

1. Scope.

This specification covers the description and tests of the voltage controlled oscillator (VCO) FG 812, which is a module in the FS 811 intended for CQP 800.

2. Description.2.1. Functional.

FG 812 is a thick-film plug-in micromodule. It generates the RF signal to the transmitter. The frequency of the oscillator is controlled by the phase-detector in PL 801.

The VCO can be modulated.

2.2. Circuit.

The oscillator is a Hartley type LC-oscillator using a JFET in the grounded gate configuration as the active element.

By changing the reverse bias of a variable capacitance diode in the resonant circuit the frequency of the RF signal is changed. The same principle is used to modulate the carrier. The modulation input is biased close to 7.5V.

The frequency control input passes through a low-pass filter with a cut-off frequency of approx. 1300 Hz.

3. Specifications.3.1. Interface.

Power supply

7.5 Volt  $\pm 0.15V$ .

Current consumption

3mA  $\pm 1mA$ .

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THIRD ANGLE PROJECTION		FIRST ANGLE PROJECTION		SI-METRIC
APPV	DATE	TITLE	FIRST MADE FOR	FG 812
OHN	30/10 -80	TEST SPECIFICATION	F.C.F.O.	19M905115
MADE BY		OHN 80 JUL 2	GENERAL ELECTRIC	
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			19J706488	
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Input:Frequency control input:

0 - 7.5V DC.

Input resistance

100 k $\Omega$ .

Input impedance

@ 1kHz ~ 18k $\Omega$ .Modulation input:

0 - 7.5 V AC.

Input resistance

> 100 k $\Omega$ .

Input impedance

@ 1kHz ~ 100 k $\Omega$ .Output:

Frequency range

140 - 180 MHz.

Output level

&gt; 0 dBm.

Output impedance

(150MHz) ~ 100  $\Omega$ .3.2. Mechanical.

In accordance with the 800 build standard for hybrid thickfilms.

3.3. Environmental.

Temperature range :

Operating range:

- 25°C to + 55°C.

Functioning range:

- 30°C to + 60°C.

4. Applicable drawings.

Parts list

19M905115

Circuit diagram

19J706364

Component placing

19M905115P1

Assembly drawing

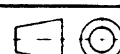
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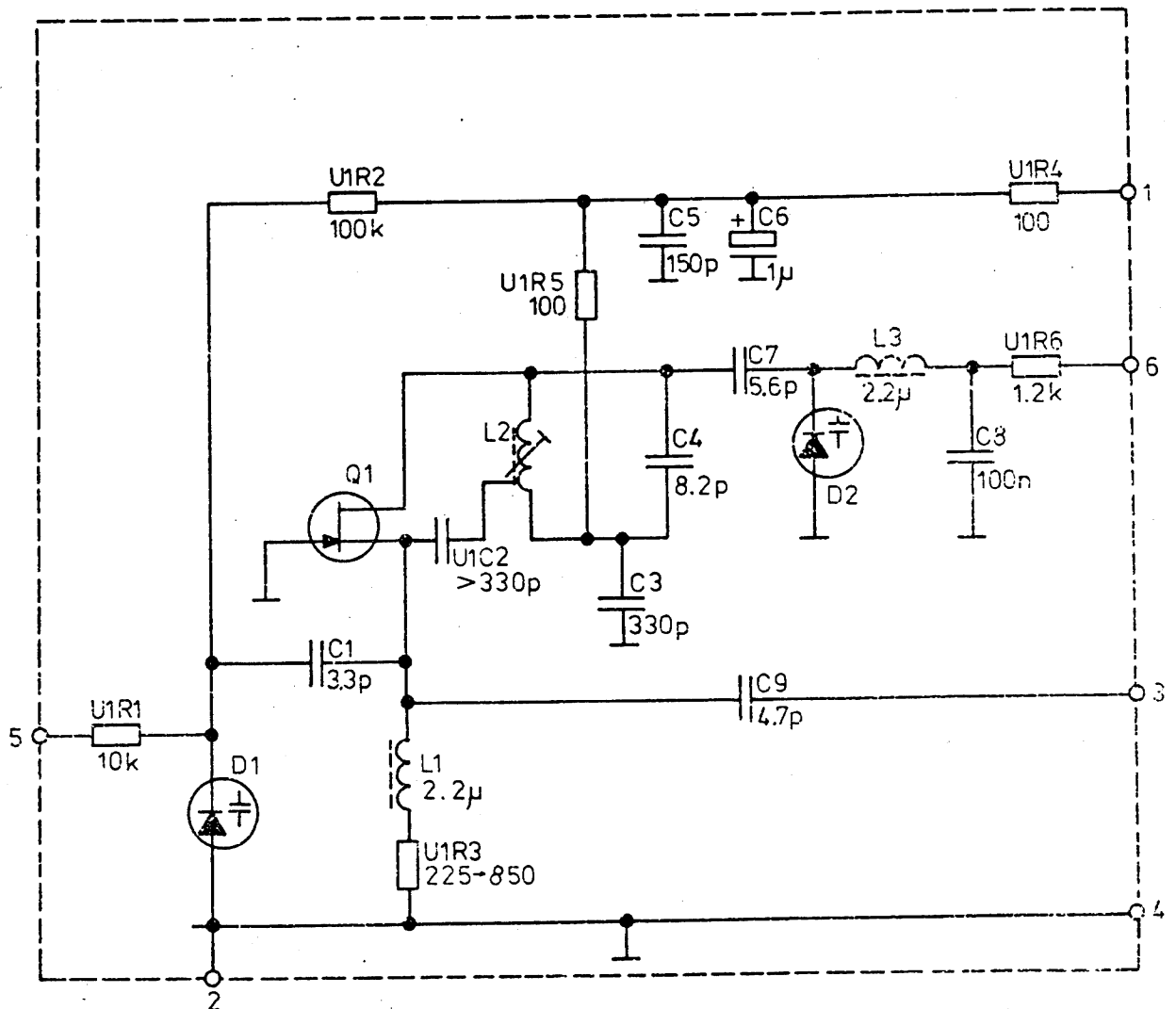
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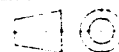
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DIAGRAM

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