

Prepared (also subject responsible if other)		No.		
EAB/RTL/I Palle Zetterstrand		B5KAKRC16184-3 Uen		
Approved	Checked	Date	Rev	Reference
EAB/RTL/I (P. Zetterstrand)		2003-04-09	A	

## EXHIBIT 10 Components - Tune Up

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## 1 2.1033 (c) (10) Function of Active Circuit Devices

### 1.1 Printed Board RAB 1900 ROA 117 4765/1

#### 1.1.1 Function Block RX Frontend, ROZ 104 237/1

Product: ROZ 104 237/1, Revision: C

Pos	Prod name/Des	Product number
D5101	MIKROKRETS/IC, DIGITAL THERMOMETER AND TH	RYT 124 6006/C
L5100	INDUKTOR/22NH 5% 0.7A 0603	REG 704 1122/22
L5101	INDUKTOR/22NH 5% 0.7A 0603	REG 704 1122/22
N5100	MIKROKRETS/Amplifier RF SiGe HBT MMIC	RYT 101 6526/1
N5101	RIKTKOPPLARE/PD18-73 Y010	UND 106 039/1
N5102	RIKTKOPPLARE/PD18-73 Y010	UND 106 039/1
N5103	RIKTKOPPLARE/PD18-73 Y010	UND 106 039/1
N5104	RIKTKOPPLARE/PD18-73 Y010	UND 106 039/1
N5105	RIKTKOPPLARE/PD18-73 Y010	UND 106 039/1
N5106	MIKROKRETS/Amplifier RF SiGe HBT MMIC	RYT 101 6526/1
N5107	MIKROKRETS/AS186-302	RYT 101 6438/1
N5108	MIKROKRETS/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
N5109	MIKROKRETS/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
N5110	MIKROKRETS/COMP 2.7V R/R OPEN DRAIN	RYT 101 6326/1
N5111	MIKROKRETS/COMP 2.7V R/R OPEN DRAIN	RYT 101 6326/1
N5112	MIKROKRETS/COMP 2.7V R/R OPEN DRAIN	RYT 101 6326/1
N5113	MIKROKRETS/COMP 2.7V R/R OPEN DRAIN	RYT 101 6326/1
X3106	KOAXIALKONTAKT/MCX STRAIGHT SMD	RNT 403 090/1
X3107	KOAXIALKONTAKT/MCX STRAIGHT SMD	RNT 403 090/1
X3108	KOAXIALKONTAKT/SMP male 50ohm SMD w.g.pins	RPT 408 1002/01
X3109	KOAXIALKONTAKT/SMP male 50ohm SMC	RPT 408 1012/01

#### 1.1.2 Function Block RX0, ROZ 104 238/1

Product: ROZ 104 238/1, Revision: E

Pos	Prod name/Des	Product number
N6200	MICROCIRCUIT/Minisynth (RX 1900 MHz) 3.3V	RYT 902 6029/2
N6201	MICROCIRCUIT/Minisynth (RX 1900 MHz) 3.3V	RYT 902 6029/2
N6202	MICROCIRCUIT/TEMP SENSOR, SOT-23, LM50C	RYT 124 6009/C
N6203	MICROCIRCUIT/IC ASIC ULLA II	ROP 101 664/C
N6204	MICROCIRCUIT/REG LIN+ 3.3V 300mA 0.155V	RYT 113 6238/2
N6205	MICROCIRCUIT/REG LIN- -5.0V 200mA ESD=400V	RYT 113 6343/1
N6206	MICROCIRCUIT/REGLIN 3.3V 150mA 0.165V	RYT 113 6156/6
N6207	MICROCIRCUIT/COMP x1 1.6V R/R	RYT 101 6312/1

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N6300	MICROCIRCUIT/REG LIN+ 3.3V 300mA 0.155V	RYT 113 6238/2
N6301	MICROCIRCUIT/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
N6400	MICROCIRCUIT/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
N6401	MICROCIRCUIT/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
T6200	TRANSFORMER/BALUN 50/50 OHM 1880 MHZ	REG 135 58/5
T6201	TRANSFORMER/SMD TRANSFORMER	REG 135 55/7
T6202	TRANSFORMER/BALUN 50/50 OHM 1880 MHZ	REG 135 58/5
T6203	TRANSFORMER/SMD TRANSFORMER	REG 135 55/7
V6200	DIODE/SWix2 70V 0.2A SOT23 6ns Seria	RKZ 123 03/1
V6300	DIODE/CAP 15V 15-6pF 1-1E1A(USC) 6pF	RKZ 323 610/1
V6301	DIODE/CAP 15V 15-6pF 1-1E1A(USC) 6pF	RKZ 323 610/1
X6300	FILTER/201MHz BP SAW	RTN 201 851/03
X6301	FILTER/201MHz BP SAW	RTN 201 851/03
Z6200	FILTER/1880MHz BP BW=30MHZ	RTN 202 709/02
Z6202	FILTER/1880MHz BP BW=30MHZ	RTN 202 709/02
Z6300	PROD. ADAPT. CIRCUIT/ASIC VERDI	ROP 101 609
Z6301	PROD. ADAPT. CIRCUIT/ASIC QIM	ROP 101 1115/C
Z6400	MICROCIRCUIT/DUAL SIGMA-DELTA MODULATOR	RYT 120 6061/2
Z6401	MICROCIRCUIT/DUAL SIGMA-DELTA MODULATOR	RYT 120 6061/2
Z6402	MICROCIRCUIT/DUAL SIGMA-DELTA MODULATOR	RYT 120 6061/2
Z6403	MICROCIRCUIT/DUAL SIGMA-DELTA MODULATOR	RYT 120 6061/2

**1.1.3 Function Block RX1, ROZ 104 239/1**

Product: ROZ 104 239/1, Revision: E

Pos	Prod name/Des	Product number
N7200	MICROCIRCUIT/Minisynth (RX 1900 MHz) 3.3V	RYT 902 6029/2
N7201	MICROCIRCUIT/Minisynth (RX 1900 MHz) 3.3V	RYT 902 6029/2
N7202	MICROCIRCUIT/TEMP SENSOR, SOT-23, LM50C	RYT 124 6009/C
N7203	MICROCIRCUIT/IC ASIC ULLA II	ROP 101 664/C
N7204	MICROCIRCUIT/REG LIN+ 3.3V 300mA 0.155V	RYT 113 6238/2
N7205	MICROCIRCUIT/COMP x1 1.6V R/R	RYT 101 6312/1
N7206	MICROCIRCUIT/REG LIN- -5.0V 200mA ESD=400V	RYT 113 6343/1
N7207	MICROCIRCUIT/REGLIN 3.3V 150mA 0.165V	RYT 113 6156/6
N7300	MICROCIRCUIT/REG LIN+ 3.3V 300mA 0.155V	RYT 113 6238/2
N7301	MICROCIRCUIT/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
N7400	MICROCIRCUIT/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
N7401	MICROCIRCUIT/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
T7200	TRANSFORMER/BALUN 50/50 OHM 1880 MHZ	REG 135 58/5
T7201	TRANSFORMER/SMD TRANSFORMER	REG 135 55/7
T7202	TRANSFORMER/BALUN 50/50 OHM 1880 MHZ	REG 135 58/5
T7203	TRANSFORMER/SMD TRANSFORMER	REG 135 55/7
V7200	DIODE/SWix2 70V 0.2A SOT23 6ns Seria	RKZ 123 03/1
V7300	DIODE/CAP 15V 15-6pF 1-1E1A(USC) 6pF	RKZ 323 610/1
V7301	DIODE/CAP 15V 15-6pF 1-1E1A(USC) 6pF	RKZ 323 610/1
X7300	FILTER/201MHz BP SAW	RTN 201 851/03
X7301	FILTER/201MHz BP SAW	RTN 201 851/03
Z7200	FILTER/1880MHz BP BW=30MHZ	RTN 202 709/02

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Z7202 FILTER/1880MHz BP BW=30MHZ	RTN 202 709/02
Z7300 PROD. ADAPT. CIRCUIT/ASIC QIM	ROP 101 1115/C
Z7301 PROD. ADAPT. CIRCUIT/ASIC VERDI	ROP 101 609
Z7400 MICROCIRCUIT/DUAL SIGMA-DELTA MODULATOR	RYT 120 6061/2
Z7401 MICROCIRCUIT/DUAL SIGMA-DELTA MODULATOR	RYT 120 6061/2
Z7402 MICROCIRCUIT/DUAL SIGMA-DELTA MODULATOR	RYT 120 6061/2
Z7403 MICROCIRCUIT/DUAL SIGMA-DELTA MODULATOR	RYT 120 6061/2

**1.1.4 Function Block RC0, ROZ 104 111/1**

Product: ROZ 104 111/1, Revision: F

Pos	Prod name/Des	Product number
D2200	MICROCIRCUIT/74'157 LVC SSOP16 4x2 MULTIPLE	RYT 331 0157/C
D2203	MICROCIRCUIT/74'08 Z1G SSOP5-P-A 1x 2-INP A	RYT 326 6008/42C
Z2200	MICROCIRCUIT/FLASH SPI 128K8 20MHz 2.7V I	RYT 118 6154/2
Z2300	PROD. ADAPT. CIRCUIT/TARAC_S+	ROP 101 617/4C

**1.1.5 Function Block RC1, ROZ 104 112/1**

PSD1/2 Product: ROZ 104 112/1, Revision: G

Pos	Prod name/Des	Product number
D4200	MICROCIRCUIT/74'157 LVC SSOP16 4x2 MULTIPLE	RYT 331 0157/C
D4202	MICROCIRCUIT/BUFFER,OCTAL,74LVC244	RYT 331 0244/3C
Z4200	MICROCIRCUIT/FLASH SPI 128K8 20MHz 2.7V I	RYT 118 6154/2
Z4300	PROD. ADAPT. CIRCUIT/TARAC_S+	ROP 101 617/4C

**1.1.6 Function Block TXPA0, ROZ 104 240/1**

Product: ROZ 104 240/1, Revision: J

Pos	Prod name/Des	Product number
D8500	MICROCIRCUIT/160MHz	RYT 901 6156/1
D8802	MICROCIRCUIT/74'4051 HCT SSOP16 8-CH ANALOG	RYT 310 6017/C
D8803	MICROCIRCUIT/74'595 HCT TSSOP16 8B S-IN S/P	RYT 310 6031/2C
D8804	MICROCIRCUIT/74'541 HCT TSSOP20 8x BUS BUFF	RYT 310 6023/2C
L8701	FERRITE/Ferrite Bead	REG 704 20/2
N8300	MICROCIRCUIT/DC-2.8 GHz amplifier	RYT 101 6476/1
N8301	PROD. ADAPT. CIRCUIT/ASIC NINJA	ROP 101 614/2
N8302	PROD. ADAPT. CIRCUIT/ASIC PENNY	ROP 101 612/2
N8303	FILTER/BP 160MHz SAW	RTN 201 867/02

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N8304	MICROCIRCUIT/REGLIN 3.3V 150mA 0.165V	RYT 113 6156/6
N8305	MICROCIRCUIT/REG LIN+ 3.3V 300mA 0.155V	RYT 113 6238/2
N8306	MICROCIRCUIT/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
N8401	FILTER/1960MHz BP	RTN 202 1021/01
N8500	MICROCIRCUIT/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
N8600	MICROCIRCUIT/5 bit attenuator 0.5-2.5GHz	RYT 115 6033/1
N8601	MICROCIRCUIT/5 bit attenuator 0.5-2.5GHz	RYT 115 6033/1
N8602	MICROCIRCUIT/GaAs HBT Amplifier. SXA-389	RYT 101 6515/2
N8603	FILTER/1960MHz BP	RTN 202 1021/01
N8604	MICROCIRCUIT/74'595 HCT TSSOP16 8B S-IN S/P	RYT 310 6031/2C
N8605	MICROCIRCUIT/74'595 HCT TSSOP16 8B S-IN S/P	RYT 310 6031/2C
N8701	DIRECTIONAL COUPLER/Coupler, Directional 15db SMT	UND 106 08/1
N8703	MICROCIRCUIT/OPAMPx2 2.7V R/R 5.5MHz	RYT 101 6331/2
N8705	MICROCIRCUIT/TEMP. SENSOR FAHERNHEIT	RYT 124 6015/1
N8900	MICROCIRCUIT/IC, H-Volt Hot-Swap Cont Auto-	RYT 126 6016/02
N8901	MICROCIRCUIT/REG LIN+ 3.3V 300mA 0.155V	RYT 113 6238/2
T8300	BALUN/1900 MHZ 200 Ohm	REG 735 58/16
T8301	BALUN/1800 MHZ 200 OHM	REG 735 58/9
T8302	TRANSFORMER/SMD TRANSFORMER 4:1	REG 135 55/1
T8303	BALUN/1900 MHZ 200 Ohm	REG 735 58/16
T8304	BALUN/1800 MHZ 200 OHM	REG 735 58/9
V8701	DIODE/SCHx2 20V 5mA SOT363 RF Schot	RKZ 323 6059/1
V8900	TRANSISTOR/NFET 100V 7A SO8 0.022_Ohm	RYN 123 6060/1
V8901	REGULATOR DIODE/REG 15.0V 5% 0.2W SOT-23	RKZ 223 01/20
V8903	TRANSISTOR/SIL.AF TRANSIST.NPN, SOT23	RYN 121 6068/1
X3110	COAXIAL CONNECTOR/SMP male 50ohm SMD	RPT 408 1011/01
Z8201	MICROCIRCUIT/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
Z8202	PROD. ADAPT. CIRCUIT/ASIC SPIRA	ROP 101 616/C
Z8300	FILTER/1880MHz BP SAW	RTN 201 404/01
Z8301	MICROCIRCUIT/Minisynth (TX 1900 MHz) 3.3V	RYT 902 6030/2
Z8302	MICROCIRCUIT/Minisynth (TX 1900 MHz) 3.3V	RYT 902 6030/2
Z8400	AMPLIFIER/SGA-6389	RYT 101 6414/1
Z8402	MICROCIRCUIT/74'541 HCT TSSOP20 8x BUS BUFF	RYT 310 6023/2C
Z8600	MICROCIRCUIT/SGA-6589, SiGe amplifier	RYT 101 6470/1
R8717	RESISTOR/27kohm 1% 0402 0.063W	REP 622 655/27

**1.1.7 Function Block TXPA1, ROZ 104 241/1**

Product: ROZ 104 241/1, Revision: J

Pos	Prod name/Des	Product number
D9500	MICROCIRCUIT/160MHz	RYT 901 6156/1
D9802	MICROCIRCUIT/74'4051 HCT SSOP16 8-CH ANALOG	RYT 310 6017/C
D9803	MICROCIRCUIT/74'595 HCT TSSOP16 8B S-IN S/P	RYT 310 6031/2C
D9804	MICROCIRCUIT/74'541 HCT TSSOP20 8x BUS BUFF	RYT 310 6023/2C
L9701	FERRITE/Ferrite Bead	REG 704 20/2
N9300	MICROCIRCUIT/DC-2.8 GHz amplifier	RYT 101 6476/1
N9301	PROD. ADAPT. CIRCUIT/ASIC NINJA	ROP 101 614/2
N9302	PROD. ADAPT. CIRCUIT/ASIC PENNY	ROP 101 612/2

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N9303	FILTER/BP 160MHz SAW	RTN 201 867/02
N9304	MICROCIRCUIT/REGLIN 3.3V 150mA 0.165V	RYT 113 6156/6
N9305	MICROCIRCUIT/REG LIN+ 3.3V 300mA 0.155V	RYT 113 6238/2
N9306	MICROCIRCUIT/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
N9500	MICROCIRCUIT/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
N9600	MICROCIRCUIT/5 bit attenuator 0.5-2.5GHz	RYT 115 6033/1
N9601	MICROCIRCUIT/5 bit attenuator 0.5-2.5GHz	RYT 115 6033/1
N9602	MICROCIRCUIT/GaAs HBT Amplifier. SXA-389	RYT 101 6515/2
N9603	FILTER/1960MHz BP	RTN 202 1021/01
N9604	MICROCIRCUIT/74'595 HCT TSSOP16 8B S-IN S/P	RYT 310 6031/2C
N9605	MICROCIRCUIT/74'595 HCT TSSOP16 8B S-IN S/P	RYT 310 6031/2C
N9701	DIRECTIONAL COUPLER/Coupler, Directional 15db SMT	UND 106 08/1
N9703	MICROCIRCUIT/TEMP. SENSOR FAHERNHEIT	RYT 124 6015/1
N9704	MICROCIRCUIT/OPAMPx2 2.7V R/R 5.5MHz	RYT 101 6331/2
N9900	MICROCIRCUIT/IC, H-Volt Hot-Swap Cont Auto-	RYT 126 6016/02
N9901	MICROCIRCUIT/REG LIN+ 3.3V 300mA 0.155V	RYT 113 6238/2
T9300	BALUN/1900 MHZ 200 Ohm	REG 735 58/16
T9301	BALUN/1800 MHZ 200 OHM	REG 735 58/9
T9302	TRANSFORMER/SMD TRANSFORMER 4:1	REG 135 55/1
T9303	BALUN/1900 MHZ 200 Ohm	REG 735 58/16
T9304	BALUN/1800 MHZ 200 OHM	REG 735 58/9
V9701	DIODE/SCHx2 20V 5mA SOT363 RF Schot	RKZ 323 6059/1
V9900	TRANSISTOR/NFET 100V 7A SO8 0.022_Ohm	RYN 123 6060/1
V9901	REGULATOR DIODE/REG 15.0V 5% 0.2W SOT-23	RKZ 223 01/20
V9903	TRANSISTOR/SIL.AF TRANSIST.NPN, SOT23	RYN 121 6068/1
X3111	COAXIAL CONNECTOR/SMP male 50ohm SMD	RPT 408 1011/01
Z9200	PROD. ADAPT. CIRCUIT/ASIC SPIRA	ROP 101 616/C
Z9202	MICROCIRCUIT/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
Z9300	FILTER/1880MHz BP SAW	RTN 201 404/01
Z9301	MICROCIRCUIT/Minisynth (TX 1900 MHz) 3.3V	RYT 902 6030/2
Z9302	MICROCIRCUIT/Minisynth (TX 1900 MHz) 3.3V	RYT 902 6030/2
Z9400	AMPLIFIER/SGA-6389	RYT 101 6414/1
Z9401	FILTER/1960MHz BP	RTN 202 1021/01
Z9402	MICROCIRCUIT/74'541 HCT TSSOP20 8x BUS BUFF	RYT 310 6023/2C
Z9600	MICROCIRCUIT/SGA-6589, SiGe amplifier	RYT 101 6470/1
R9717	RESISTOR/27kohm 1% 0402 0.063W	REP 622 655/27

**1.1.8 Function Block LTU, ROZ 104 110/1**

Product: ROZ 104 110/1, Revision: C

Pos	Prod name/Des	Product number
N1100	MICROCIRCUIT/REG LIN 5.0V 150mA 0.165V	RYT 113 6156/4
V1100	DIODE/SCHx2 70V 70mA SOT23 Serial	RKZ 323 08/2
Z1100	MICROCIRCUIT/74'04 ACT TSSOP14 6x INVERTER	RYT 317 6004/22C
Z1102	MICROCIRCUIT/74'04 LVC SSOP14 6x INVERTER	RYT 331 0004/C
Z1109	MICROCIRCUIT/MB15E07 PFV-ER	RYT 102 6057/1
Z1111	MICROCIRCUIT/74'74 AC SOP14 2xD FLIP-FLOP	RYT 318 0074/C
Z1112	OSCILLATOR/26.000MHZ	RTL 202 610/02

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**1.1.9 Function Block RDI, ROZ 104 122/1**

Product: ROZ 104 122/1, Revision: D

Pos	Prod name/Des	Product number
D3200	MICROCIRCUIT/BUFFER,OCTAL,74LVC244	RYT 331 0244/3C
D3203	MICROCIRCUIT/82B715 I2C-BUS EXPANDER	RYT 125 6011/C
D3300	MICROCIRCUIT/BUFFER,OCTAL,74LVC244	RYT 331 0244/3C
D3302	MICROCIRCUIT/3485 RS485/422 TRANCEIVER	RYT 109 165/C

**1.2 Printed Board, DRB, ROA 117 4767/2**

**1.2.1 Function Block LEC, ROZ 104 120/1**

Product: ROZ 104 120/1, Revision: C,

Pos	Prod name/Des	Product number
V4201	DIODE/SCHx2 30V 100mA SOT23 A-A	RKZ 123 601/3
V4202	DIODE/SCHx2 30V 100mA SOT23 A-A	RKZ 123 601/3
V4203	DIODE/SCHOTTKY 40V 1A DO214AC	RKZ 323 488/04
V4204	RECTIFIER/SCHx1 30V 5.5A 0.46V DPAK(TO-2	RKZ 323 6083/1
V4205	TRANSISTOR/N-CHANNEL 28V/11A SOP-8	RYN 123 490/2
V4206	TRANSISTOR/N-CHANNEL 28V/11A SOP-8	RYN 123 490/2
V4207	TRANSISTOR/NFETx2+SCH 30V 5A/7A/2A SO8 0	RYN 123 6029/1
V4208	TRANSISTOR/NFETx2+SCH 30V 5A/7A/2A SO8 0	RYN 123 6029/1
V4209	TRANSISTOR/NFETx2+SCH 30V 5A/7A/2A SO8 0	RYN 123 6029/1
V4210	DIODE/SCHx2 30V 100mA SOT23 C-C	RKZ 123 601/4
V4211	TRANSISTOR/NFET+SCH 30V 8A/2.5A SO8 0.12	RYN 123 6028/1
V4301	DIODE/SCHx2 30V 100mA SOT23 C-C	RKZ 123 601/4
V4302	TRANSISTOR/NPN 45V 100mA SOT23	RYN 121 629/1
V4304	DIODE/SCHx2 30V 100mA SOT23 C-C	RKZ 123 601/4
V4305	DIODE/SCHx2 30V 100mA SOT23 C-C	RKZ 123 601/4
X3221	CONNECTOR/	RNV 403 104/210
Z4201	MICROCIRCUIT/REG SW DUAL.CONTR 3V-7V +/-1%	RYT 113 6225/2
Z4202	MICROCIRCUIT/REG SW DUAL.CONTR 3V-7V +/-1%	RYT 113 6225/2
Z4203	MICROCIRCUIT/REG SW ADJ -VO 1.2MHz	RYT 113 6333/1
Z4204	MICROCIRCUIT/SUP.V x4 5V/3.3V/ADJ/-5V	RYT 113 6341/1
Z4205	MICROCIRCUIT/REFERENCE 5.0V +/-0.2% SOT-23	RYT 113 481/10
Z4206	MICROCIRCUIT/SUP.V x4 5V/3.3V/ADJ/-5V	RYT 113 6341/1
Z4207	MICROCIRCUIT/CURRENT MODE BOOST CONTR.	RYT 113 6365/1
Z4301	MICROCIRCUIT/COMP 2.7V R/R OPEN DRAIN	RYT 101 6326/1
Z4302	MICROCIRCUIT/Controller 8-BIT FLASH	RYT 123 6102/1
Z4303	MICROCIRCUIT/COMP 2.7V R/R OPEN DRAIN	RYT 101 6326/1
Z4304	MICROCIRCUIT/COMP 2.7V R/R OPEN DRAIN	RYT 101 6326/1
Z4305	MICROCIRCUIT/COMP 2.7V R/R OPEN DRAIN	RYT 101 6326/1
Z4306	MICROCIRCUIT/COMP 2.7V R/R OPEN DRAIN	RYT 101 6326/1

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Z4307	MICROCIRCUIT/COMP 2.7V R/R OPEN DRAIN	RYT 101 6326/1
Z4308	MICROCIRCUIT/COMP 2.7V R/R OPEN DRAIN	RYT 101 6326/1

**1.2.2 Function Block Digital, ROZ 104 232/1**

Product: ROZ 104 232/1, Revision: B

Pos	Prod name/Des	Product number
L12001	FILTER/EMI,3A 50 OHM 1206 SMD	REG 706 21/1
V12001	LIGHT EMITTING DIODE/LED Red 20mA 0.5-1.3mcd 1.6x3.	RKZ 433 606/3
X3201	PIN CONNECTOR UNIT/FRÄMRE KORTDON SIGNAL PIP	RPV 602 1161
X3202	PIN CONNECTOR UNIT/FRÄMRE KORTDON SIGNAL PIP	RPV 602 1161
X3203	PIN CONNECTOR UNIT/FRÄMRE KORTDON SIGNAL PIP	RPV 602 1161
X3204	PIN CONNECTOR UNIT/FRÄMRE KORTDON SIGNAL PIP	RPV 602 1161
X3205	PIN CONNECTOR UNIT/FRÄMRE KORTDON SIGNAL PIP	RPV 602 1161
X3206	PIN CONNECTOR/BAKPLANSDON 5 RAD	RPV 616 1111
X3207	PIN CONNECTOR/BAKPLANSDON 5 RAD	RPV 616 1111
X3208	CONNECTOR/PINSTRIP 2x25pos 1,27 SMD.SHRO	RPV 380 253/550
Z00001	MICROCIRCUIT/DS1621 DIG. TERMOMETER 150mil	RYT 124 7601/C
Z01001	MICROCIRCUIT/74'244 AHC/VHC TSSOP20 8x BUFF	RYT 335 6008/2C
Z01002	MICROCIRCUIT/74'244 AHC/VHC TSSOP20 8x BUFF	RYT 335 6008/2C
Z04001	MICROCIRCUIT/74'244 AHC/VHC TSSOP20 8x BUFF	RYT 335 6008/2C
Z06001	MICROCIRCUIT/74'244 AHC/VHC TSSOP20 8x BUFF	RYT 335 6008/2C
Z06002	MICROCIRCUIT/74'244 AHC/VHC TSSOP20 8x BUFF	RYT 335 6008/2C
Z06003	MICROCIRCUIT/74'244 AHC/VHC TSSOP20 8x BUFF	RYT 335 6008/2C
Z07001	MICROCIRCUIT/74'244 AHC/VHC TSSOP20 8x BUFF	RYT 335 6008/2C
Z08001	MICROCIRCUIT/74'244 AHC/VHC TSSOP20 8x BUFF	RYT 335 6008/2C
Z08002	MICROCIRCUIT/74'244 AHC/VHC TSSOP20 8x BUFF	RYT 335 6008/2C
Z08003	MICROCIRCUIT/74'244 AHC/VHC TSSOP20 8x BUFF	RYT 335 6008/2C
Z08004	MICROCIRCUIT/74'08 Z1G SSOP5-P-A 1x 2-INP A	RYT 326 6008/42C
Z08005	MICROCIRCUIT/74'32 Z1G SSOP5-P-A 1x 2-INP O	RYT 326 6032/42C
Z08006	MICROCIRCUIT/74'244 AHC/VHC TSSOP20 8x BUFF	RYT 335 6008/2C
Z12001	MICROCIRCUIT/PowerPC405GP 266MHz rev E	RYT 123 6091/4
Z12002	MICROCIRCUIT/74'04 LVC SSOP14 6x INVERTER	RYT 331 0004/C
Z12003	MICROCIRCUIT/74'74 LVC TSSOP14 2xD FLIP-FLO	RYT 331 0074/3C
Z12004	MICROCIRCUIT/74'08 Z1G SSOP5-P-A 1x 2-INP A	RYT 326 6008/42C
Z12005	MICROCIRCUIT/I2C HOT SWAPPABLE BUS BUFFER 2	RYT 109 6218/C
Z12006	MICROCIRCUIT/Zero delay buffer 3.3V	RYT 108 107/C
Z12007	MICROCIRCUIT/74'138 AHC/VHC SOP16 3:8 DEC/D	RYT 335 6006/C
Z12008	MICROCIRCUIT/74'08 Z1G SSOP5-P-A 1x 2-INP A	RYT 326 6008/42C
Z14001	MICROCIRCUIT/SDRAM CL2+3 16M16 133M 3.3V C	RYT 119 6142/5
Z14002	MICROCIRCUIT/SDRAM CL2+3 16M16 133M 3.3V C	RYT 119 6142/5
Z14003	MICROCIRCUIT/SDRAM CL2+3 16M16 133M 3.3V C	RYT 119 6142/5
Z14004	MICROCIRCUIT/FLASH TB 2M16 90NS 3.3V I	RYT 118 6152/4
Z14005	MICROCIRCUIT/FLASH 8M16 150ns 3.3V E	RYT 118 6153/1
Z15001	MICROCIRCUIT/7128AE-7 3.3V C=-40/85	RYT 141 6006/5C
Z23001	PROD. ADAPT. CIRCUIT/TARAC_S+	ROP 101 617/4C
Z24001	MICROCIRCUIT/SDRAM CL2+3 16M16 133M 3.3V C	RYT 119 6142/5



Prepared (also subject responsible if other) EAB/RTL/I Palle Zetterstrand		No. B5KAKRC16184-3 Uen		
Approved EAB/RTL/I (P. Zetterstrand)	Checked	Date 2003-04-09	Rev A	Reference

Z25001	PROD. ADAPT. CIRCUIT/TARAC_S+	ROP 101 617/4C
Z26001	MICROCIRCUIT/XCV50E-6 FPGA 1.8V	RYT 139 055/C
Z33001	PROD. ADAPT. CIRCUIT/TARAC_S+	ROP 101 617/4C
Z34001	MICROCIRCUIT/SDRAM CL2+3 16M16 133M 3.3V C	RYT 119 6142/5
Z35001	PROD. ADAPT. CIRCUIT/TARAC_S+	ROP 101 617/4C
Z36001	MICROCIRCUIT/XCV50E-6 FPGA 1.8V	RYT 139 055/C

## 2 2.1033(c)(9) Tune-Up Procedure

All the necessary adjustments will be set in the factory, and no adjustments are needed. The output power level is remotely controlled by the Base Station Controller (BSC). If the TRX (an RRU contains four identical TRXes) is not able to maintain the requirements for power output, frequency stability, etc an alarm is sent to the BSC. On severe faults, the TRX will disable transmission.

## 3 2.1033(c)(9,10) Power Tune-Up – Power Limiting

The transmitter in each TRX contains three synthesized oscillators. One PLL gives a 160 MHz signal to the I/Q modulator. The two other generate a 1770 to 1830 MHz signal to the mixer where the modulated signal is converted to the transmit frequency. Two oscillators are needed in frequency hopping mode, one is retuning while the other is active. All three synthesized oscillators have a reference of 13 MHz generated in a central synthesized oscillator (PLL) of 26 MHz, which is downmixed by 2, in the LTU part of the RRU. This PLL frequency reference is locked to a 3.25 MHz clock which is extracted from the multiplexed Y-interface MY. MY is generated and distributed by the IXU (Interface & Switching Unit) to all RRU:s in the base station.

The frequency reference 13 MHz in the IXU is generated in a voltage controlled oscillator phase-locked to the incoming PCM-link frequency or as an option an incoming GPS-link frequency.