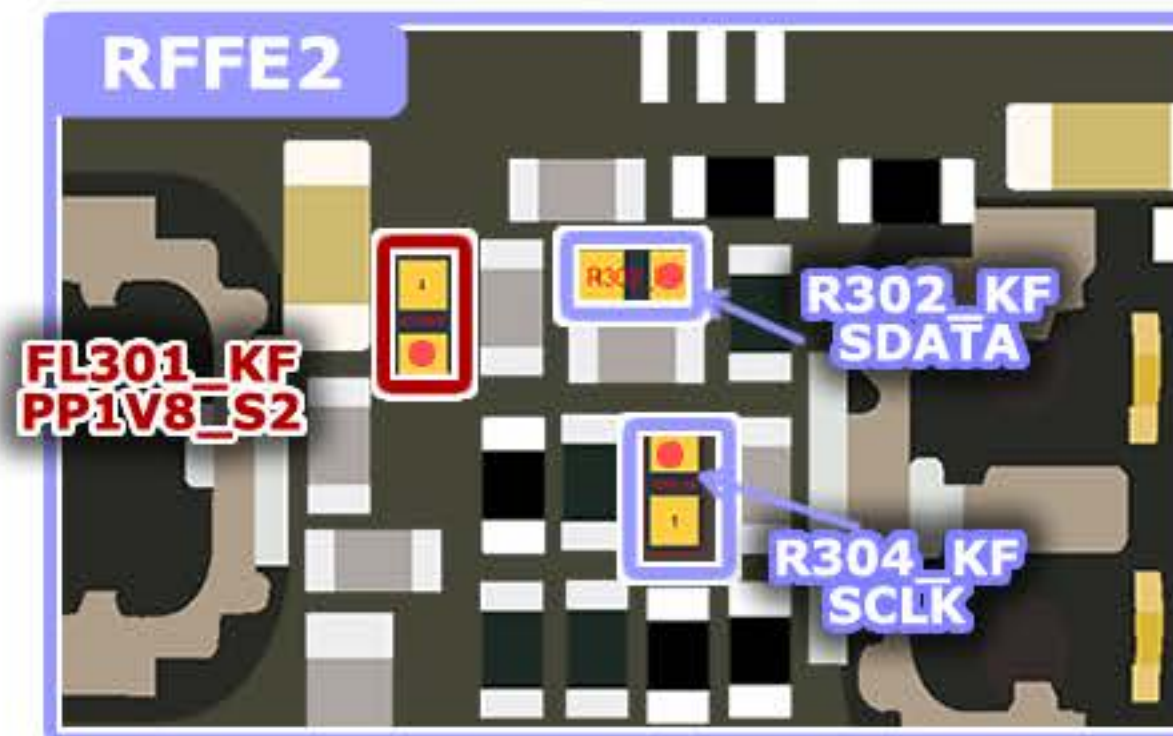
**LAT TUNER**

\* GPO 0x8  
PP1V8\_S2 - FL600\_K

**J6400**

**DOCK** FLEX

C801\_K / R800\_K  
R1200\_K  
VDD\_RFFE\_VIO\_1V8\_K



### RFFE2

SKY13764\_14

**MB/HB DRX\_LNA** 0x3

VDD\_RFFE\_VIO\_1V8\_K  
R800\_K

SKY13767\_11

**LBLN\_K** 0x2

VDD\_RFFE\_VIO\_1V8\_K  
R800\_K

**UAT\_TUNER\_FLEX**  
TUNFX\_KF

\* PP1V8\_S2 - FL301\_K

QM18098

**UAT TUNER GPO** 0x8

\* PP1V8\_S2 - FL301\_K

- SLCK
- SDATA
- GND
- 1V8\*

Necessary test points to read RFFE

FL600\_K  
PP1V8\_S2



### RFFE1

R1200\_K  
1V8

R1201\_K  
SDATA

R1202\_K  
SCLK

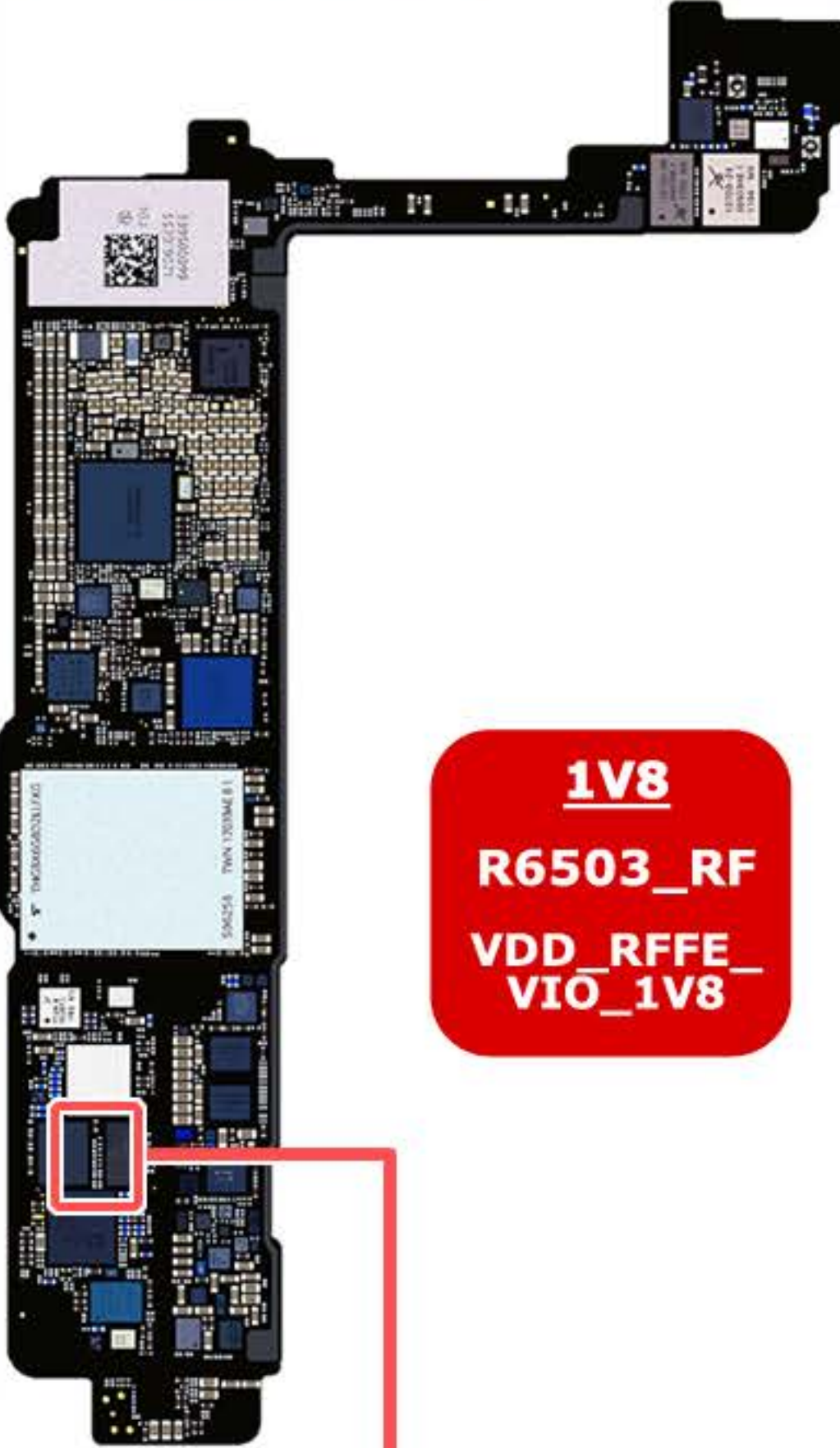


# RFFE - XRECEIVER (XCVRO\_RF) (XRCEIVER 071)

## (XCVR1\_RF)

### IPHONE 7 INTEL

APN: 820-00189-A



**1V8**  
R6503\_RF  
VDD\_RFFE\_VIO\_1V8

RFFE1	
SKY77359	
GSM PA RF	2G PA 0x5
MB HB TDD SPAD	
TDD PA RF	4G 0xF
QM81003M	
ET RF	ENVELOPE 0xC
MB HB S PAD	
MBHBPA RF	0xE
D513	
MB HB DRX ASM	0xA
LATCP RF	DUAL COUPLER 0x6
RF6110	
UATCP_RF	0x7
LBPA_RF LB S_PAD	0xD
GPIO	0x8
D5325	
LB DRX_ASM	0x9

RFFE2	
SKY13703-19	
MHBLN_RF	0x3
VDD_RFFE_VIO_1V8	
SKY13702-17	
LBLN_RF	0x2
VDD_RFFE_VIO_1V8	
TUNFX_RF	Flex
PP1V8_SDRAM	

Necessary test points to read RFFE

- SLCK
- SDATA
- GND
- VDD\_RFFE\_VIO\_1V8

