



Test Report issued under the responsibility of:



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TEST REPORT	
IEC 60950-1: 2005 (2nd Edition)	
Information technology equipment – Safety –	
Part 1: General requirements	
Report Reference No.	180488B
Date of issue	2011-10-21
Total number of pages	45 + pages as indicated in part “List of attachments”
CB/CCA Testing Laboratory	Nemko Oy
Address	Perkkaantie 11, FI-02601 Espoo, Finland
Applicant's name	Satel Oy
Address	Meriniitynkatu 17, FI-24100 Salo, Finland
Manufacturer's name	Same as applicant
Address	
Factory's name	Same as applicant
Address	
Test specification:	
Standard	IEC 60950-1:2005 (2nd Edition) + A1:2009
Test procedure	☐ CB ☐ CCA ☐ National
Non-standard test method	N/A
Test Report Form No.	IECEN60950_1C
Test Report Form(s) Originator	SGS Fimko Ltd (edited by Nemko Oy)
Master TRF	Dated 2009-09 (2010-02)
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Test item description	Radio modem receiver for building-in
Trade Mark	SATEL-TA21
Manufacturer	Satel Oy
Model/Type reference	CGR10 and CGR15
Ratings	No electrical ratings (the EUT is not connected to a mains supply)

This Test Report , when bearing the Nemko name and logo is only valid when issued by a Nemko laboratory, or by a laboratory having special agreement with Nemko.

Testing procedure and testing location:	
☒ CB/CCA Testing Laboratory: Testing location/ address : See page 1. Tested by (name + signature) : Erja Hägert Approved by (name + signature) . : Timo Leismala	 
☐ Testing procedure: TMP Tested by (name + signature) : Approved by (name + signature) .. : Testing location/ address :	
☐ Testing procedure: WMT Tested by (name + signature) : Witnessed by (name + signature) : Approved by (name + signature) . : Testing location/ address :	
☐ Testing procedure: SMT Tested by (name + signature) : Approved by (name + signature) .. : Supervised by (name + signature): Testing location/ address :	
☐ Testing procedure: RMT Tested by (name + signature) : Approved by (name + signature) .. : Supervised by (name + signature): Testing location/ address :	

Summary of testing (SOT):

The receiver CGR10 is working inside the Leica Viva CS10/15 unit. During the test the transmitter is sending continuously the text to the CGR10 receiver. The numbers of receiver data can be seen in the display of Leica Viva unit. The receiver frequencies are 403-473 MHz.

Clause 4.7; The equipment is for building-in. The flammability properties of the end product enclosure have not been evaluated. Fire enclosure requirements have to be considered in end product.

The product ☒ fulfils / ☐ does not fulfill the requirements of EN 60950-1:2006 + A11:2009.

Tests performed (name of test and test clause):

All tests as indicated in the test report:

Testing location:

See page 1.

Summary of compliance with National Differences:

The product ☒ fulfils / ☐ does not fulfill the requirements of EN 60950-1:2006 + A11:2009 (+ A1:2010):

☒ CENELEC common modifications ☒ NO ☒ SE ☒ FI ☒ DK ☒ UK
☒ IE ☒ DE ☒ CH ☒ ES
☐ US ☐ CA ☐ KR

☐ other: -

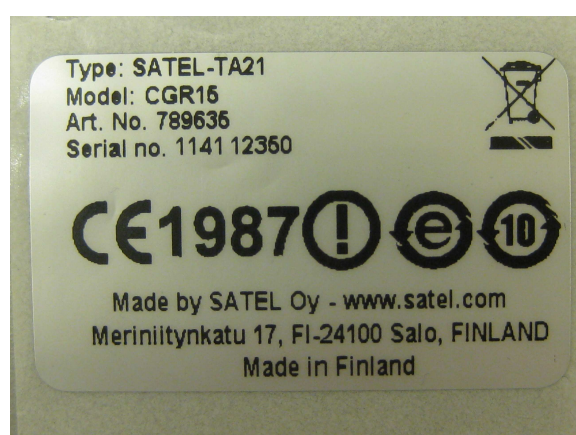
According to Online CB-Bulletin dated 2011-10-21 no SNC have been informed for the following countries: China, Japan.

SNC for Germany: Manuals have to be provided in German language before marketing in Germany.

Copy of marking plates

Receiver model CGR10

Receiver model CGR15



Name and address of production-sites (Factories):

Satel Oy
Meriniitynkatu 17
P.O. Box 142
FI-24101
Finland

List of attachments:

The test report includes following additional documentation:

- ☒ Technical Annex: 13 pages
- ☒ Photographs: 5 pages

Test item particulars (TIP):	
Equipment mobility	☐ movable ☐ hand-held ☐ transportable ☐ stationary ☒ for building-in ☐ direct plug-in
Supply(s)	☐ a.c. mains ☐ d.c. mains ☒ SELV ☐ TNV ☐ battery operated ☐ LPS ☐ secondary hazardous voltage ? ☐ other:
Connection to the supply	Connections per IEC 62102: ☐ pluggable equipment: ☐ type A ☐ type B ☐ permanent connection ☐ detachable power supply cord ☐ non-detachable power supply cord ☒ not directly connected to the mains
Operating condition	☒ continuous ☐ rated operating / resting time:
Access area	☒ operator access area ☐ restricted access location ☐ service access area
Overvoltage category (OVC)	☒ OVC I ☐ OVC II ☐ OVC III ☐ OVC IV ☐ other:
Mains supply tolerance (%) or absolute mains supply values (V)	Not connected to mains.
Tested power systems	☐ TN-S, TN-C, TN-C-S, TT (not corner earthed, figure V.1, V.2, V.3, V.5) ☐ TN-S, TT (corner earthed, figures V.1, V.6) ☐ TN-C (middle point earthed, figure V.4) ☐ IT (not corner earthed, figure V.7) ☐ IT (corner earthed, figure V.8), simulated impedance (M Ω):
IT testing, phase-phase voltage (V)	N/A
Class of equipment	☐ Class I ☐ Class II ☒ Class III ☐ Not classified
Considered current rating (A)	
Pollution degree (PD)	☐ PD 1 ☒ PD 2 ☐ PD 3
IP protection class	IP20
Max. altitude during operation (m)	2000 m
Altitude of test laboratory (m)	approx. 3 m
Mass of equipment (kg)	0,053kg
Ambient temperature during operation (°C)	Max. +60°C
Additional requirements as per cl. 1.1.2	
Radiation(s) and special hazards	☐ Laser ☐ UV ☐ Ionizing ☐ CRT ☐ Energy ☐ batteries ☐ moving parts ☐ dust, powder, gases, liquids, oil, grease ☐ heating elements ☐ thermostats ☐ sound pressure ☐ audio amplifier ☐ other:
Output(s) and other connections	☐ none ☒ SELV ☐ LPS ☐ TNV ☐ secondary hazardous voltage ☐ mains ☐ other:
	Connections per IEC 62102:

Possible test case verdicts:

- test case does not apply to the test object.....: N/A
- test object does meet the requirement: P (Pass)
- test object does not meet the requirement.....: F (Fail)

Testing:

Date of receipt of test item: 08.08.2011

Date(s) of performance of tests: 11.10.2011-18.10.2011

General remarks:

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(See Enclosure #)" refers to additional information appended to the report.

"(See appended table)" refers to a table appended to the report.

Note: This TRF includes EN Group Differences together with National Differences and Special National Conditions, if any. All Differences are located in the Appendix to the main body of this TRF.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

General product information (GPI):

CGR10/15 is a 4-level FSK/GMSK UHF radio modem receiver, which provides a transparent data received from SATELLINE compatible radio modems manufactured by Satel Oy.

It has been designed especially for use in Leica Viva CS10/15 series controllers.

The CGR10/15 gets the 5V operating voltage inside from the Leica Viva CS10/15 unit.

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict

1	GENERAL		P
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1.4	General conditions for test		P
1.4.1	Application of tests		P
1.4.2	Type tests		P
1.4.3	Test samples	As user would receive.	P
1.4.4	Operating parameters for test		P
1.4.5	Supply voltage for test	5VDC	P
1.4.6	Supply frequency for test	DC equipment	N/A
1.4.7	Electrical measuring instruments		P
1.4.8	Normal operating voltages		P
1.4.9	Measurement of voltage to earth	DC equipment	N/A
1.4.10	Loading configuration of the EUT	The transmitter is sending continuously the text to the CGR10 receiver.	P
1.4.11	Power from a telecommunication network		N/A
1.4.12	Temperature measurement conditions		P
1.4.12.1	General		P
1.4.12.2	Temperature dependent equipment		N/A
1.4.12.3	Non-temperature dependent equipment	Measurements carried out with 60 °C.	P
1.4.13	Temperature measurement methods	Thermocouple method	P
1.4.14	Simulated faults and abnormal operating conditions		P
1.4.15	Compliance by inspection of relevant data		P

1.5	Components		P
1.5.1	General		P
	Comply with IEC 60950-1 or relevant component standard	(see appended table 1.5.1)	P

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
1.5.2	Evaluation and testing of components	Certified components are used in accordance with their ratings, certifications and/or they comply with applicable parts of this standard. Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950-1 and/or the relevant component standard. Components, for which no relevant IEC-standard exists, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950-1.	P
1.5.3	Thermal controls	No thermal controls.	N/A
1.5.4	Transformers		N/A
1.5.5	Interconnecting cables		N/A
1.5.6	Capacitors bridging insulation	No primary circuits in the equipment. The equipment contains SELV circuits only.	N/A
1.5.7	Resistors bridging insulation	Refer below:	P
1.5.7.1	Resistors bridging functional, basic or supplementary insulation	Resistors are bridging functional insulation only.	P
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains supply and other circuits	No primary circuits in the equipment.	N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable	No primary circuits in the equipment.	N/A
1.5.8	Components in equipment for IT power systems	The equipment is for DC only.	N/A
1.5.9	Surge suppressors	VDRs have not been used in the equipment.	N/A
1.5.9.1	General		N/A
1.5.9.2	Protection of VDRs		N/A
1.5.9.3	Bridging of functional insulation by a VDR		N/A
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A
1.6	Power interface		P
1.6.1	AC power distribution systems	The equipment is for DC only.	N/A
1.6.2	Input current		N/A
1.6.3	Voltage limit of hand-held equipment	5VDC	P

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict

1.6.4	Neutral conductor	The equipment is for DC only.	N/A
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Equipment	Inv. no.	Date(s)
-	-	-

1.7	Marking and instructions		P
1.7.1	Power rating and identification markings	The equipment is building-in type for use in Leica Viva CS10/15 series controllers.	P
1.7.1.1	Power rating markings		N/A
	Rated voltage(s) or voltage range(s) (V)	The 5V operating voltage is taken from the Leica Viva CS10/15 unit. No rating provided, since the equipment is not connected to a mains supply.	N/A
	Symbol for nature of supply, for d.c. only		N/A
	Rated frequency or rated frequency range (Hz)		N/A
	Rated current (mA or A)		N/A
1.7.1.2	Identification markings	Refer below;	P
	Manufacturer's name or trade-mark or identification mark	SATEL-TA21	P
	Model identification or type reference	CGR-10 and CGR-15	P
	Symbol for Class II equipment only	The equipment is class III.	N/A
	Other markings and symbols		N/A
1.7.2	Safety instructions and marking	No precautions regarding connection to earthed mains socket-outlet are necessary.	N/A
1.7.2.1	General		N/A
1.7.2.2	Disconnect devices		N/A
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT power distribution systems	The equipment is for DC supply only.	N/A
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone	EUT does not produce ozone.	N/A
1.7.3	Short duty cycles	The equipment is intended for continuous operation.	N/A
1.7.4	Supply voltage adjustment		N/A
	Methods and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment	No standard power outlet.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)		N/A
1.7.7	Wiring terminals	No wiring terminals provided.	N/A
1.7.7.1	Protective earthing and bonding terminals		N/A
1.7.7.2	Terminals for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators	No controls or indicators.	N/A
1.7.8.1	Identification, location and marking		N/A
1.7.8.2	Colours		N/A
1.7.8.3	Symbols according to IEC 60417		N/A
1.7.8.4	Markings using figures		N/A
1.7.9	Isolation of multiple power sources	Single power source only.	N/A
1.7.10	Thermostats and other regulating devices	No thermostats or other regulating devices.	N/A
1.7.11	Durability	Marking withstands rubbing by water (15 s) and petroleum spirit (15 s).	P
1.7.12	Removable parts	No marking is placed on removable parts such that the marking could become misleading.	P
1.7.13	Replaceable batteries	No batteries in the equipment.	N/A
	Language(s)		—
1.7.14	Equipment for restricted access locations		N/A

Equipment	Inv. no.	Date(s)
Water	-	11.10.2011
Spirit	-	11.10.2011

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict

2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas	For building-in equipment with +5VDC input voltage	P
2.1.1.1	Access to energized parts		P
	Test by inspection		P
	Test with test finger (Figure 2A)		P
	Test with test pin (Figure 2B)		N/A
	Test with test probe (Figure 2C)		N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring	No ELV.	N/A
	Working voltage (V _{peak} or V _{rms}); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltages in operator access area.	N/A
2.1.1.5	Energy hazards	No energy hazard in operator access area.	P
2.1.1.6	Manual controls	No shafts of knobs etc.	N/A
2.1.1.7	Discharge of capacitors in equipment		N/A
	Measured voltage (V); time-constant (s).....		—
2.1.1.8	Energy hazards – d.c. mains supply	Not connected to d.c. mains supply.	N/A
	a) Capacitor connected to the d.c. mains supply ..		N/A
	b) Internal battery connected to the d.c. mains supply		N/A
2.1.1.9	Audio amplifiers	No audio amplifiers.	N/A
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A

Equipment	Inv. no.	Date(s)
-	-	-

2.2	SELV circuits		P
2.2.1	General requirements	SELV limits are not exceeded under normal condition and after a single fault.	P
2.2.2	Voltages under normal conditions (V)	+5VDC	P
2.2.3	Voltages under fault conditions (V)	+5VDC	P

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict

2.2.4	Connection of SELV circuits to other circuits :	SELV circuits are connected to other SELV circuits.	P
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Equipment	Inv. no.	Date(s)
Multimetr Fluke 289	682	18.10.2011

2.3	TNV circuits		N/A
2.3.1	Limits		N/A
	Type of TNV circuits..... :		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions :		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed :		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed :		—
2.3.5	Test for operating voltages generated externally		N/A

Equipment	Inv. no.	Date(s)
-	-	-

2.4	Limited current circuits		N/A
2.4.1	General requirements	2.4.1 – 2.4.3; No limited current circuits.	N/A
2.4.2	Limit values		N/A
	Frequency (Hz) :		—
	Measured current (mA)..... :		—
	Measured voltage (V)..... :		—
	Measured circuit capacitance (nF or µF) :		—
2.4.3	Connection of limited current circuits to other circuits		N/A

Equipment	Inv. no.	Date(s)
-	-	-

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict

2.5	Limited power sources	(See appended table 2.5)	N/A
	a) Inherently limited output	No limited power sources.	N/A
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition		N/A
	d) Overcurrent protective device limited output		N/A

Equipment	Inv. no.	Date(s)
-	-	-

2.6	Provisions for earthing and bonding		N/A
2.6.1	Protective earthing	Not connected to mains. No parts required to be connected to protective earth.	N/A
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG		—
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG		—
	Protective current rating (A), cross-sectional area (mm ²), AWG.....		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min)		N/A
2.6.3.5	Colour of insulation		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm).....		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A

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Clause	Requirement + Test	Result – Remark	Verdict

2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

Equipment	Inv. no.	Date(s)
-	-	-

2.7	Overcurrent and earth fault protection in primary circuits		N/A
2.7.1	Basic requirements	2.7.1 – 2.7.6; No primary circuits.	N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7		N/A
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices :		N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel :		N/A

2.8	Safety interlocks		N/A
2.8.1	General principles	2.8.1 – 2.8.8; No safety interlocks.	N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

Equipment	Inv. no.	Date(s)
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IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict

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2.9	Electrical insulation		P
2.9.1	Properties of insulating materials		P
2.9.2	Humidity conditioning	Non hygroscopic insulation materials used (PCB only).	P
	Relative humidity (%), temperature (°C) :	-	—
2.9.3	Grade of insulation	Functional.	P
2.9.4	Separation from hazardous voltages	Supplied by SELV.	N/A
	Method(s) used :		—

Equipment	Inv. no.	Date(s)
-	-	-

2.10	Clearances, creepage distances and distances through insulation		P
2.10.1	General		P
2.10.1.1	Frequency :	DC supply.	P
2.10.1.2	Pollution degrees :	2	P
2.10.1.3	Reduced values for functional insulation	See 5.3.4.	P
2.10.1.4	Intervening unconnected conductive parts		N/A
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage		P
2.10.2.1	General		P
2.10.2.2	RMS working voltage		P
2.10.2.3	Peak working voltage		P
2.10.3	Clearances		N/A
2.10.3.1	General		N/A
2.10.3.2	Mains transient voltages	Not connected to mains supply.	N/A
	a) AC mains supply :		N/A
	b) Earthed d.c. mains supplies :		N/A
	c) Unearthed d.c. mains supplies :		N/A
	d) Battery operation :		N/A
2.10.3.3	Clearances in primary circuits	No primary circuits.	N/A
2.10.3.4	Clearances in secondary circuits	Functional insulation complies with 5.3.4 c).	N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply		N/A
2.10.3.7	Transients from d.c. mains supply		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems		N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network :		N/A
2.10.4	Creepage distances	Functional insulation complies with 5.3.4 c).	N/A
2.10.4.1	General		N/A
2.10.4.2	Material group and comparative tracking index		N/A
	CTI tests	Material group IIIb is assumed to be used.	—
2.10.4.3	Minimum creepage distances		N/A
2.10.5	Solid insulation		P
2.10.5.1	General		P
2.10.5.2	Distances through insulation		N/A
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices		N/A
2.10.5.5	Cemented joints		N/A
2.10.5.6	Thin sheet material – General		N/A
2.10.5.7	Separable thin sheet material		N/A
	Number of layers (pcs)		—
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material – standard test procedure		N/A
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure		N/A
	Electric strength test		—
2.10.5.11	Insulation in wound components		N/A
2.10.5.12	Wire in wound components		N/A
	Working voltage		N/A
	a) Basic insulation not under stress		N/A
	b) Basic, supplementary, reinforced insulation		N/A
	c) Compliance with Annex U		N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict

	Two wires in contact inside wound component; angle between 45° and 90°		N/A
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test	(see appended table 2.10.5)	—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage		N/A
	- Basic insulation not under stress		N/A
	- Supplementary, reinforced insulation		N/A
2.10.6	Construction of printed boards		P
2.10.6.1	Uncoated printed boards		P
2.10.6.2	Coated printed boards		N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs).....		N/A
2.10.7	Component external terminations		N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A

Equipment	Inv. no.	Date(s)
-	-	-

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Clause	Requirement + Test	Result – Remark	Verdict

3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	No over-current protection.	P
3.1.2	Protection against mechanical damage		P
3.1.3	Securing of internal wiring		N/A
3.1.4	Insulation of conductors		N/A
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections		N/A
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors		N/A
	10 N pull test		N/A
3.1.10	Sleeving on wiring		N/A

Equipment	Inv. no.	Date(s)
-	-	-

3.2	Connection to a mains supply Not connected to mains. Sub-clauses deleted.	N/A
-----	--	-----

3.3	Wiring terminals for connection of external conductors Not connected to mains. Sub-clauses deleted.	N/A
-----	--	-----

3.4	Disconnection from the mains supply Not connected to mains. Sub-clauses deleted.	N/A
-----	---	-----

3.5	Interconnection of equipment		P
3.5.1	General requirements		P
3.5.2	Types of interconnection circuits :	SELV- SELV	P
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment		N/A

Equipment	Inv. no.	Date(s)
-	-	-

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4	PHYSICAL REQUIREMENTS		P
4.1	Stability		N/A
	Angle of 10°	For building-in.	N/A
	Test force (N)		N/A

Equipment	Inv. no.	Date(s)
-	-	-

4.2	Mechanical strength		N/A
4.2.1	General	4.2.1 – 4.2.7; No requirements from clauses 2.1.1, 2.6.1, 2.10, 3.2.6 and 4.4.1. No tests considered necessary.	N/A
4.2.2	Steady force test, 10 N		N/A
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N		N/A
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm)		N/A
4.2.7	Stress relief test (°C)		N/A
4.2.8	Cathode ray tubes	No CRTs in the equipment.	N/A
	Picture tube separately certified		N/A
4.2.9	High pressure lamps	No high pressure lamps in the equipment.	N/A
4.2.10	Wall or ceiling mounted equipment; force (N)	The equipment is hand-held.	N/A
4.2.11	Rotating solid media	The equipment does not contain devices that would use solid media rotating at a speed higher than 8 000 r/min.	N/A

Equipment	Inv. no.	Date(s)
-	-	-

4.3	Design and construction		P
4.3.1	Edges and corners	All edges and corners are free from sharp edges.	P

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Clause	Requirement + Test	Result – Remark	Verdict
4.3.2	Handles and manual controls; force (N).....:	No handles and manual controls.	N/A
4.3.3	Adjustable controls	No hazardous adjustable controls.	N/A
4.3.4	Securing of parts	No loosening of parts impairing creepage distances or clearances likely to occur.	P
4.3.5	Connection by plugs and sockets	SELV connector at the back of the equipment does not comply with IEC 60320 or IEC 60083.	P
4.3.6	Direct plug-in equipment	Not intended to plug directly into a wall socket-outlet.	N/A
	Torque		—
	Compliance with the relevant mains plug standard		N/A
4.3.7	Heating elements in earthed equipment	No heating elements provided.	N/A
4.3.8	Batteries	No batteries in the equipment.	N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease	Insulation is not exposed to oil, grease etc.	N/A
4.3.10	Dust, powders, liquids and gases	The equipment does not generate dust or use powders, and does not contain flammable liquids or gases.	N/A
4.3.11	Containers for liquids or gases	No containers for liquids or gases in the equipment.	N/A
4.3.12	Flammable liquids	The equipment does not contain flammable liquid.	N/A
	Quantity of liquid (l)		N/A
	Flash point (°C)		N/A
4.3.13	Radiation		N/A
4.3.13.1	General	Refer below:	N/A
4.3.13.2	Ionizing radiation	The equipment does not generate ionizing radiation.	N/A
	Measured radiation (pA/kg)		—
	Measured high-voltage (kV)		—

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Clause	Requirement + Test	Result – Remark	Verdict

	Measured focus voltage (kV)		—
	CRT markings		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	The equipment does not produce UV radiation.	N/A
	Part, property, retention after test, flammability classification		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation	The equipment does not produce UV radiation.	N/A
4.3.13.5	Lasers (including laser diodes) and LEDs	Refer below:	N/A
4.3.13.5.1	Lasers (including laser diodes)	No lasers in the equipment.	N/A
	Laser class		—
4.3.13.5.2	Light emitting diodes (LEDs)	No LEDs.	
4.3.13.6	Other types	The equipment is a receiver only.	N/A

Equipment	Inv. no.	Date(s)
-	-	-

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Clause	Requirement + Test	Result – Remark	Verdict

4.4	Protection against hazardous moving parts No moving parts. Sub-clauses deleted.		N/A
-----	--	--	-----

4.5	Thermal requirements		P
4.5.1	General	Refer below:	P
4.5.2	Temperature tests		P
	Normal load condition per Annex L		—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat	Class III equipment. No thermoplastic parts carrying hazardous voltages.	N/A

Equipment	Inv. no.	Date(s)
Datalogger Agilent 34970A	600	14.10.2011

4.6	Openings in enclosures		P
4.6.1	Top and side openings	No openings.	P
	Dimensions (mm)		—
4.6.2	Bottoms of fire enclosures	No openings.	P
	Construction of the bottom, dimensions (mm)		—
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment	No openings.	P
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm)		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes	No barrier secured by adhesive inside enclosure.	N/A
	Conditioning temperature (°C), time (weeks)		—

Equipment	Inv. no.	Date(s)
-	-	-

4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame	Method 1 has been used.	P

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Clause	Requirement + Test	Result – Remark	Verdict

	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	P
	Method 2, application of all of simulated fault condition tests	Method 1 has been used.	N/A
4.7.2	Conditions for a fire enclosure	For building-in. Fire enclosure requirements has to be considered in end product.	N/A
4.7.2.1	Parts requiring a fire enclosure		N/A
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		P
4.7.3.1	General	See table 4.7.	P
4.7.3.2	Materials for fire enclosures	For building-in. Fire enclosure requirements has to be considered in end product.	N/A
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	See tables 1.5.1 and 4.7.	P
4.7.3.5	Materials for air filter assemblies	No air filters in the equipment.	N/A
4.7.3.6	Materials used in high-voltage components	No high-voltage components in the equipment.	N/A

Equipment	Inv. no.	Date(s)
-	-	-

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		N/A
5.1	Touch current and protective conductor current Touch current and protective conductor current not applicable. Sub-clauses deleted.		N/A

5.2	Electric strength		N/A
5.2.1	General	Functional insulation complies with 5.3.4 c).	N/A
5.2.2	Test procedure		N/A

Equipment	Inv. no.	Date(s)
-	-	-

5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P

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5.3.2	Motors	No motors / fans in the equipment.	N/A
5.3.3	Transformers	No safety isolating transformers in the equipment.	N/A
5.3.4	Functional insulation..... :	Functional insulation complies with 5.3.4 c).	N/A
5.3.5	Electromechanical components	No electromechanical components in the equipment.	N/A
5.3.6	Audio amplifiers in ITE :	No audio amplifiers in the equipment.	N/A
5.3.7	Simulation of faults	See the enclosed fault condition tests, Table 5.3.	P
5.3.8	Unattended equipment	No thermostats, temperature limiters or thermal cut-outs.	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	Refer below:	P
5.3.9.1	During the tests	No fire or molten metal occurred and no deformation of enclosure during the tests.	P
5.3.9.2	After the tests	Functional insulation only.	P

Equipment	Inv. no.	Date(s)
Datalogger Agilent 34970A	600	18.10.2011

6	CONNECTION TO TELECOMMUNICATION NETWORKS Not connected to telecommunication networks. Sub-clauses deleted.	N/A
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7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS Not connected to cable distribution systems. Sub-clauses deleted.	N/A
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Clause	Requirement + Test	Result – Remark	Verdict
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE PCB material V-0. Sub-clauses deleted.		N/A
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2) No motors. Sub-clauses deleted.		N/A
C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3) No transformers. Sub-clauses deleted.		N/A
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		N/A
D.1	Measuring instrument		N/A
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		N/A
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES See 2.10.1.3. Sub-clauses deleted.		N/A
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		N/A
	Metal(s) used		—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8) No thermal controls. Sub-clauses deleted.		N/A
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		N/A
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment		N/A
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1) No telephone ringing signals. Sub-clauses deleted.		N/A
N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
P	ANNEX P, NORMATIVE REFERENCES		—
Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1) No VDRs used. Sub-clauses deleted.		N/A
R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A
			—
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		N/A
			—
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		N/A
V.1	Introduction		N/A
V.2	TN power distribution systems		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
V.3	TT power distribution systems		N/A
V.4	IT power distribution systems		N/A
W	ANNEX W, SUMMATION OF TOUCH CURRENTS No touch currents in this equipment. Sub-clauses deleted.		N/A
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus		N/A
Y.2	Mounting of test samples		N/A
Y.3	Carbon-arc light-exposure apparatus		N/A
Y.4	Xenon-arc light exposure apparatus		N/A
Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		N/A
AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—
CC	ANNEX CC, EVALUATION OF INTEGRATED CIRCUIT (IC) CURRENT LIMITERS		N/A
CC.1	Integrated circuit (IC) current limiters		N/A
CC.2	Test program 1		N/A
CC.3	Test program 2		N/A
DD	ANNEX DD, REQUIREMENTS FOR THE MOUNTING MEANS OF RACK-MOUNTED EQUIPMENT		N/A
DD.1	General	The equipment is not for rack mounting.	N/A
DD.2	Mechanical strength test, variable N		N/A
DD.3	Mechanical strength test, 250 N, including end stops		N/A
DD.4	Compliance		N/A
EE	ANNEX EE, HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS		N/A

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Clause	Requirement + Test	Result – Remark	Verdict
EE.1	General		N/A
EE.2	Markings and instructions		N/A
EE.3	Inadvertent reactivation		N/A
EE.4	Disconnection of power to hazardous moving parts		N/A
EE.5	Protection against hazardous moving parts		N/A

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Clause	Requirement + Test	Result – Remark	Verdict

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾	
General						
PCB	AT&S	MX3	94V-0	UL94	UL (E67138)	
Functional insulation						
-						
Basic insulation						
-						
Supplementary insulation						
-						
Reinforced insulation						
-						
¹⁾ An asterisk indicates a mark which assures the agreed level of surveillance						
Supplementary information:						

1.6.2	TABLE: Electrical data (in normal conditions)						N/A
U (V)	I (A)	I _{rated} (A)	P (W)	Fuse #	I _{fuse} (A)	Condition/status	
Supplementary information:							

2.5	TABLE: limited power sources								N/A
Circuit	Fault	U _{oc} (V)		I _{sc} (A)		P (VA)		Fuse (A)	
		Mea- sured	Limit	Mea- sured	Limit	Mea- sured	Limit	Value	Limit
Supplementary information:									

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2.10.3 and 2.10.4	TABLE: Working voltage measurements for clearance and creepage distances										-
Condition #	Between	TN-S, TN-C, TN-CS, TT (not corner earthed) Figures V.1, V.2, V.3, V.5		TN-S, TT (corner earthed) Figures V.1, V.6		TN-C (middle point earthed) Figure V.4		IT (not corner earthed) Figure V.7		IT (corner earthed) Figure V.8	
		peak	rms	peak	Rms	peak	rms	peak	rms	peak	Rms
Supplementary information:											

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements						N/A
Clearance (cl) and creepage distance (cr) at/of/between:		U_{peak} (V)	U_{rms} (V)	Req. cl. (mm)	Meas. cl. (mm)	Req. cr. (mm)	Meas. cr. (mm)
Functional insulation:							
Basic/supplementary insulation:							
Reinforced insulation:							
Supplementary information:							

2.10.5	TABLE: Distance through insulation measurements					N/A
Distance through insulation (DTI) at/of:		U_{peak} (V)	U_{rms} (V)	Test voltage (V)	Req. DTI (mm)	DTI (mm)
Basic insulation:						
Supplementary insulation:						
Reinforced insulation:						
Supplementary information:						

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Clause	Requirement + Test	Result – Remark	Verdict

4.3.8	TABLE: Batteries								N/A
The tests of 4.3.8 are applicable only when appropriate battery data is not available					No batteries.				N/A
Is it possible to install the battery in a reverse polarity position?									N/A
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition									
Max. current during fault condition									
Test results:									Verdict
- Chemical leaks					No batteries.				N/A
- Explosion of the battery									N/A
- Emission of flame or expulsion of molten metal									N/A
- Electric strength tests of equipment after completion of tests									N/A
Supplementary information:									

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Clause	Requirement + Test	Result – Remark	Verdict

4.5	TABLE: Thermal requirements						P
	Supply voltage (V)	5VDC					—
	Ambient T_{min} (°C)						—
	Ambient T_{max} (°C)	60 ¹⁾					—
Maximum measured temperature T of part/at::		T (°C)					Allowed T_{max} (°C)
Top of MIX1		78,7					105
Top of IC28		80,2					105
Top of IC2		79,4					105
Top of cover		67,7					85
Supplementary information:							
Temperature T of winding:		t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	Allowed T_{max} (°C)
Supplementary information:							
¹⁾ Temperatures indicated are extrapolated to $T_{amb} = 60$ °C.							
Worst case temperature of assemblies in horizontal and vertical are informed.							

4.5.5	TABLE: Ball pressure test of thermoplastic parts			N/A
	Allowed impression diameter (mm):	≤ 2 mm		—
Part		Test temperature (°C)	Impression diameter (mm)	
Supplementary information:				

4.7	TABLE: Resistance to fire					P
Part		Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
PCB		AT&S	MX3 LE	Various	94V-0	UL
Supplementary information:						

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Clause	Requirement + Test	Result – Remark	Verdict

5.1.6	TABLE: Touch current measurements (single phase equipment)								N/A
Supply voltage (V) :									—
Supply frequency (Hz) :									—
From	Fault	L – N	L – L	L – L	L – N	L – N	L – L	L – L	Measurement limit
		TN-S, TN-C, TN-CS, TT	TN-C, TT	TN, TT	IT	IT	IT	IT	
		Not corner earthed	Middle point earthed	Not corner earthed	Not corner earthed	Corner earthed	Not corner earthed	Corner earthed	
		Figure 6	Figure 7	Figure 8	Figure 9	Figure 9	Figure 10	Figure 10	
		(mA)	(mA)	(mA)	(mA)	(mA)	(mA)	(mA)	(mA)
Equipment main protective earthing terminal	Earth								3,5 / 0,75 / 5 % of rated current
Accessible parts and circuits not connected to protective earth	None								0,25
	Earth								
	Neutral			-		-	-		
	Line	-			-	-			
	Line to earth	-	-	-		-		-	
	Component								
Supplementary information:									
-									

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Clause	Requirement + Test	Result – Remark	Verdict

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			N/A
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Functional insulation:				
Basic/supplementary insulation:				
Reinforced insulation:				
Supplementary information:				
Functional insulation complies with 5.3.4 c).				

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5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C)				23,5	—
	Power source for EUT: Manufacturer, model/type, output rating				+5VDC	—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
D9	s-c	+5VDC	2min	-	-	No remarks.
C120	s-c	+5VDC	2min	-	-	The receiver shut off. It works normal after the test.
Supplementary information:						

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Clause	Requirement + Test	Result – Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60950-1 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Information technology equipment – Safety – Part 1: General requirements			
Differences according to : EN 60950-1:2006/A11:2009/A1:2010			
Attachment Form No. : EU_GD_IEC60950_1B			
Attachment Originator : SGS Fimko Ltd (edited by Nemko Oy 2010-07)			
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IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)																																																																							
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZC (informative) A-deviations		—																																																																				
General	Delete all the “country” notes in the reference document according to the following list: <table border="0"> <tr> <td>1.4.8</td><td>Note 2</td> <td>1.5.1</td><td>Note 2 & 3</td> </tr> <tr> <td>1.5.7.1</td><td>Note</td> <td>1.5.8</td><td>Note 2</td> </tr> <tr> <td>1.5.9.4</td><td>Note</td> <td>1.7.2.1</td><td>Note 4, 5 & 6</td> </tr> <tr> <td>2.2.3</td><td>Note</td> <td>2.2.4</td><td>Note</td> </tr> <tr> <td>2.3.2</td><td>Note</td> <td>2.3.2.1</td><td>Note 2</td> </tr> <tr> <td>2.3.4</td><td>Note 2</td> <td>2.6.3.3</td><td>Note 2 & 3</td> </tr> <tr> <td>2.7.1</td><td>Note</td> <td>2.10.3.2</td><td>Note 2</td> </tr> <tr> <td>2.10.5.13</td><td>Note 3</td> <td>3.2.1.1</td><td>Note</td> </tr> <tr> <td>3.2.4</td><td>Note 3</td> <td>2.5.1</td><td>Note 2</td> </tr> <tr> <td>4.3.6</td><td>Note 1 & 2</td> <td>4.7</td><td>Note 4</td> </tr> <tr> <td>4.7.2.2</td><td>Note</td> <td>4.7.3.1</td><td>Note 2</td> </tr> <tr> <td>5.1.7.1</td><td>Note 3 & 4</td> <td>5.3.7</td><td>Note 1</td> </tr> <tr> <td>6</td><td>Note 2 & 5</td> <td>6.1.2.1</td><td>Note 2</td> </tr> <tr> <td>6.1.2.2</td><td>Note</td> <td>6.2.2</td><td>Note</td> </tr> <tr> <td>6.2.2.1</td><td>Note 2</td> <td>6.2.2.2</td><td>Note</td> </tr> <tr> <td>7.1</td><td>Note 3</td> <td>7.2</td><td>Note</td> </tr> <tr> <td>7.3</td><td>Note 1 & 2</td> <td>G.2.1</td><td>Note 2</td> </tr> </table> Annex H Note 2	1.4.8	Note 2	1.5.1	Note 2 & 3	1.5.7.1	Note	1.5.8	Note 2	1.5.9.4	Note	1.7.2.1	Note 4, 5 & 6	2.2.3	Note	2.2.4	Note	2.3.2	Note	2.3.2.1	Note 2	2.3.4	Note 2	2.6.3.3	Note 2 & 3	2.7.1	Note	2.10.3.2	Note 2	2.10.5.13	Note 3	3.2.1.1	Note	3.2.4	Note 3	2.5.1	Note 2	4.3.6	Note 1 & 2	4.7	Note 4	4.7.2.2	Note	4.7.3.1	Note 2	5.1.7.1	Note 3 & 4	5.3.7	Note 1	6	Note 2 & 5	6.1.2.1	Note 2	6.1.2.2	Note	6.2.2	Note	6.2.2.1	Note 2	6.2.2.2	Note	7.1	Note 3	7.2	Note	7.3	Note 1 & 2	G.2.1	Note 2		—
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General	EN 60950-1 + A1:2010: In IEC 60950-1:2005/A1 delete all the “country” notes according to the following list: - 1.5.7.1: Note - 6.1.2.1: Note 2 - 6.2.2.1: Note 2 - EE.3: Note		—																																																																				

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
1.1.1	EN 60950-1 + A1:2010: Replace the text of NOTE 3 by the following: NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.	Not a multimedia equipment.	N/A
1.2.3	EN 60950-1 + A1:2010: Add the following definition: 1.2.3.Z1 PORTABLE SOUND SYSTEM small battery powered audio equipment: – whose prime purpose is to listen to recorded or broadcasted sound; and – that uses headphones or earphones that can be worn in or on or around the ears; and – that allows the user to walk around NOTE Examples are mini-disk or CD players; MP3 audio players or similar equipment.	The equipment is not a portable sound system.	N/A
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment", and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.	No headphones or earphones provided.	N/A
1.5.1	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC	Considered.	P
1.7.2.1	Add the following NOTE: NOTE Z1 In addition, the instructions shall include, as far as applicable, a warning that excessive sound pressure from earphones and headphones can cause hearing loss	No headphones or earphones provided	N/A

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Clause	Requirement + Test	Result – Remark	Verdict
1.7.2.1	EN 60950-1 + A1:2010: Delete NOTE Z1. Add the following paragraph at the end of the subclause: In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.	No headphones or earphones provided.	N/A
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.	The equipment is DC powered (SELV). No primary circuits.	N/A
2.7.2	This subclause has been declared 'void'.	Considered.	N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	Considered.	N/A

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Clause	Requirement + Test		Result – Remark	Verdict									
3.2.5.1	Replace “60245 IEC 53” by “H05 RR-F”; “60227 IEC 52” by “H03 VV-F or H03 VVH2-F”; “60227 IEC 53” by “H05 VV-F or H05 VVH2-F2”. In Table 3B, replace the first four lines by the following: <table><tr><td>Up to and including 6</td><td colspan="2">0,75 ^a</td></tr><tr><td>Over 6 up to and including 10</td><td>(0,75) ^b</td><td>1,0</td></tr><tr><td>Over 10 up to and including 16</td><td>(1,0) ^c</td><td>1,5</td></tr></table> In the conditions applicable to Table 3B delete the words “in some countries” in condition ^a. In NOTE 1, applicable to Table 3B, delete the second sentence.		Up to and including 6	0,75 ^a		Over 6 up to and including 10	(0,75) ^b	1,0	Over 10 up to and including 16	(1,0) ^c	1,5	Considered.	N/A
Up to and including 6	0,75 ^a												
Over 6 up to and including 10	(0,75) ^b	1,0											
Over 10 up to and including 16	(1,0) ^c	1,5											
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: <table><tr><td>Over 10 up to and including 16</td><td>1,5 to 2,5</td><td>1,5 to 4</td></tr></table> Delete the fifth line: conductor sizes for 13 to 16 A.		Over 10 up to and including 16	1,5 to 2,5	1,5 to 4	The equipment is class III.	N/A						
Over 10 up to and including 16	1,5 to 2,5	1,5 to 4											
4.3.13.6	Add the following NOTE: NOTE Z1 Attention is drawn to 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz. Standards taking into account this Recommendation which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		Considered.	N/A									
4.3.13.6	EN 60950-1 + A1:2010: Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to : 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation). Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		Considered.	N/A									
Annex H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level. Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.		The unit does not emit X-ray radiation.	N/A									

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Clause	Requirement + Test	Result – Remark	Verdict

Bibliography	Additional EN standards.		—
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ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS		—
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ZB	SPECIAL NATIONAL CONDITIONS		P
1.2.4.1	In Denmark , certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	The equipment is class III.	N/A
1.2.13.14	In Norway and Sweden , for requirements see 1.7.2.1 and 7.3 of this annex.	The equipment is not connected to a cable distribution system.	N/A
1.5.7.1	In Finland, Norway and Sweden , resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.	The equipment is not pluggable equipment type A. The equipment is class III.	N/A
1.5.8	In Norway , due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).	The equipment is class III and DC powered (5V).	N/A
1.5.9.4	In Finland, Norway and Sweden , the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.	No VDRs in the equipment.	N/A
1.7.2.1	In Finland, Norway and Sweden , CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In Finland: "Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan" In Norway: "Apparatet må tilkoples jordet stikkontakt" In Sweden: "Apparaten skall anslutas till jordat uttag"	The equipment is not pluggable equipment type A. The equipment is class III.	N/A

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Clause	Requirement + Test	Result – Remark	Verdict
1.7.2.1	In Norway and Sweden, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11).” NOTE In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkøp utstyr – og er tilkøp et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkøp av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.” Translation to Swedish: ”Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”	The equipment is not connected to a cable distribution system.	N/A

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Clause	Requirement + Test	Result – Remark	Verdict
1.7.5	In Denmark , socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a. For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.	There are no socket outlets providing power to other equipment.	N/A
2.2.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuits in the equipment.	N/A
2.3.2	In Finland, Norway and Sweden there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuits in the equipment.	N/A
2.3.4	In Norway , for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuits in the equipment.	N/A
2.6.3.3	In the United Kingdom , the current rating of the circuit shall be taken as 13 A, not 16 A.	The equipment is class III and not for connection to a.c. mains supply.	N/A
2.7.1	In the United Kingdom , to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.	The equipment is not a direct plug-in equipment.	N/A
2.10.5.13	In Finland, Norway and Sweden , there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuits in the equipment.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
3.2.1.1	In Switzerland, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998: SEV 5932-2.1998 Plug Type 25 3L+N+PE 230/400 V, 16 A SEV 5933-2.1998 Plug Type 21 L+N 250 V, 16 A SEV 5934-2.1998 Plug Type 23 L+N+PE 250 V, 16 A	The equipment is class III and not connected to a mains supply.	N/A
3.2.1.1	In Denmark, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.	The equipment is class III and not connected to a mains supply.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
3.2.1.1	In Spain, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.	The equipment is class III and not connected to a mains supply.	N/A
3.2.1.1	In the United Kingdom, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.	The equipment is class III and not connected to a mains supply.	N/A
3.2.1.1	In Ireland, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.	The equipment is class III and not connected to a mains supply.	N/A
3.2.4	In Switzerland, for requirements see 3.2.1.1 of this annex.	The equipment is class III and not connected to a mains supply.	N/A
3.2.5.1	In the United Kingdom, a power supply cord with conductor of 1,25 mm² is allowed for equipment with a rated current over 10 A and up to and including 13 A.	The equipment is class III and not connected to a mains supply.	N/A
3.3.4	In the United Kingdom, the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm² to 1,5 mm² nominal cross-sectional area.	The equipment is class III. Terminals are not used for connection of DC to the equipment.	N/A

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Clause	Requirement + Test	Result – Remark	Verdict
4.3.6	In the United Kingdom , the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.	The equipment is not a direct plug-in equipment.	N/A
4.3.6	In Ireland , DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.	The equipment is not a direct plug-in equipment.	N/A
5.1.7.1	In Finland, Norway and Sweden TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that ○ is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and ○ has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and ○ is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.	The equipment is class III and contains no TNV circuits.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
6.1.2.1	In Finland, Norway and Sweden, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2. A capacitor classified Y3 according to EN 132400:1994, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 132400; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400, in the sequence of tests as described in EN 132400.	No TNV circuits.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
6.1.2.1	EN 60950-1 + A1:2010: In Finland, Norway and Sweden, add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 60384-14; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.	No TNV circuits.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict
6.1.2.2	In Finland, Norway and Sweden , the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.	No TNV circuits.	N/A
7.2	In Finland, Norway and Sweden , for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.	Not connected to cable distribution systems.	N/A
7.3	In Norway and Sweden , for requirements see 1.2.13.14 and 1.7.2.1 of this annex.	Not connected to cable distribution systems.	N/A
7.3	In Norway , for installation conditions see EN 60728-11:2005.	Not connected to cable distribution systems.	N/A

ZC	A-DEVIATIONS (informative)		P
1.5.1	Switzerland (Ordinance on environmentally hazardous substances SR 814.081, Annex 1.7, Mercury - Annex 1.7 of SR 814.81 applies for mercury.) Add the following: NOTE In Switzerland, switches containing mercury such as thermostats, relays and level controllers are not allowed.	There are no components containing mercury in the equipment.	P
1.7.2.1	Germany (Gesetz über technische Arbeitsmittel und Verbraucherprodukte (Geräte- und Produktsicherheitsgesetz – GPSG) [Law on technical labour equipment and consumer products], of 6th January 2004, Section 2, Article 4, Clause (4), Item 2). If for the assurance of safety and health certain rules during use, amending or maintenance of a technical labour equipment or readymade consumer product are to be followed, a manual in German language has to be delivered when placing the product on the market. Of this requirement, rules for use even only by SERVICE PERSONS are not exempted.	Must be considered before marketing in Germany.	–
1.7.13	Switzerland (Ordinance on chemical hazardous risk reduction SR 814.81, Annex 2.15 Batteries) Annex 2.15 of SR 814.81 applies for batteries.	No batteries in the equipment.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result – Remark	Verdict

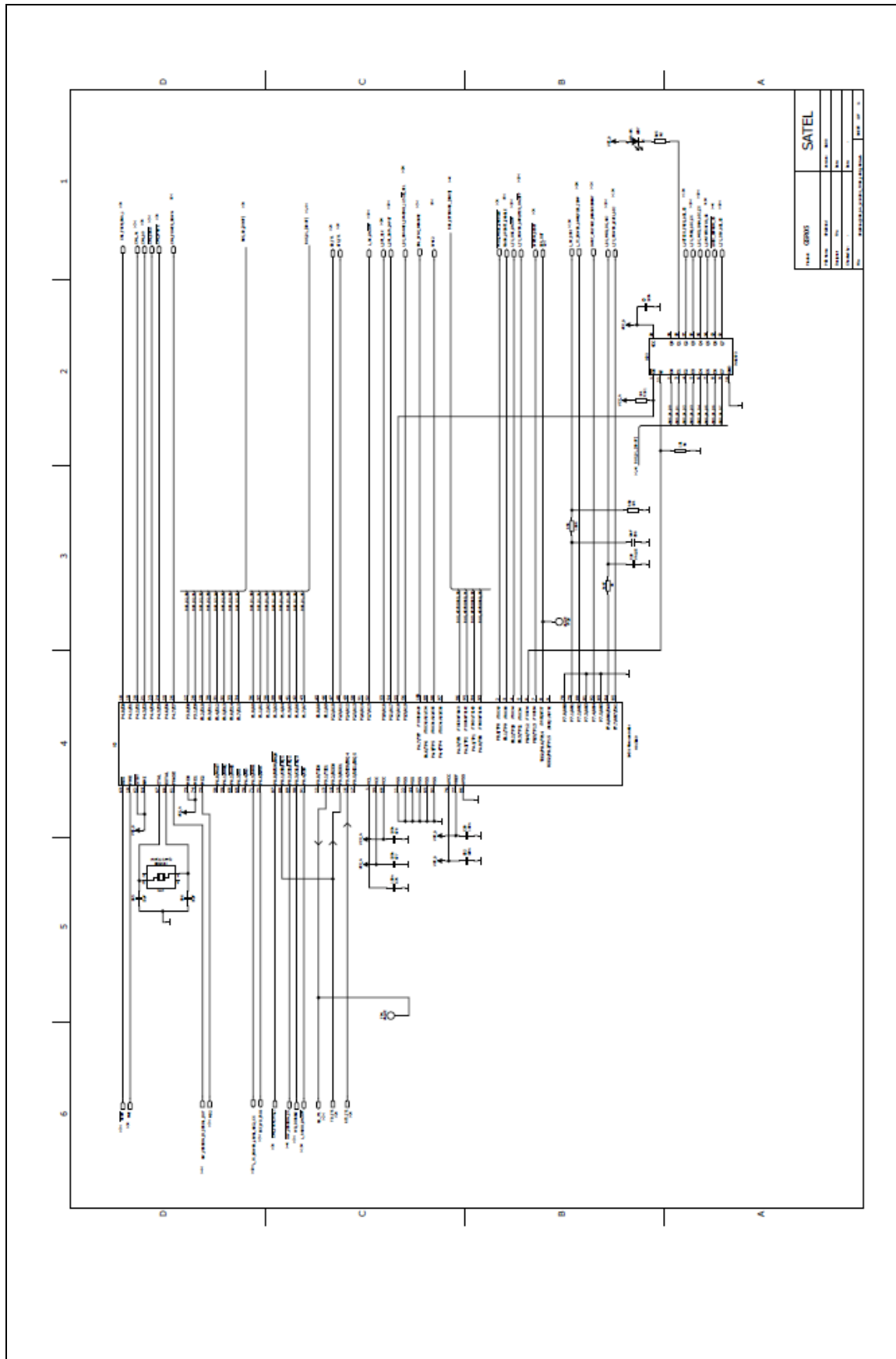
List of measurement and test equipment:

Inv. no.	Equipment	Manufacturer / model / type	Range and accuracy based on calibration data	Used
682	Multimeter	Fluke 289 (true rms)	VDC $\pm 0,1$ % VAC (20 Hz – 10 kHz) ± 1 % VAC (10 kHz – 100 kHz) ± 5 % ADC $\pm 0,1$ % AAC $\pm 0,5$ % R $\pm 0,5$ % f $\pm 0,1$ %	x
600	Datalogger	Datalogger Agilent 34970A	-100 °C – 1200 °C (± 1 °C)	x
609	Scale	Precisa XT 6200D	0 – 6 kg (0,1 g), $\pm 0,1$ g	x

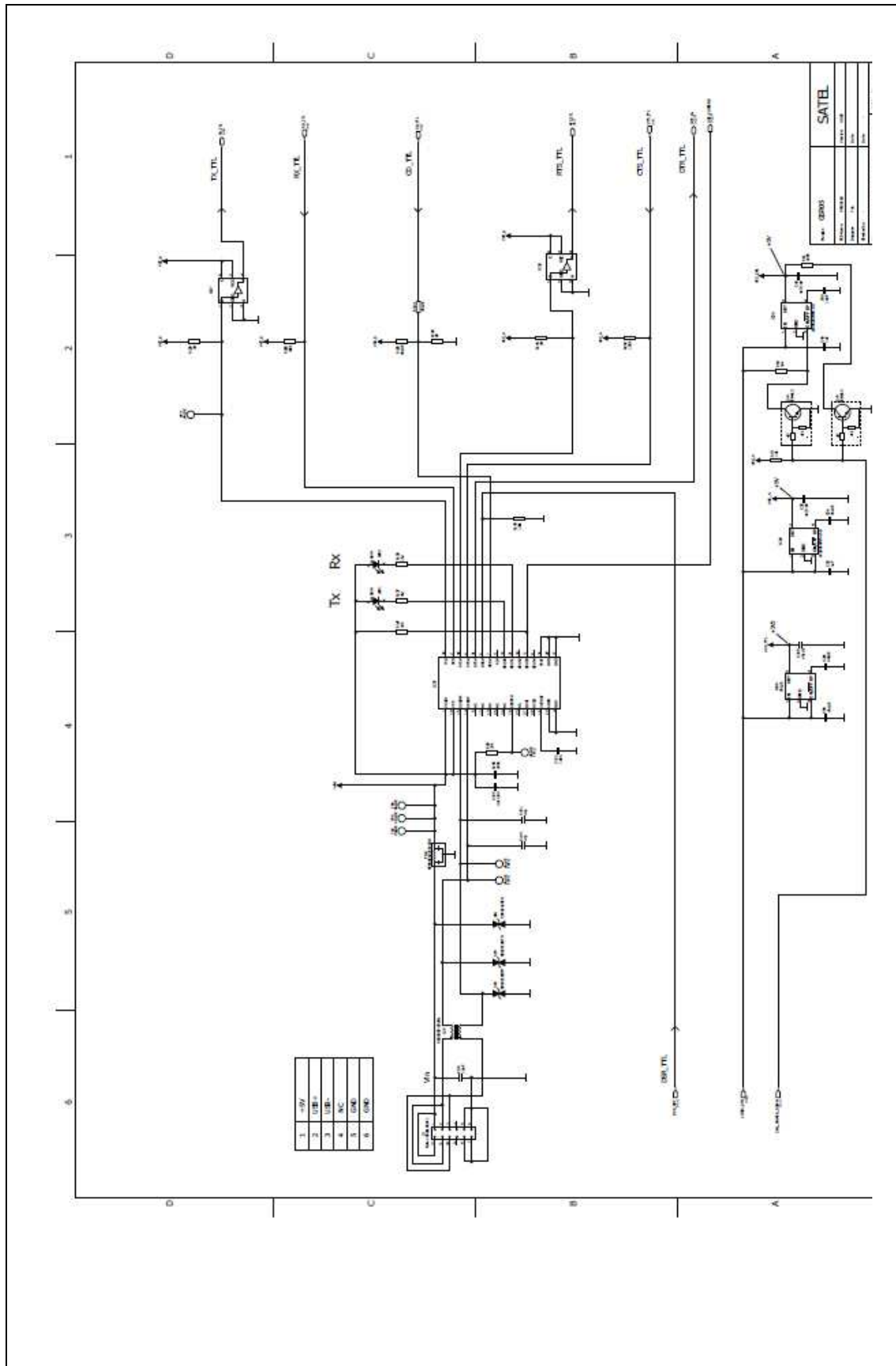


Technical Annex

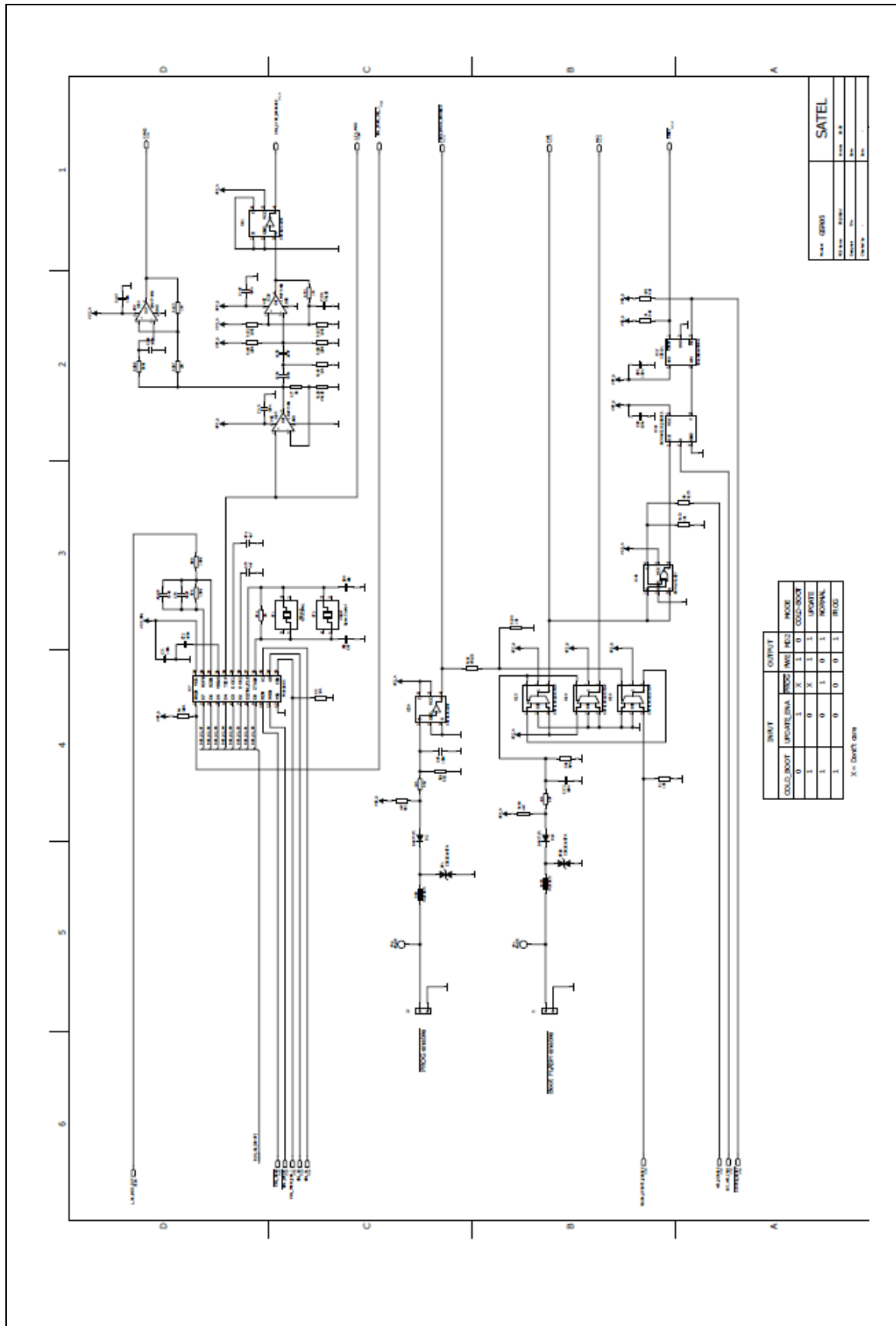
Report No. 180488B



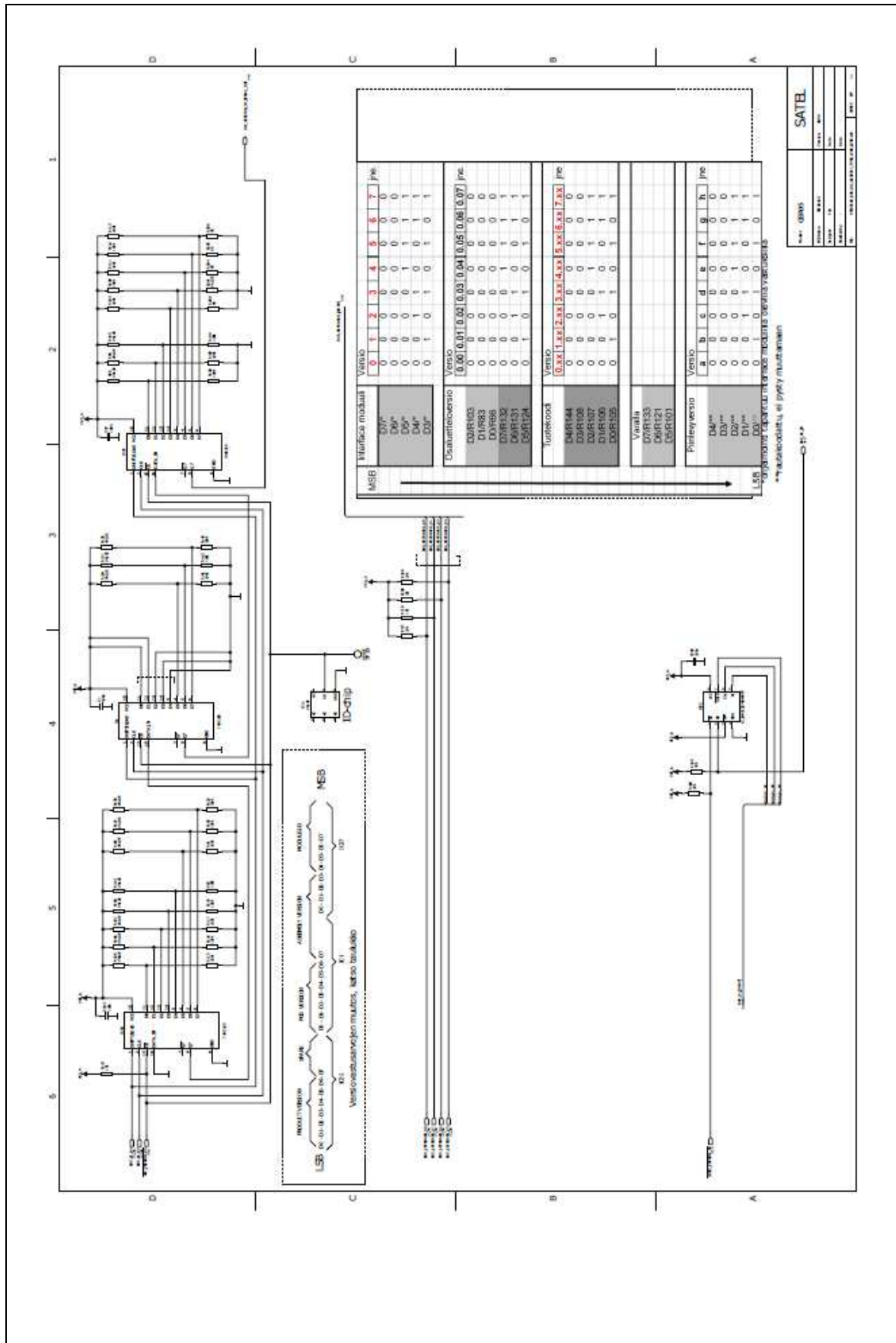
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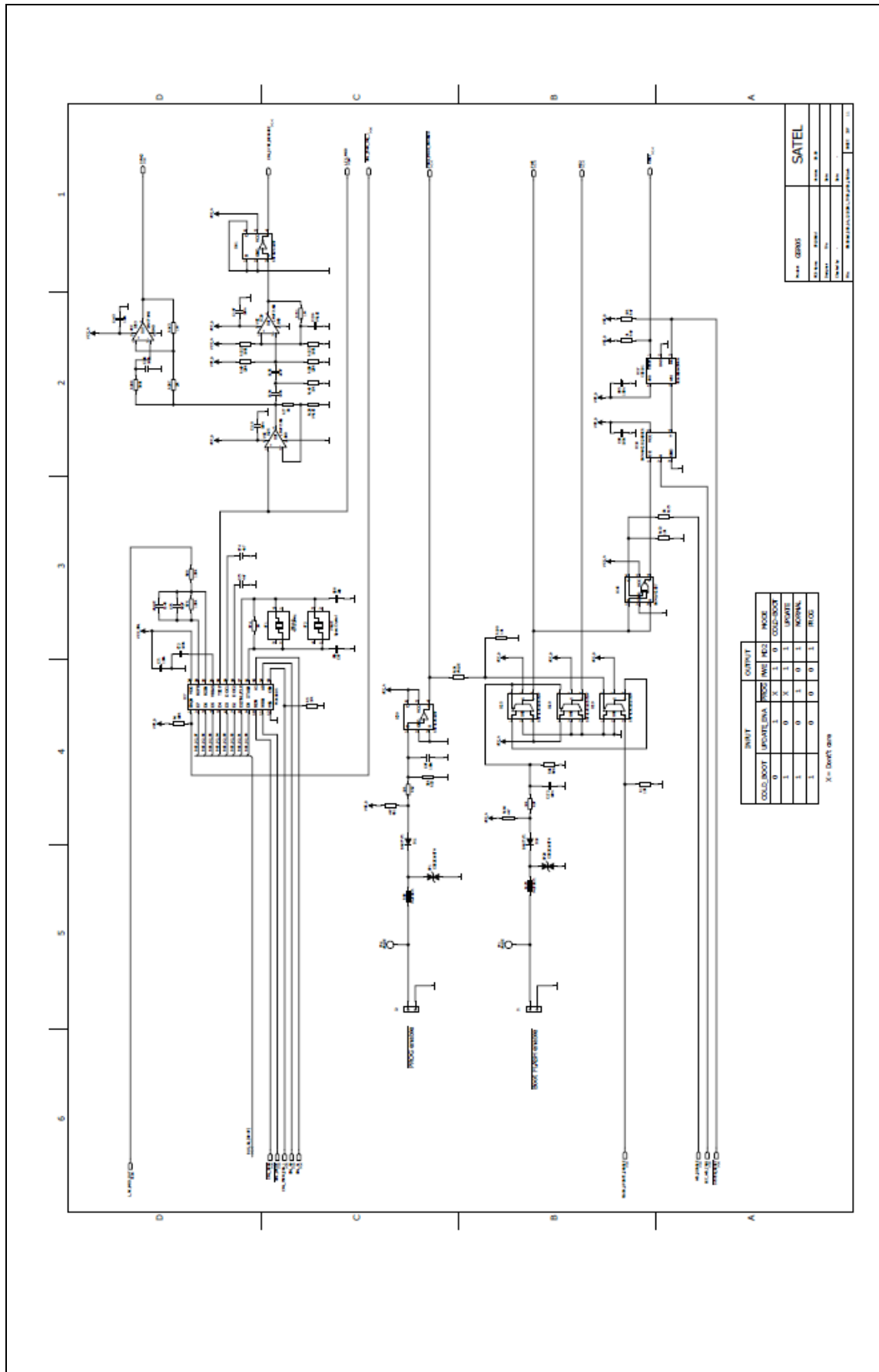
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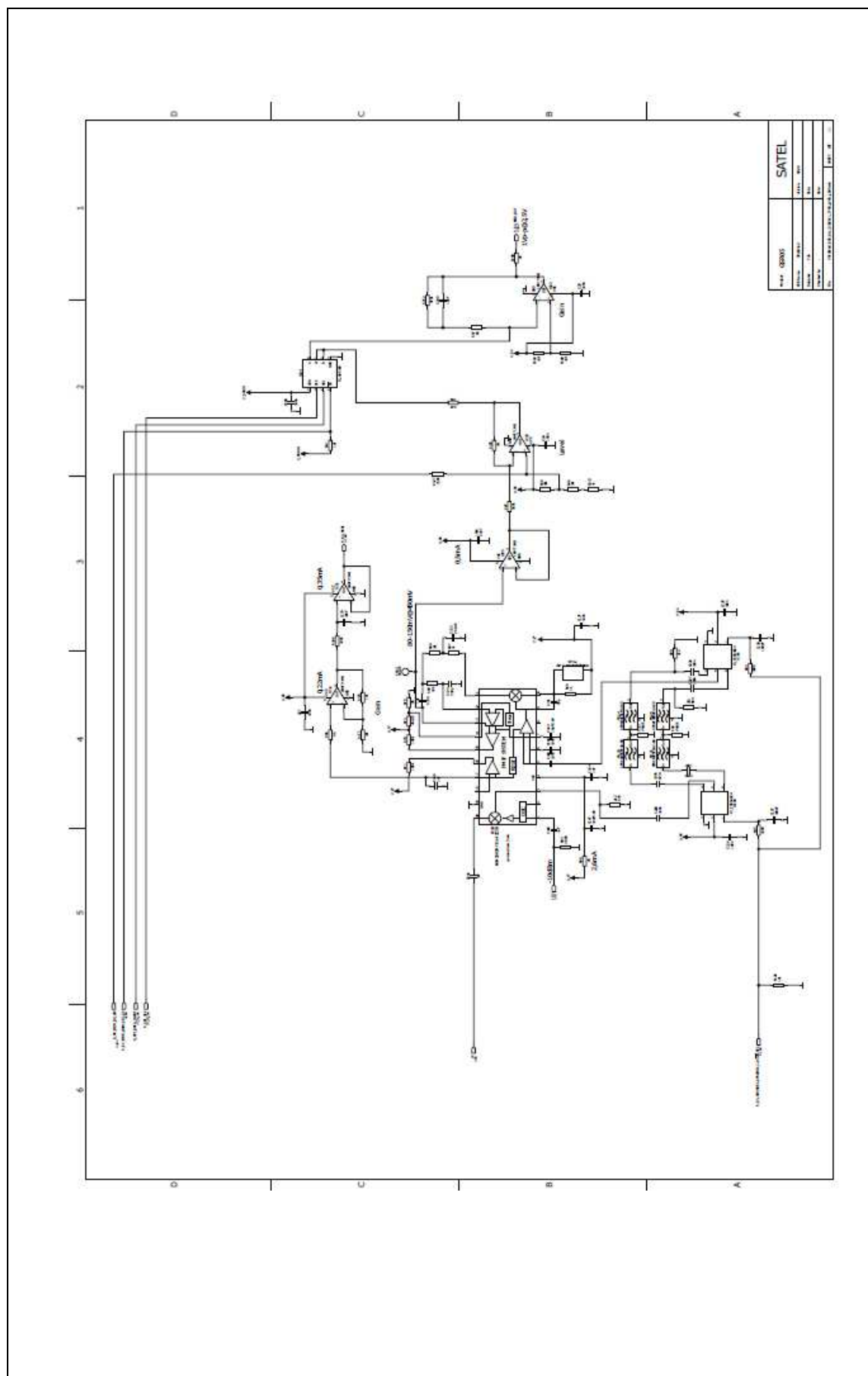
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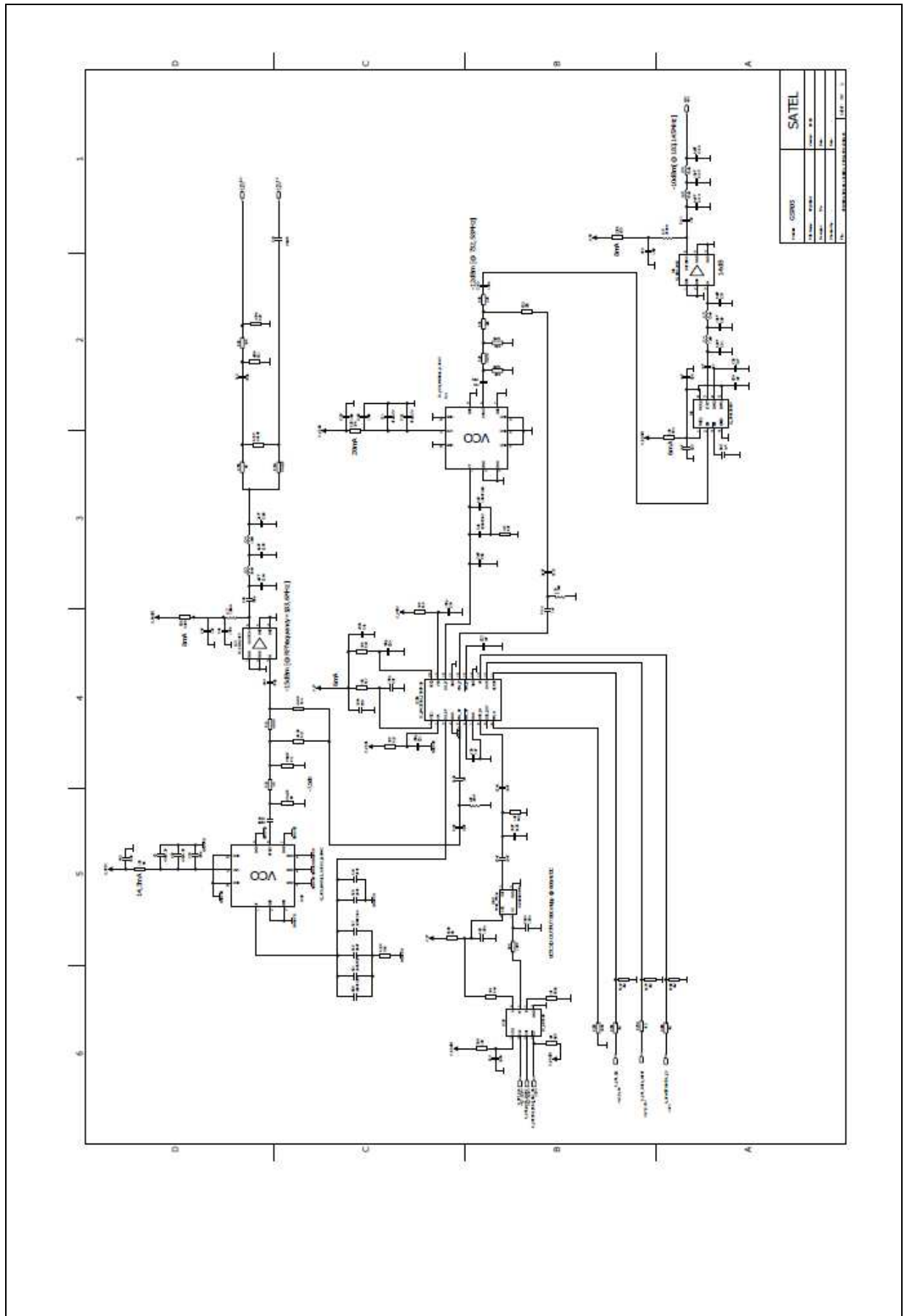
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Technical Annex

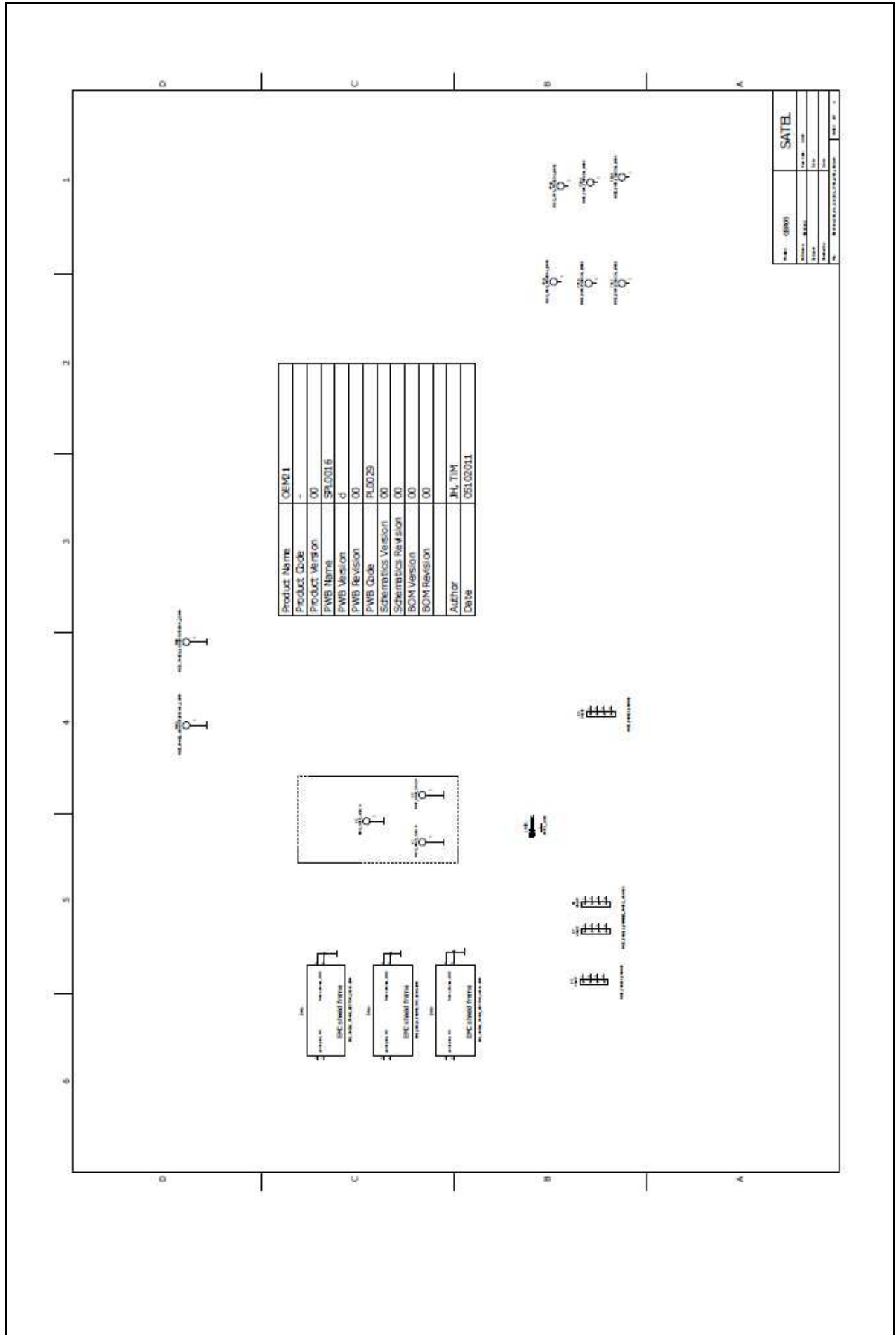
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Technical Annex

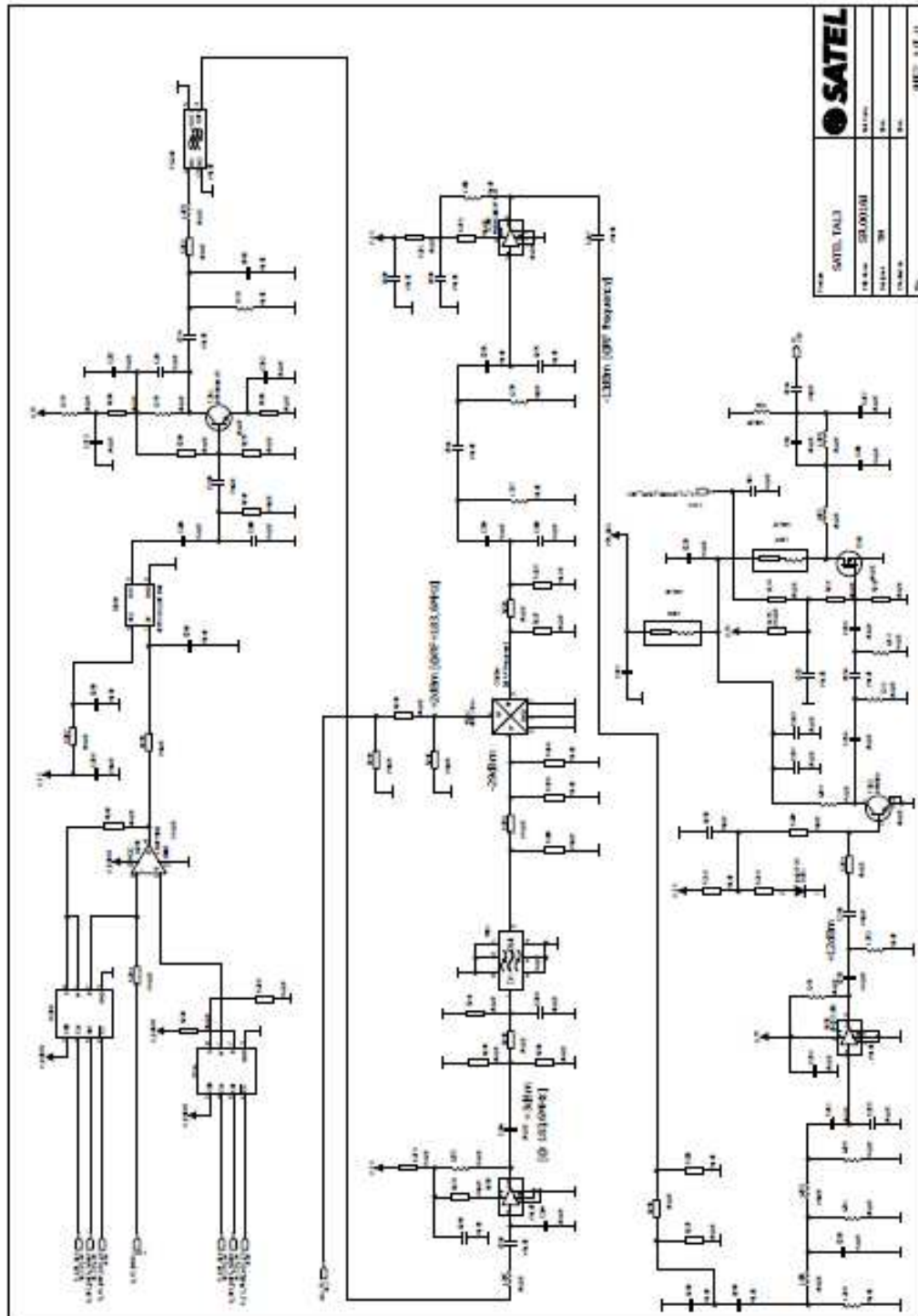
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Technical Annex

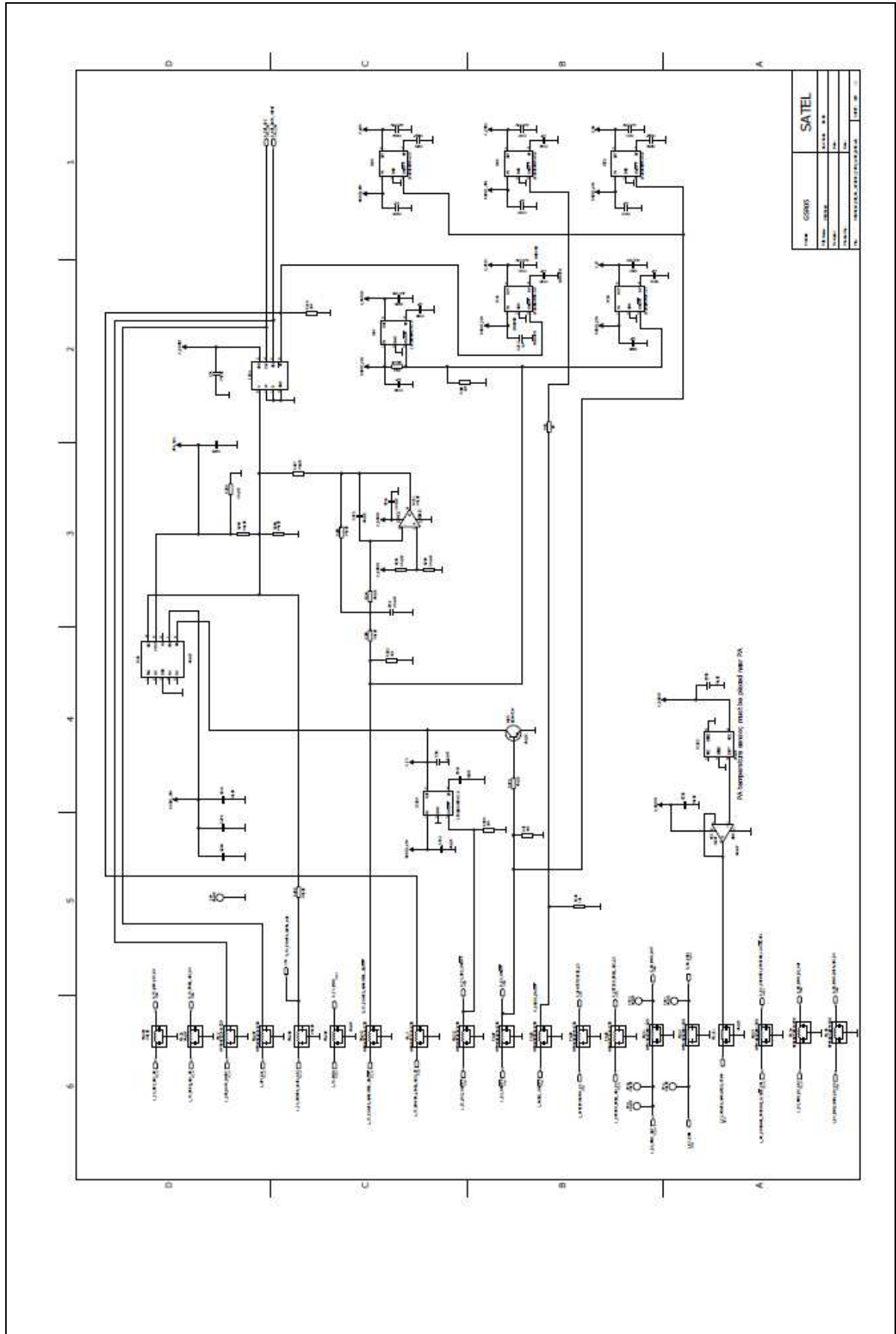
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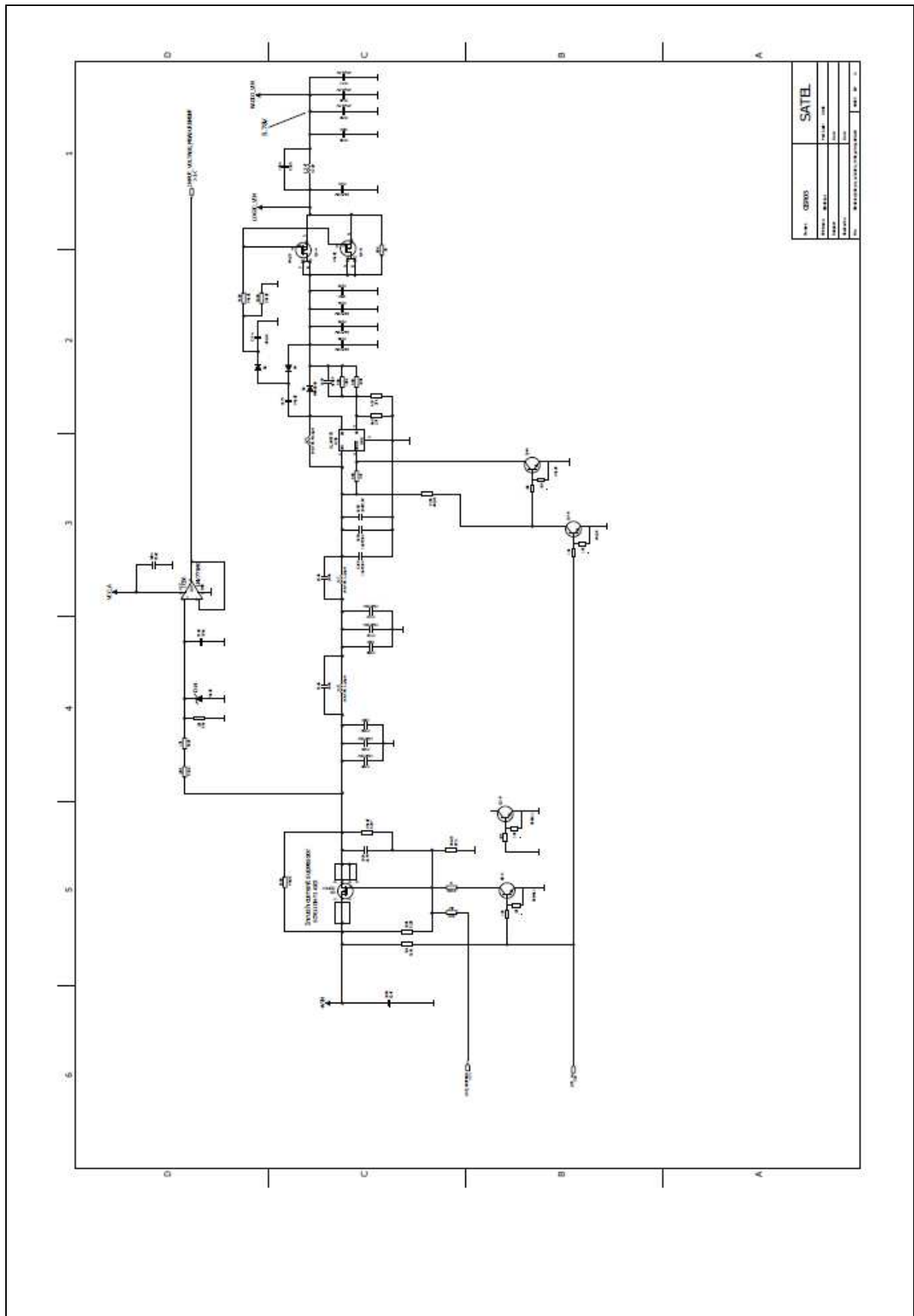


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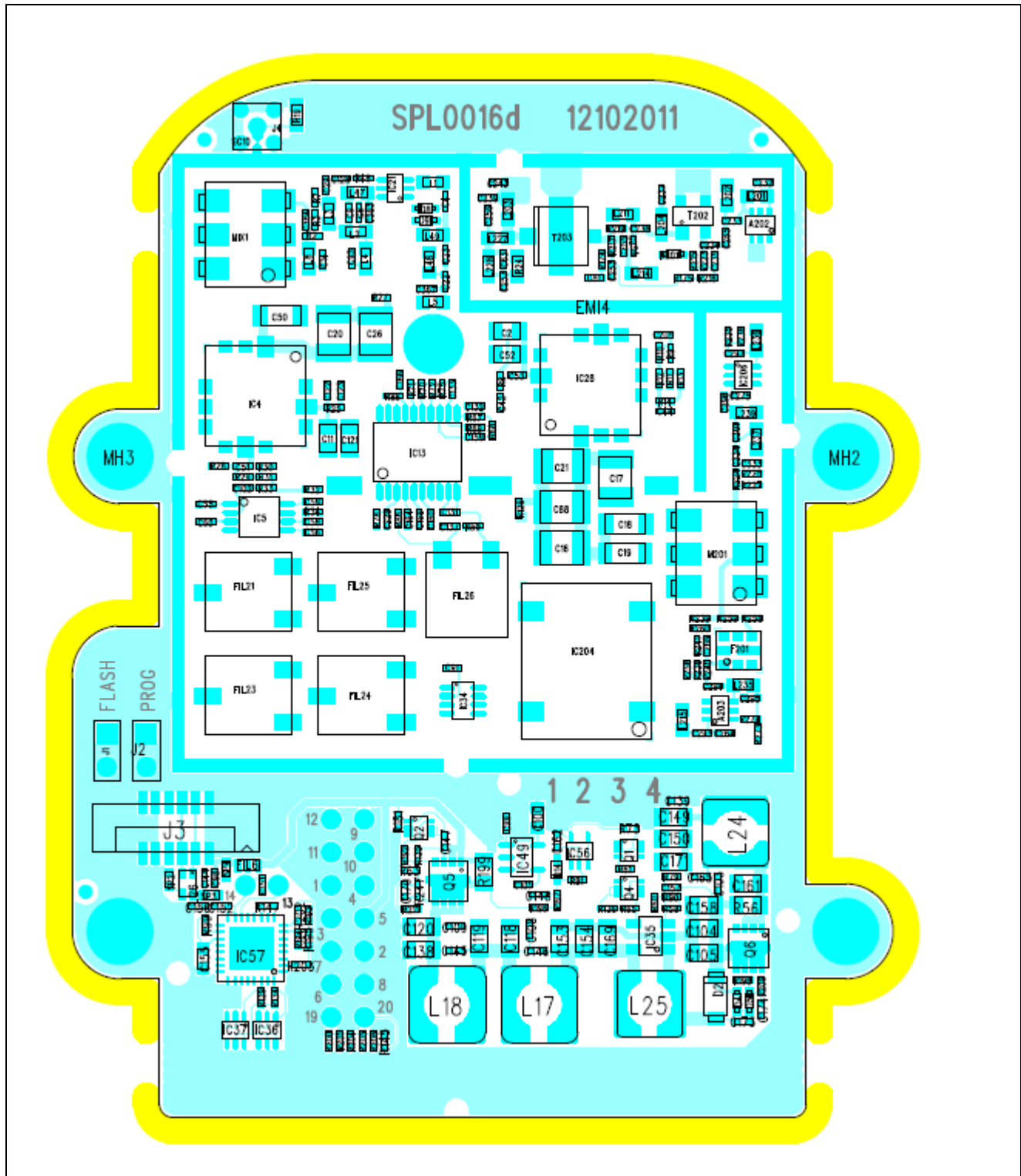
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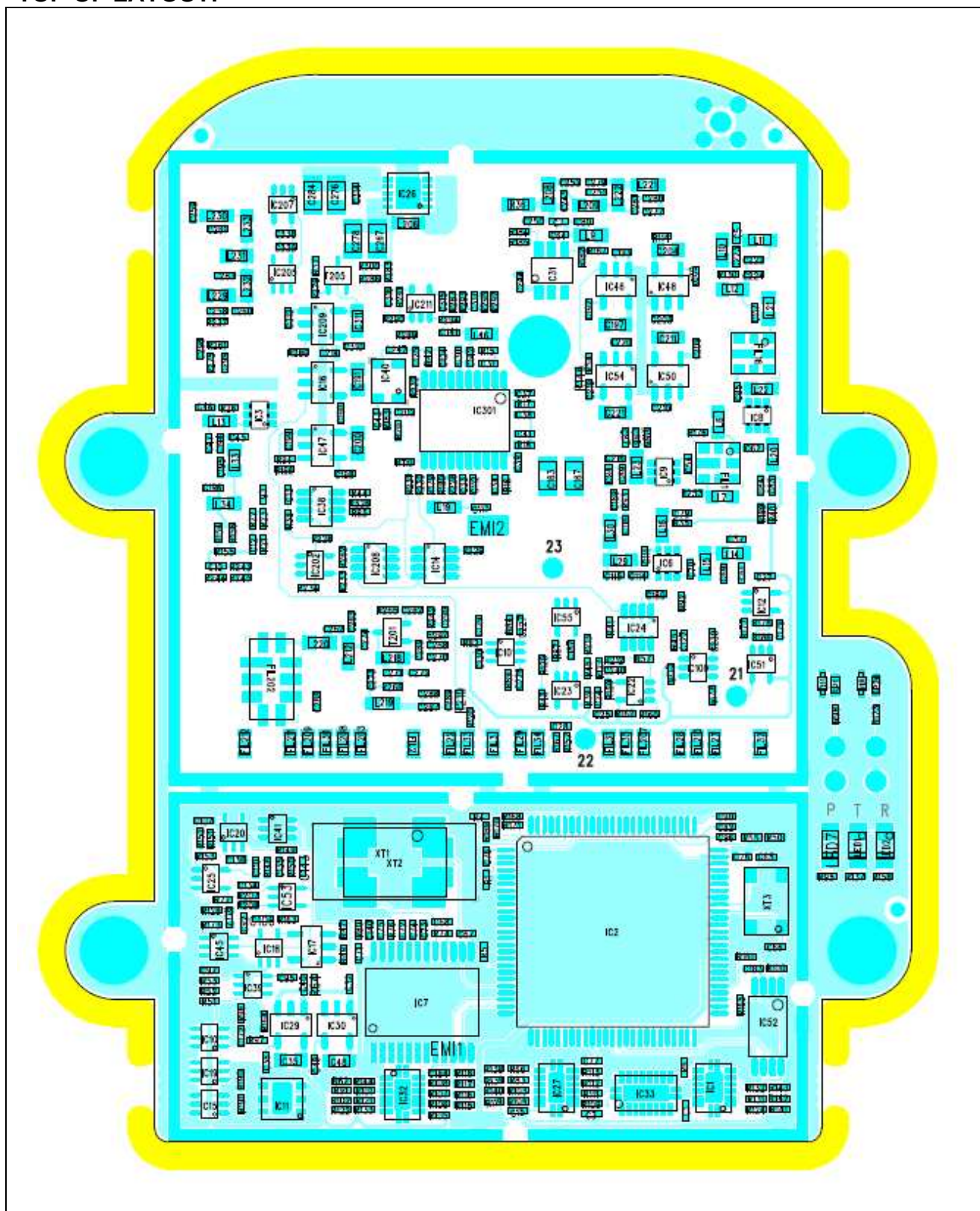
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BOTTOM OF LAYOUT:



TOP OF LAYOUT:

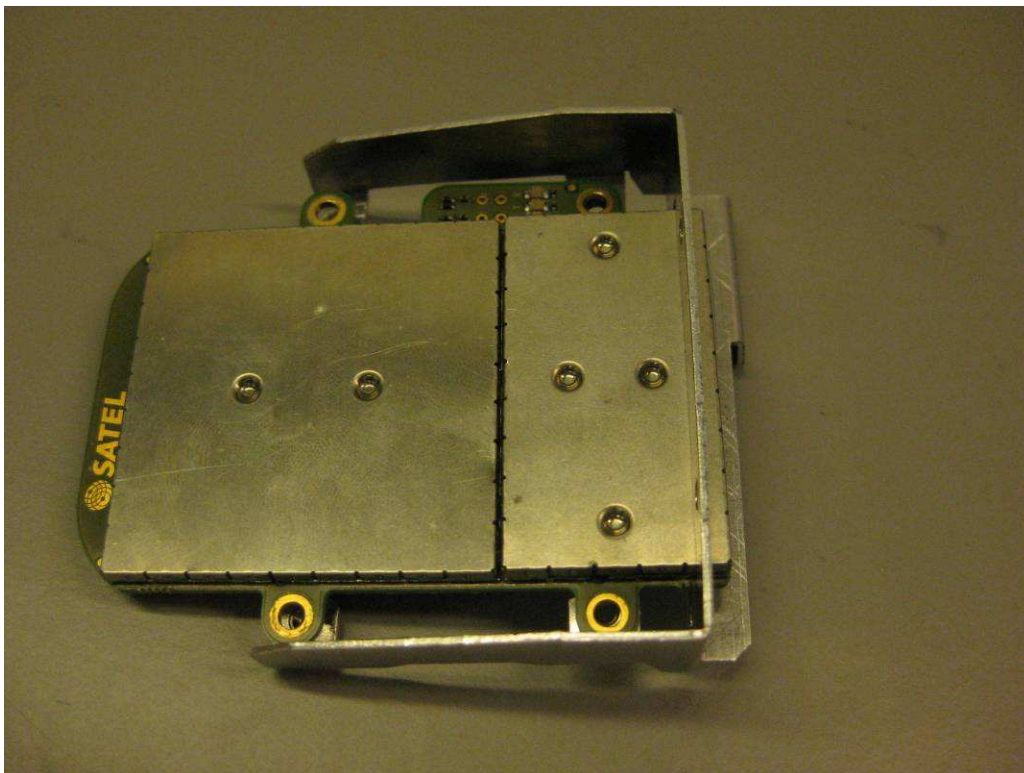




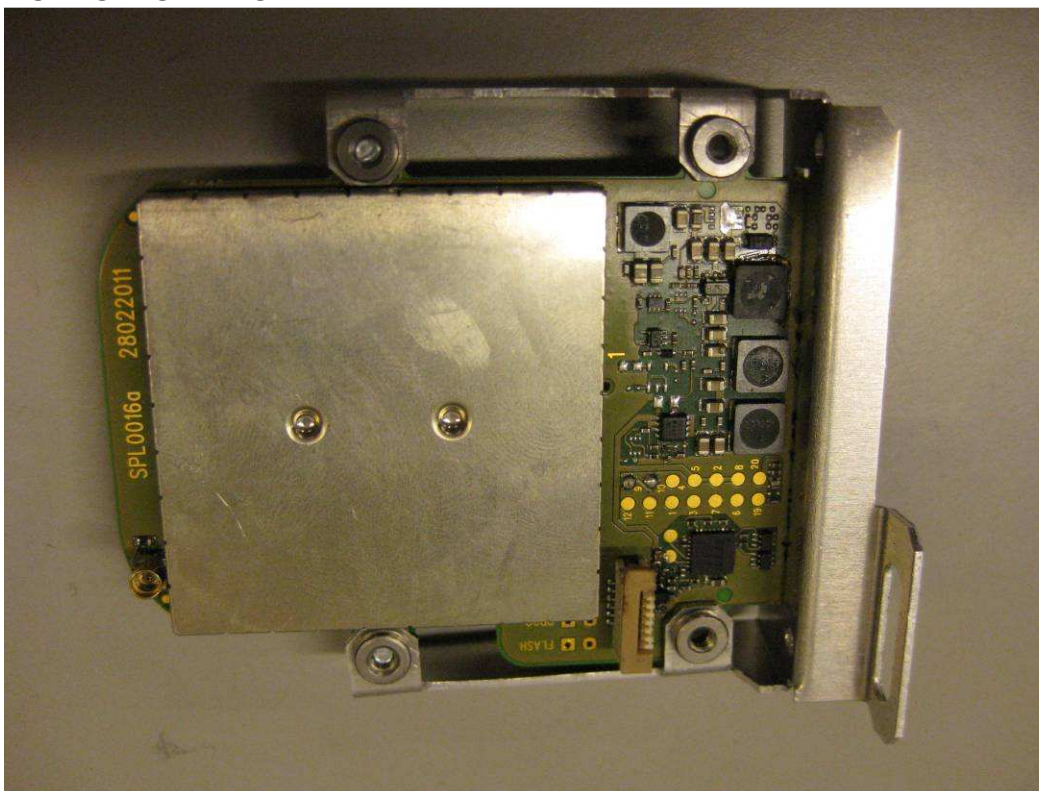
Photographic documentation

Report No. 180488B

TOP OF RECEIVER



BOTTOM OF RECEIVER





Photographic documentation

Report No. 180488B

TESTED WITH THIS UNIT



TOP OF CONSTRUCTION

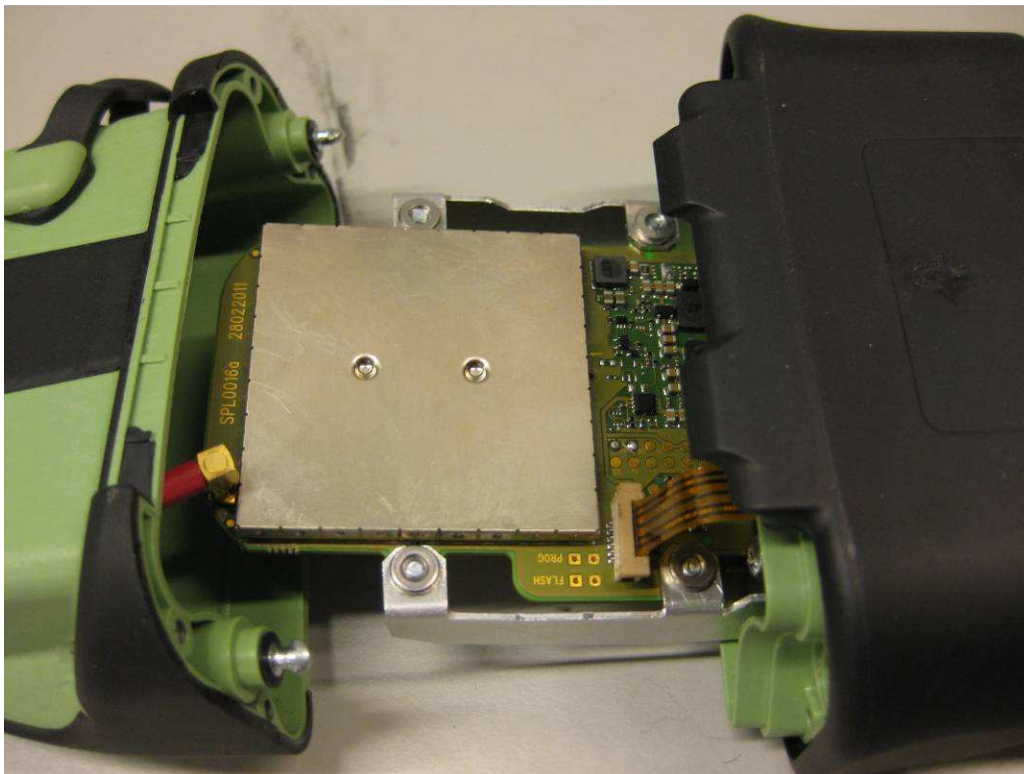




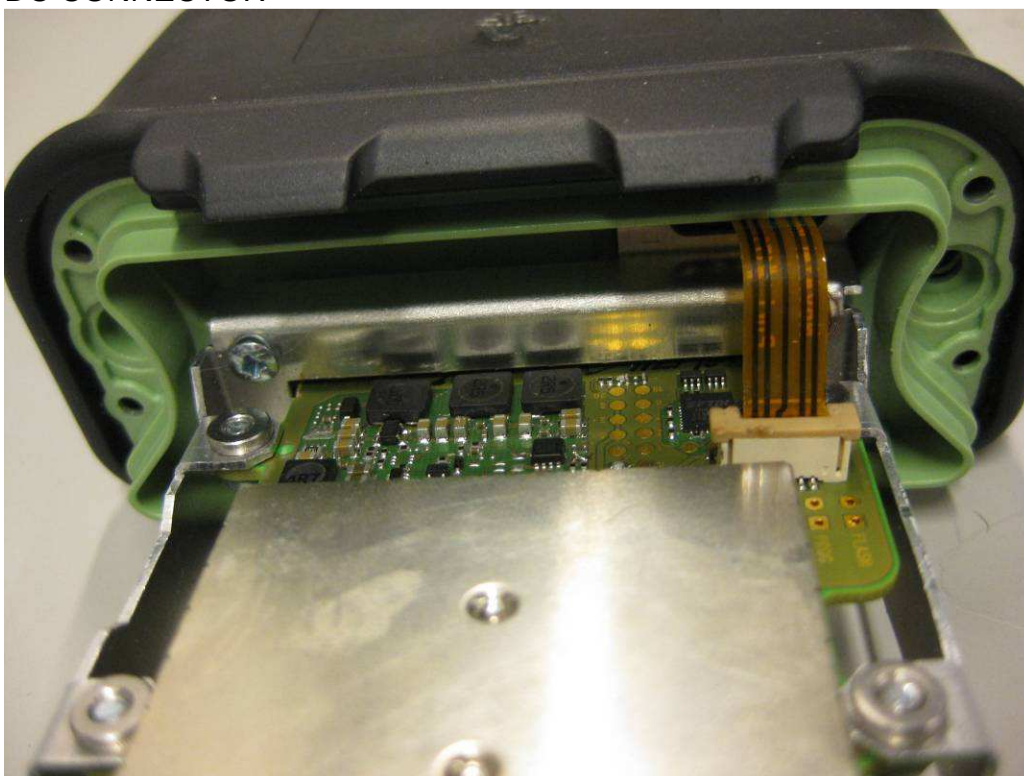
Photographic documentation

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BOTTOM OF CONSTRUCTION



DC CONNECTOR

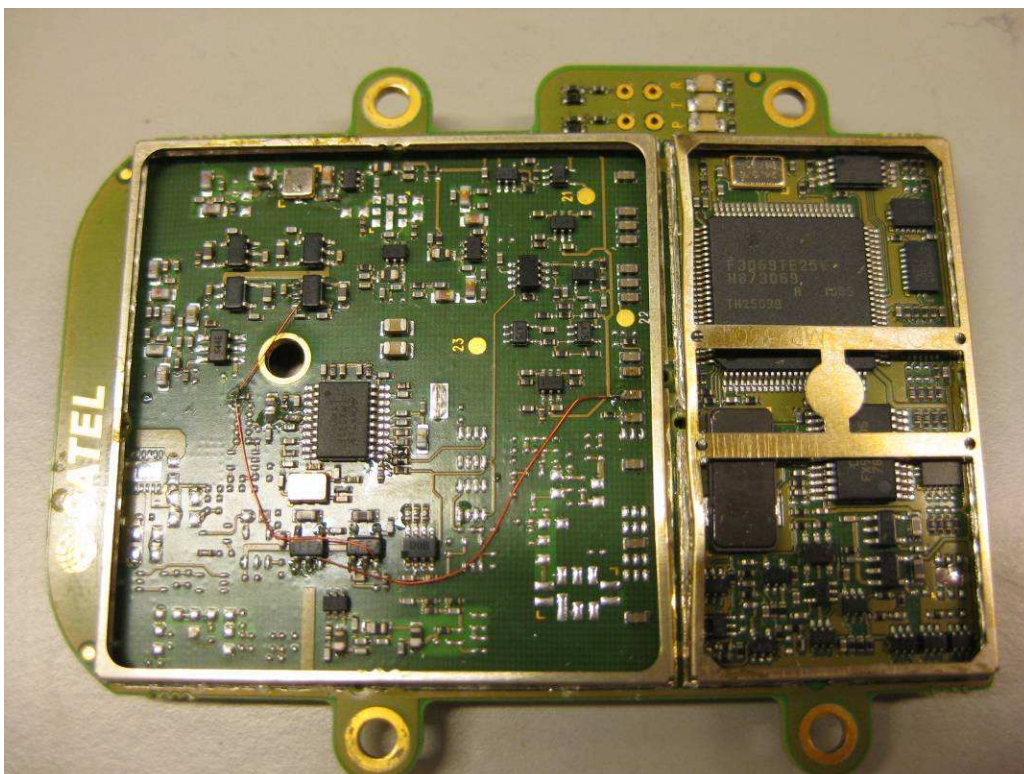
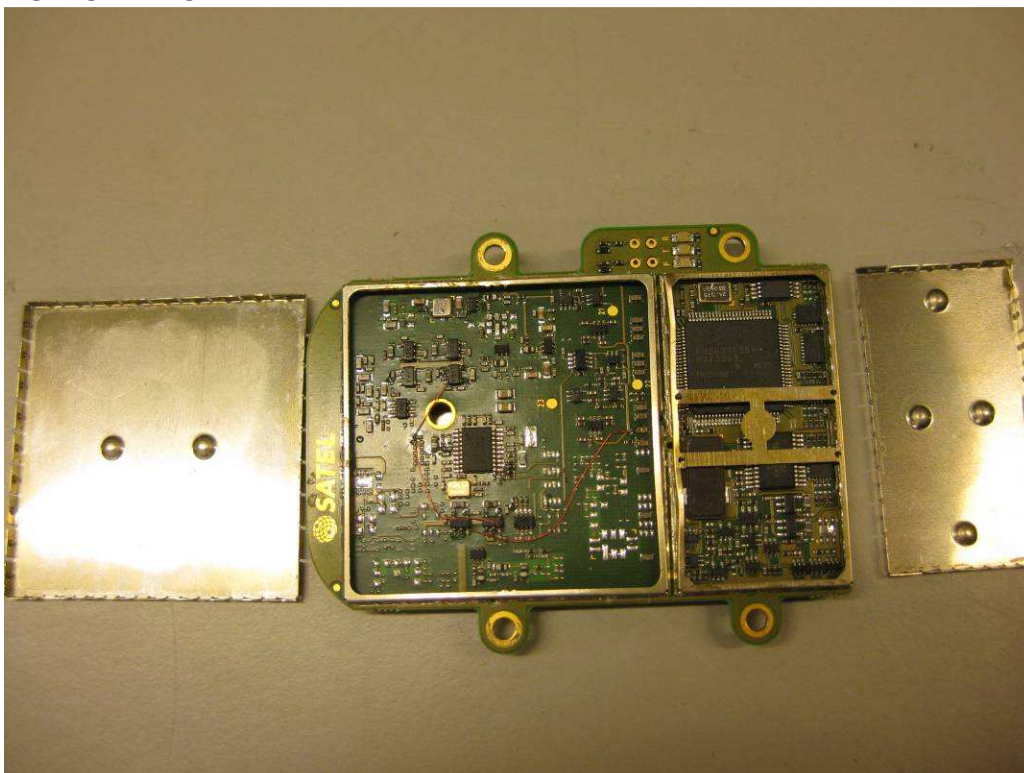




Photographic documentation

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TOP OF RECEIVER





Photographic documentation

Report No. 180488B

BOTTOM OF RECEIVER

