

Technical Service:
emitel AG
KBA-Nr.: KBA-P 00057-01

Manufacturer: Sanel Sanayi Elektronik Imalat Ve Ticaret LTD. STI.
Type: SSF383

Test report No.:
A-0033-1960-00SM

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Test Report No.: A-0033-1960-00SM

Based on the test of an electric/electronic sub-assemblies
adapting to technical progress council directive
on the approximation of the laws of the member states
to the suppression of radio interference produced by spark-ignition engines fitted to wheeled agricultural or
forestry tractors
(electro magnetical compatibility)
75/322/EEC from 20.05.1975
including all changes until
2001/3/EC from 08.01.2001

0 General:

0.1 Tradename of manufacturer: Sanel Sanayi Elektronik Imalat Ve Ticaret LTD. STI.

0.2 Type: SSF383

Variant:

0.3 Means of identification of type: Stick-On-Label

0.3.1 Location of the marking: Housing of the product

0.4 Name and address of manufacturer: Sanel Sanayi Elektronik Imalat Ve Ticaret LTD. STI.
Gülsuyu Cicek Sokak No:5 Maltepe
34848 Istanbul
Turkey

0.5 Document file number: A 1960

Date of issue: 01.02.2006
Date of changes: 01.02.2006

Test result: Positive

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1 Description of the test sample:

1.1 Representative ESA: yes

Development status: Serial Prototype

1.2 Description of the ESA: The ESA is a flasher relay for the use in tractors

Rated voltage: 12 V_{DC}

Test sample configuration: The unit was tested in the following modes:
- The flasher was turned on

Recognisable EMC measure on the sample: None

Connected lines to the sample:

Pos.	Line	Length [m]	Type	Line		Line termination
				shielded	unshielded	
1	+Batt 12V (49)	2	1-wires	<input type="checkbox"/>	<input checked="" type="checkbox"/>	artificial network
2	Ground (31)	2	1-wires	<input type="checkbox"/>	<input checked="" type="checkbox"/>	artificial network
3	Ground (C2 and C)	2	1-wires	<input type="checkbox"/>	<input checked="" type="checkbox"/>	2W lamp
4	Output (49a)	2	1-wires	<input type="checkbox"/>	<input checked="" type="checkbox"/>	3 x 10W lamp

Periphery: 2 x 2W lamps
3 x 10W lamps

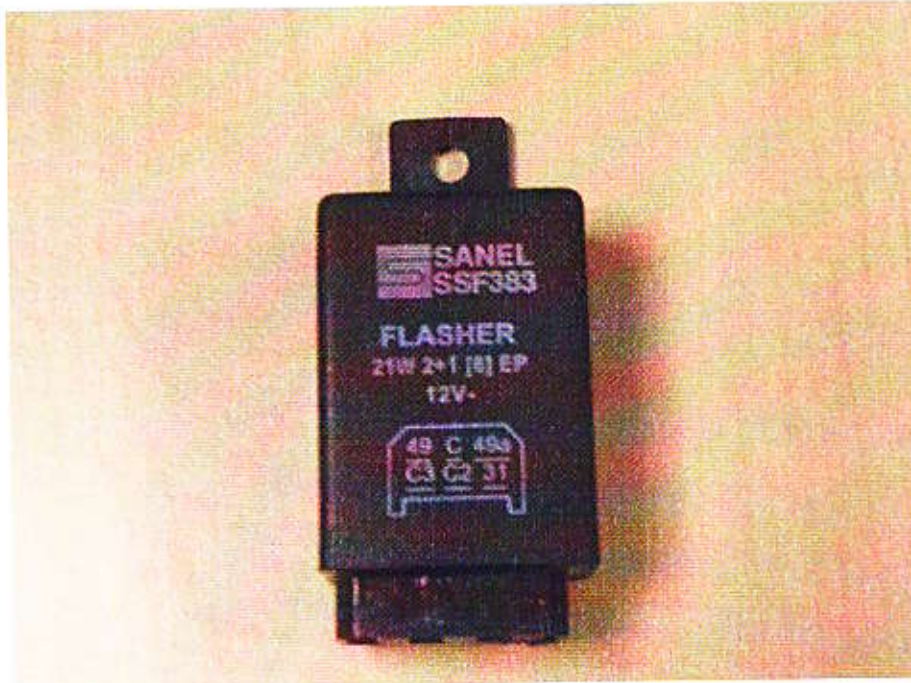
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Photo documentation of the ESA:



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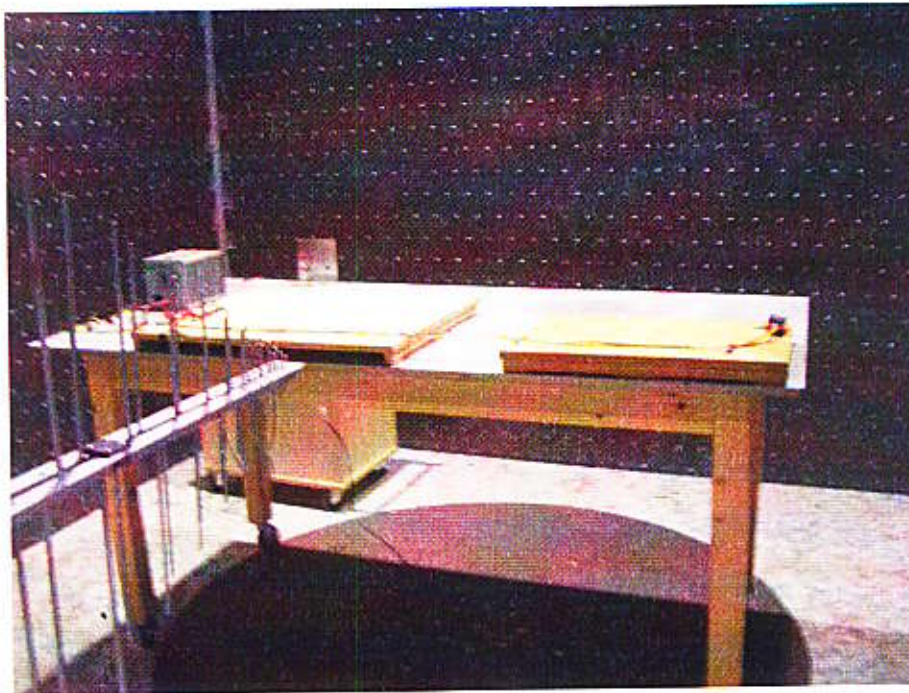
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2 Test protocol:

2.1 Radiated broadband electromagnetic emission:

2.1.1 Test set-up:



Used test equipment:

see Attachment B (ARE)

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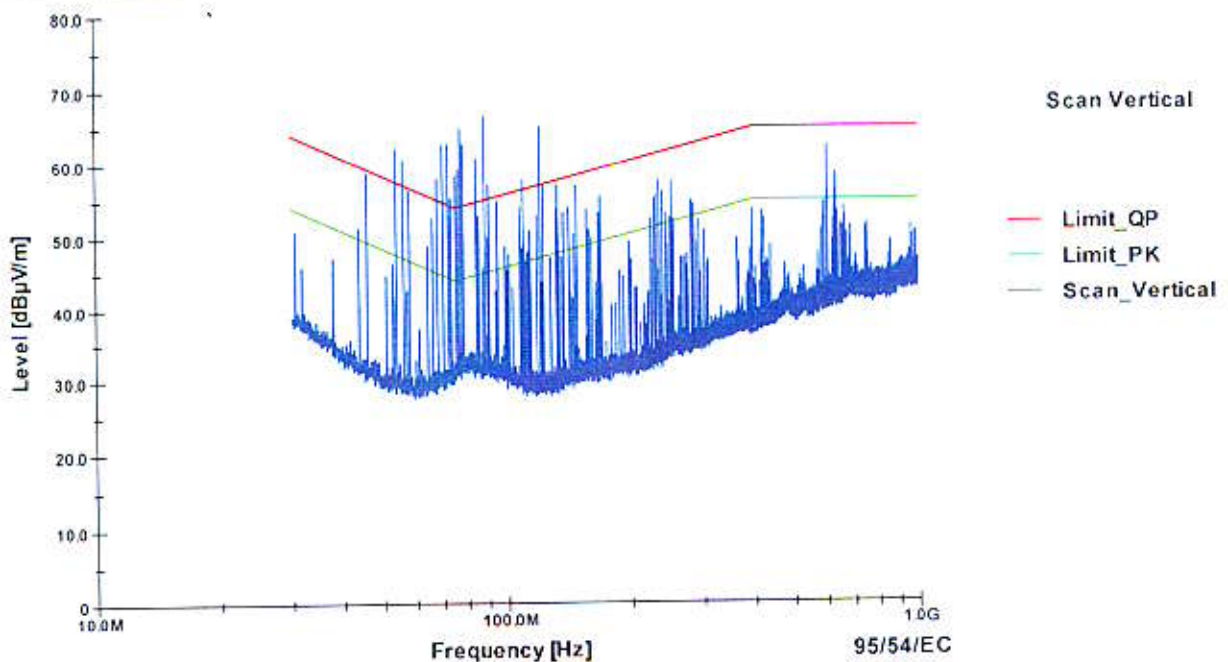
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2.1.2 Test result:

Type:	SSF383	Result:
Manufacturer:	Sanel Sanayi Elektronik Imalat Ve Ticaret LTD. STI.	BB: <input checked="" type="checkbox"/> ok <input type="checkbox"/> nok
Serial number:	Prototyp	
Mode:	The flasher was turned on	
Antenna position:	front	
Antenna polarisation:	vertical	NB: <input checked="" type="checkbox"/> ok <input type="checkbox"/> nok
Remarks:	A margin of 2 dB has to be kept to the limits. Frequencies, which are not listed, have a margin more than 5 dB.	

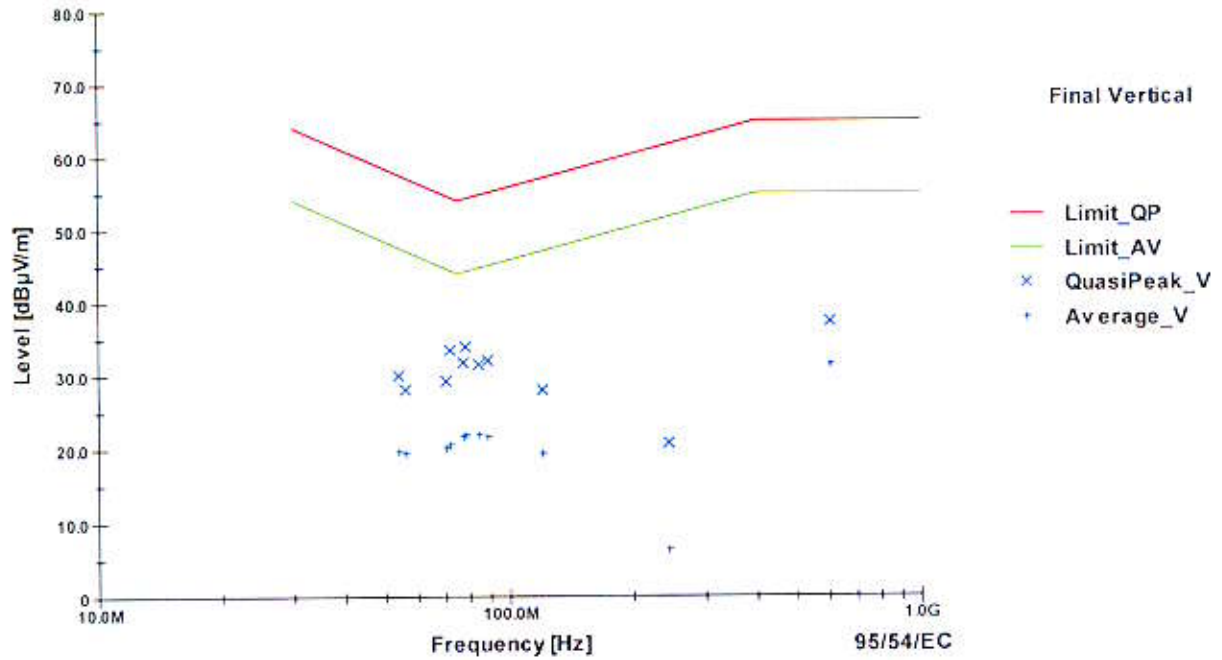
Frequency [MHz]	Test result [dB μ V/m]		Limit margin [dB μ V/m]	
	Broadband (BB) Quasi-Peak	Narrowband (NB) Average	(quasi-peak)	(average)
53.92	30.1	19.7	27.6	28.0
56.02	28.1	19.5	29.0	27.7
70.36	29.3	20.3	25.4	24.4
71.98	33.5	20.6	20.9	23.8
77.32	31.8	21.8	22.4	22.4
78.34	34.0	22.0	20.3	22.3
84.34	31.6	22.0	23.2	22.8
88.78	32.1	21.7	23.0	23.4
120.7	28.1	19.5	29.0	27.7
244.15	20.8	6.3	41.0	45.5



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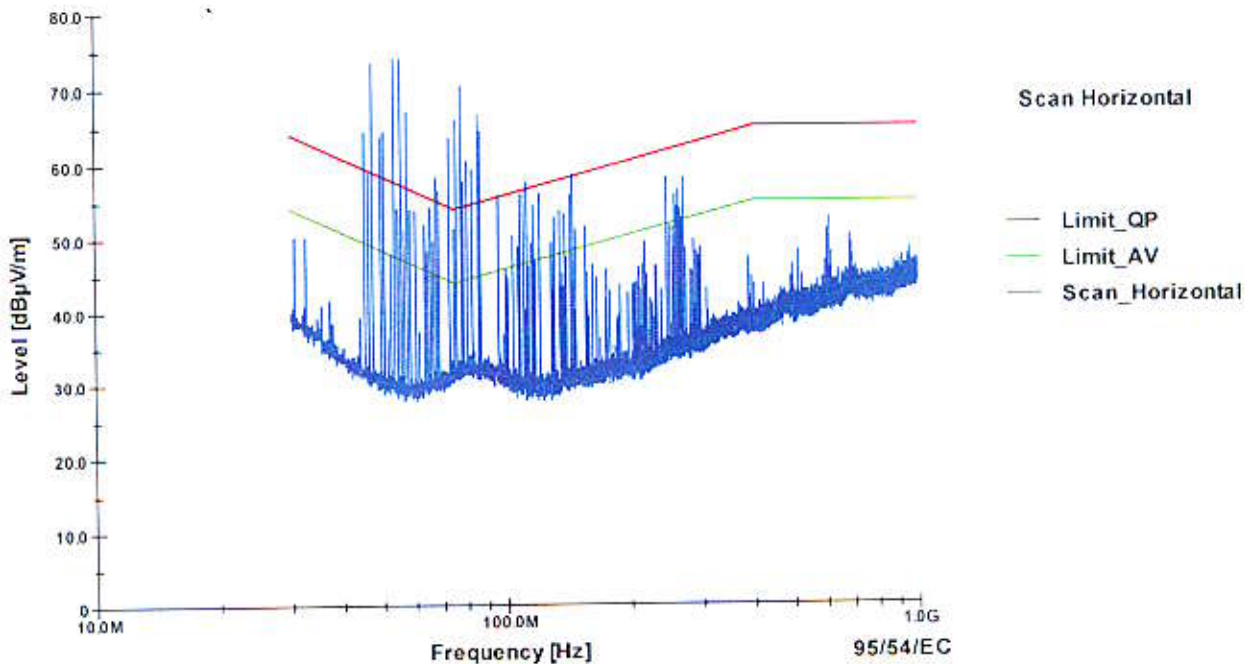
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Type: SSF383
 Manufacturer: Sanel Sanayi Elektroniği İmalat Ve Ticaret LTD. STI.
 Serial number: Prototyp
 Mode: The flasher was turned on
 Antenna position: front
 Antenna polarisation: horizontal
 Remarks: A margin of 2 dB has to be kept to the limits.
 Frequencies, which are not listed, have a margin more than 5 dB.

Result:
 BB: ■ ok
 ○ nok
 NB: ■ ok
 ○ nok

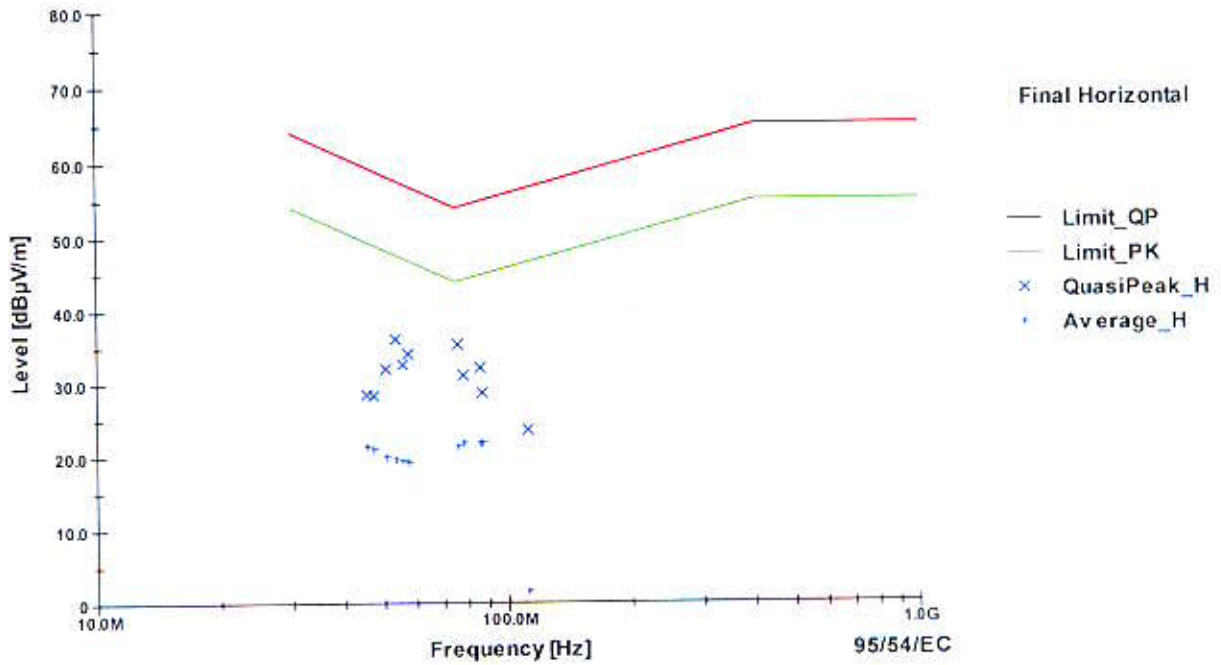
Frequency [MHz]	Test result [dBµV/m]		Limit margin [dBµV/m]	
	Broadband (BB) Quasi-Peak	Narrowband (NB) Average	(quasi-peak)	(average)
45.52	28.5	21.4	30.9	28.0
47.26	28.4	21.0	30.7	28.0
50.62	32.0	20.0	26.3	28.3
53.56	36.1	19.6	21.5	28.0
55.66	32.6	19.4	24.6	27.9
57.46	34.1	19.3	22.8	27.7
75.76	35.4	21.4	18.6	22.7
78.04	31.1	21.9	23.1	22.4
85.78	32.2	21.9	22.7	23.0
86.68	28.7	21.9	26.3	23.1



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2.2 Radiated narrowband electromagnetic emission:

2.2.1 Test set-up:

Refer to item 2.1.1

2.2.2 Test result:

Refer to item 2.1.2

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2.3 Immunity test against electromagnetic radiation:

2.3.1 Test method:

2.3.1.1 Test set-up:

Not applicable

2.3.1.2 Test result:

The ESA has no function involved in the direct control of the vehicle. (see §8.3 of 95/54/EC) Therefore it is deemed to comply with § 6.7 of Annex 1 and with Annex IX of 95/54/EC.

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2.4 Date of the test: 19.01.2006
2.5 Location of the test facility: Strasskirchen
2.6 Remarks: none

3 Attachment:

3.1 Description of the representative ESA according to Annex 2B, Appendix I:

See Information document No. A 1960

3.2 List of all additional relevant test reports according to Annex 2B, Appendix II:

None

3.3 Additional attachment:

None

4 Summary:

The above named documentation file (see item 0.5) and the described type are in compliance with the test requirements.

The test laboratory is accredited by the accreditation department of the Kraftfahrt-Bundesamt, Federal republic of Germany, with the KBA- accreditation number **KBA-P 00057-01**.

It is not allowed to copy this report even partly without the allowance of the test laboratory. The test report merely corresponds to the test sample.

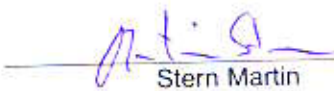
The test report covers page 1 to 11

Strasskirchen, 03.02.2006
(place) (date)

emitel AG:

tested by:


Dieter Fröhlich
Dipl. Ing.(FH)


Stern Martin
Dipl. Ing.(FH)

USED TEST EQUIPMENT AND ACCESSORIES

All test instruments used, in addition to the test accessories, are calibrated and verified regularly.

Test ID	Model / Type	Kind of Equipment	Manufacturer	Equipment No.
ARE	FSP7	Spectrum Analyzer	Rohde & Schwarz München	01-02/11-05-002
	ESH 3 - Z.6	Artificial Network	Rohde & Schwarz München	01-02/20-05-007
	3142B	Antenna	ETS EMC Systems LP	01-02/24-01-010
	N-3000-N	RF Cable	emitel AG	01-02/50-05-122
	N-6000-N	RF Cable	emitel AG	01-02/50-05-125

ANNEX II B

Information document **No. A 1960** relating to EC type-approval of an electric/electronic sub-assembly with respect to electromagnetic compatibility (75/322/EEC), as last amended by the Directive 2001/3/EC

0. General:

0.1. **Make (trade name of manufacturer):** Sanel Sanayi Elektronik Imalat Ve Ticaret LTD. STI.

0.2. **Type:** SSF383

Variant:

General commercial description: Flasher

0.5. **Name and address of manufacturer:** Sanel Sanayi Elektronik Imalat Ve Ticaret LTD. STI.
Gülsuyu Cicek Sokak No:5 Maltepe
34848 Istanbul
Turkey

0.7. **In the case of components and separate technical units, location and method of affixing of the EEC approval mark:**

Stick-on-label on the housing of the SSF383.

0.8. **Address of assembly plant(s):** Sanel Sanayi Elektronik Imalat Ve Ticaret LTD. STI.
Gülsuyu Cicek Sokak No:5 Maltepe
34848 Istanbul
Turkey

1. **This ESA shall be approved as a component/STU**

2. **Any restriction of use and condition for fitting:**

Rated voltage: 12V

The operation and installation conditions are described in the user manual.

Appendix 1

Description of the ESA chosen to represent the type:

Appendix 2

Relevant test report(s) supplied by the manufacturer or approved/recognized laboratories for the purpose of the drawing up the type-approval certificate:

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