

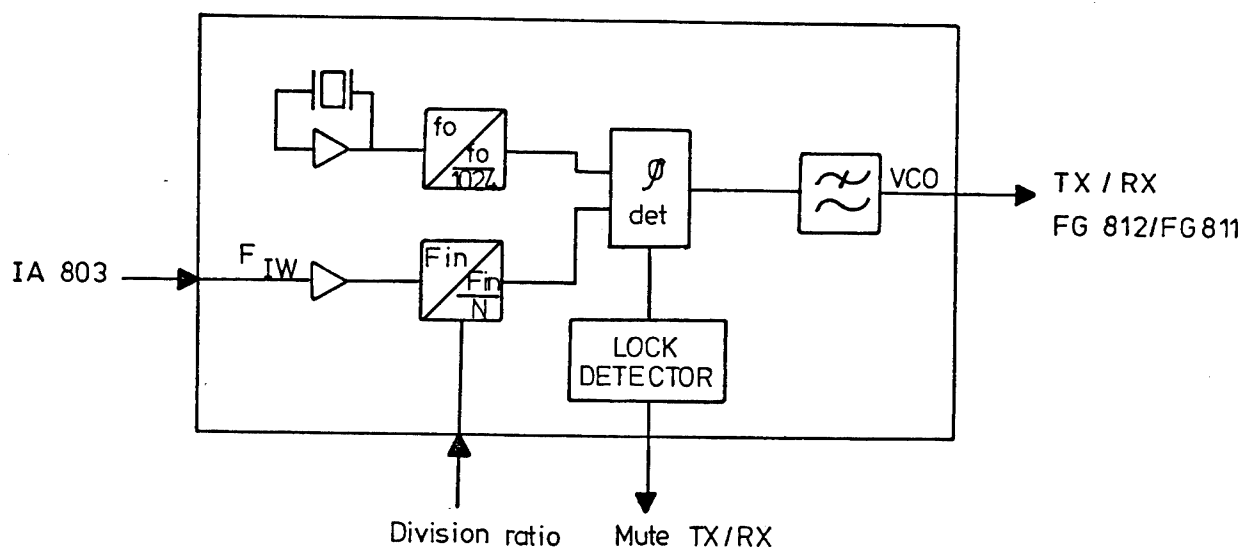
1. Scope.

This specification covers the description and tests of PL 801 module, which contains the synthesizer PL integrated circuit. It is a sub-unit in the FS 800.

2. Descriptions.2.1. Functional.

PL 801 is a thick film micro module. The module generates the loop reference frequency and contains the programmable divider and the phase detector which provides the VCO control voltage. The module also controls the receiver/transmitter muting during out-of-lock.

Block diagram.

2.2. Circuit.

The main thing in the module is the PLL integrated circuit. The following functions are included in the integrated circuit.

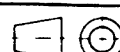
L 30

REVISIONS

THIRD ANGLE PROJECTION



FIRST ANGLE PROJECTION



SI-METRIC

PRINTS TO

APPV

DATE

TITLE

TEST SPECIFICATION

FIRST MADE FOR PL 801

F.C.F.O. 19M905120

MG

80

OCT 30

MADE BY

KAJ 80 JUL 2

GENERAL ELECTRIC

Storno

ISSUED

1990 CKT. 31

19J706489

CONT ON SHEET 3

SH NO. 2

1. Programmable divider which divides the synthesizer frequency down to the reference frequency. Division ratios from one to 511 may be used. The inputs to the divider are used to control the output frequency.
2. Phase detector which provides the VCO control signal. The detector has a tri-state output. The output is logic high or low when the loop is unlocked. In the locked condition the output impedance is very high.
3. A logic signal to indicate the out of lock condition.
4. An oscillator/ amplifier and a fixed divider to provide the reference frequency which sets the channel spacing. An external crystal is used to give a stable ref. frequency.

Furthermore the module includes some switching circuits used to mute the transmitter/receiver so that neither will operate during the out-of-lock condition.

The module also contains the loop filter. In order to decrease the interchannel switch time two transistors are used to increase the loop capacitor charging current.

3. Specifications.

3.1. Interface.

| | |
|---------------------|----------------------|
| Power supply | 7.5 Volt $\pm 5\%$. |
| Power supply | 11 Volt $\pm 5\%$. |
| Current consumption | 4 mA $\pm 15\%$. |

3.2. Mechanical.

In accordance with the 800 build standard for hybrid thickfilm:

| | |
|------------------|-----------------------------------|
| Substrate size: | 19 x 53.7 mm ² . |
| Modular package: | 21 x 54.8 x 6.5 mm ³ . |

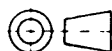
3.3. Environmental.

| | |
|-------------------|-------------------|
| Temperature range | - 30°C to + 60°C. |
|-------------------|-------------------|

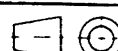
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REVISIONS

THIRD ANGLE PROJECTION



FIRST ANGLE PROJECTION



SI-METRIC

PRINTS TO

| | | | | | |
|------|--------------|--------------------|--|--------------------------|--|
| APPV | DATE | TITLE | | FIRST MADE FOR | |
| MG | 80 OCT 30 | TEST SPECIFICATION | | PL 801 | |
| | | MADE BY | | F.C.F.O. 19M905120 | |
| | | KAJ 80 JUL 2 | | 19J706489 | |
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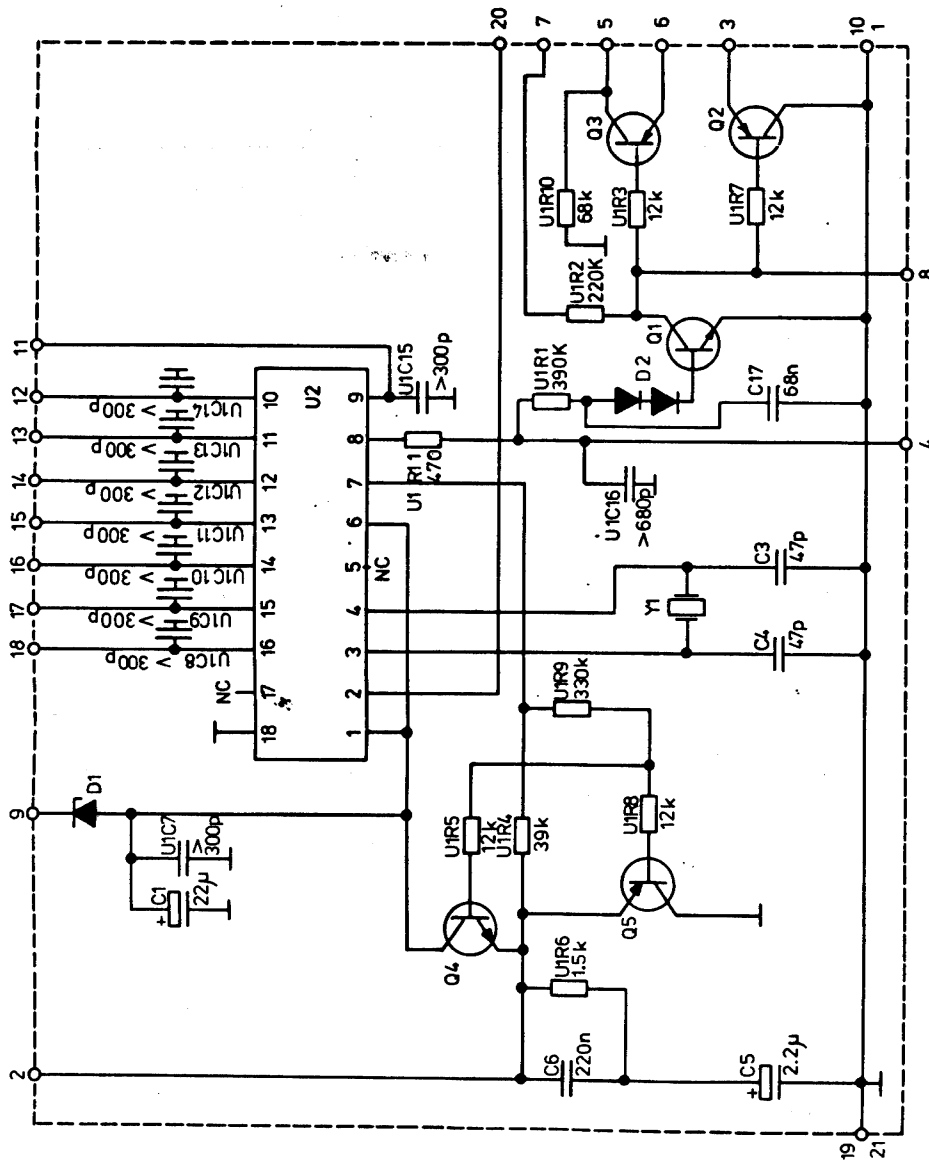
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19K805109

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|--------------------------------|--------|-------------------|--|--------------------------|--|
| UNLESS OTHERWISE SPECIFIED USE | | APPLIED PRACTICES | | THIRD ANGLE PROJECTION | |
| TOLERANCES | | SURFACES | | FIRST ANGLE PROJECTION | |
| DECIMALS | ANGLES | ✓ | | L38 | |
| + | + | SI-METRIC | | PRINTS TO | |
| MATERIAL | | FINISH | | PRINTS TO | |
| 1 AN 436 OHN 81 APR 03 | | REVISIONS | | FIRST MADE FOR | |
| DATE | | TITLE | | PL 801 | |
| APPR | | DATE | | F.C.F.O. | |
| CHN | | 80 | | 19M905120 | |
| MADE BY | | MG/JJA 80 MAY 12 | | DIAGRAM | |
| ISSUED | | 1980 OCT. 31 | | PARTS LIST | |
| GENERAL ELECTRIC | | NO | | 19K805109 | |
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