

APPLICANT:  
Ericsson Radio System AB

FCC ID NO.  
B5KKRC12104-41

EXHIBIT 10 - COVER SHEET

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FUNCTION OF ACTIVE CIRCUIT DEVICES

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

Function Block Digital Control (1911-ROZ 104 03)

|      |                                                 |
|------|-------------------------------------------------|
| D1   | 8XLINEDRIVER TS                                 |
| D2   | PLD                                             |
| D4   | ASIC TRISTAN, CONTROL Radio & Synthesizer       |
| D6   | DSP, PLL- & PCM-link Control                    |
| D8   | SRAM 64k16                                      |
| D9   | FLASHROM 256k16                                 |
| D100 | DSP, Receiver                                   |
| D101 | SRAM 64k16                                      |
| D102 | ASIC ISOLET, RSSI Receiver, IfA- & IfB-Receiver |
| D104 | DSP, Receiver                                   |
| D201 | FlipFlop P-edge Trigger                         |
| D202 | Inverter                                        |
| D203 | D-type FlipFlop                                 |
| D204 | Inverter                                        |
| D206 | Inverter                                        |
| D300 | D-type FlipFlop                                 |
| N1   | Reset Circuit                                   |
| N100 | VCO 27.300 MHz                                  |
| N200 | ASIC ADDA, A/D-converter, D/A-converter         |
| N203 | Voltage Reference                               |
| N204 | VCO 19.44 MHz                                   |
| N300 | Switch Regulator                                |
| N301 | Switch Regulator                                |
| V3   | Driver FlashROM VPP                             |
| V4   | Driver FlashROM VPP                             |
| V6   | LED Driver                                      |
| V8   | LED Driver                                      |
| V200 | Voltage Regulator                               |
| V201 | Voltage Regulator                               |
| V202 | Voltage Regulator                               |
| V203 | Voltage Regulator                               |
| V204 | Voltage Regulator                               |
| V205 | Voltage Regulator                               |

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FUNCTION OF ACTIVE CIRCUIT DEVICES

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

Function Block RXRF (1911-R0Z 104 04)

N602 ASIC ODEN, Downconverter

T601 Balun

T621 Balun

T622 Balun

V650 Voltage Regulator

V651 Voltage Regulator

Function Block RXIF (1911-R0Z 104 05)

N801 ASIC FREJA, If Circuit

N810 BandPassFilter 62.94 MHz

N820 BandPassFilter 62.94 MHz

N811 BandPassFilter 455 kHz

N821 BandPassFilter 455 kHz

T800 Transformer

V800 Voltage Regulator

V801 Voltage Regulator

Function Block IFLO (1911-R0Z 104 06)

N700 Voltage Regulator

N701 PLL Synthesizer

N702 PLL Synthesizer

N750 Voltage Regulator

V703 Amplifier

V707 Amplifier

V710 Voltage Regulator

V711 Voltage Regulator

V712 Voltage Regulator

V753 Amplifier

V757 Amplifier

V760 Voltage Regulator

V761 Voltage Regulator

V762 Voltage Regulator

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## FUNCTION OF ACTIVE CIRCUIT DEVICES

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

#### Function Block FG (1911-R0Z 104 07)

N903 PLL Synthesizer  
N905 Amplifier  
N907 Oscillator 761 - 786 MHz

V923 Voltage Regulator  
V924 Voltage Regulator  
V925 Voltage Regulator

#### Function Block LX (1911-R0Z 104 08)

D401 Inverter

N401 Differential Amplifier 4pcs  
N402 ASIC GLEIPNER, Linearization  
N403 Band Pass Filter  
N404 Amplifier  
N407 Voltage Regulator  
N408 Voltage Regulator  
N409 Voltage Reference  
N411 ASIC RIO, Serial/Parallel Interface  
N415 Amplifier  
N416 Voltage Regulator

T401 Transformer  
T402 Transformer  
T403 Transformer  
T404 Transformer

V411 VSWR Alarm Driver  
V412 Voltage Regulator  
V413 Voltage Regulator  
V420 Power Setting Driver  
V421 Power Setting Driver  
V422 Power Setting Driver

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## FUNCTION OF ACTIVE CIRCUIT DEVICES

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

#### Function Block TXPA (1911-R0Z 104 10)

|      |                           |
|------|---------------------------|
| N501 | Direction Coupler         |
| N502 | Direction Coupler         |
| N503 | Direction Coupler         |
| N504 | Voltage Regulator         |
| N505 | Voltage Regulator         |
| N511 | Temperature Sensor        |
| V501 | 1 <sup>st</sup> Amplifier |
| V502 | 2 <sup>nd</sup> Amplifier |
| V503 | 3 <sup>rd</sup> Amplifier |
| V504 | 3 <sup>rd</sup> Amplifier |
| V511 | Bias V504                 |
| V512 | Bias V504                 |
| V514 | Voltage - VSWR Compare    |
| V515 | Voltage - VSWR Compare    |
| V516 | Voltage - VSWR Compare    |
| V517 | VSWR Alarm                |
| V518 | Voltage - VSWR Compare    |
| V519 | Bias V503                 |
| V520 | Bias V503                 |
| V521 | Bias V502                 |
| V522 | Bias V501                 |

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## TUNE-UP PROCEDURE

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

All the necessary adjustments will be set in the factory, and should need no adjustments out in the field (pre-tuned coils are used, etc.). If the TRX is not able to maintain the requirements for power output, frequency stability, etc., the Switch will give an indication that the TRX needs service. If it is a great failure, the EMRPS will shut down the TRX without confirmation from the Switch.

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## CIRCUIT AND DEVICE DESCRIPTIONS

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

The EMRPS function allows the RF power output to be set from 0 dB to - 20 dB attenuation in 0.2 dB steps from the MSC (Mobile Switching Center). The power levels can be in the range from a minimum of 570 milliwatts to a maximum of 57 watts at the output of the TRX.

The EMRPS supervises the feedback loop (RFF) From the Coupler stage to Linearization by checking the baseband signals. If the power output changes, the EMRPS will adjust the gain in the exciter amplifier.

If some fault happens in the output power circuits, the EMRPS will compare the fault with prestored values and report the fault to the Switch via alarm codes in different levels. The highest alarm level is a serious fault and this alarm will get the EMRPS to shut down the output power stages without confirmation from the Switch.