

AVC AMPLIFIER PLUG IN490-007 LE

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1. DESCRIPTION

This unit is modular made, it consists of 6 independant tinned iron boxes which contain and shield the printed circuit boards (drawing 490007 LE 203). The basic circuit uses 8 SL532C limiting amplifiers from Plessey (each one with 12 dB low level gain: overall dynamic range 90 dB) with adjunction of input amplifier, band pass filters and output power amplifier.

1.1. The 1st box contains the input amplifier which decreases circuit noise and adapts 50  $\Omega$  input impedance to 200  $\Omega$  SL 532 input impedance (drawing 49007 LE 201).

1.2. The second box contains 4 SL 532 C in cascade (drawing 490 007 LE 201).

1.3. The 3rd box contains a band pass filter (central frequency 10,7 MHz 3 dB band pass 9,7  $\rightarrow$  11,7 MHz, ripple 1 dB). Matched on 200  $\Omega$  impedance it avoids excessive saturation of the next SL532 chain with noise when no input signal is present (drawing 490007 LE 205).

1.4. Box N° 4, same as 1.2.

1.5. Box N° 5, same as 1.3.

1.6. The sixth box contains the output power amplifier (gain 6 dB) which gives 10 dBm/50  $\Omega$  output (drawing 490007 LE 202).

1.7. All these boxes are riveted on a low resistor brass ground plate to minimize ground current effects and 50 Hz perturbation.

## 2. ADJUSTMENTS

Only required for band pass filters.

2.1. Select, measure and adjust the L and C components to the theoretical values with LC meter.

2.2. Adjust central cell to 10,7 MHz (with network analyser HP 8505).

2.3. Connect input and output cell and adjust rising edge and falling edge (with HP 8505) - see photos.

## 3. SPECIFICATIONS

3.1. Working frequency: 10,7 MHz

3.2. 3 dB band pass (low level): 9,3 → 12,3 MHz

3.3. Input level : - 80 dBm up to + 10 dBm

3.4. Output level : + 10 dBm/50 Ω

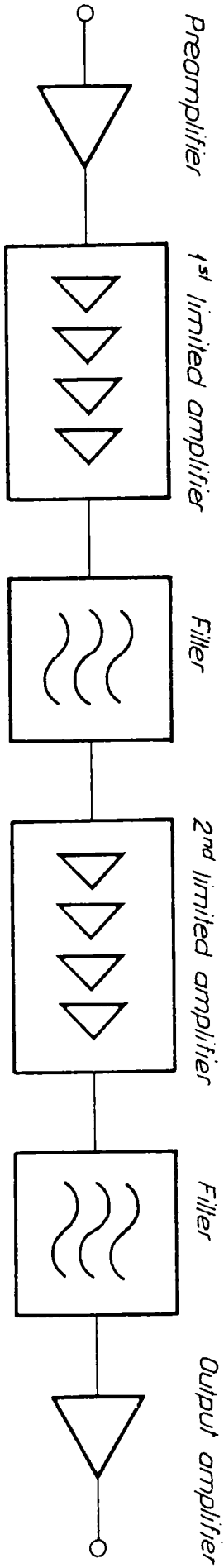
3.5. Phase variation with level: see curve

3.6. Group delay and phase shift at 10,7 MHz: see curve

3.7. S/N ratio (10,7 MHz - 50 dBm input) see photo.

EDITIONS

1/ 1.6.82 *Leadone*



TITLE *LEAR AVC amplifier*

SCALE



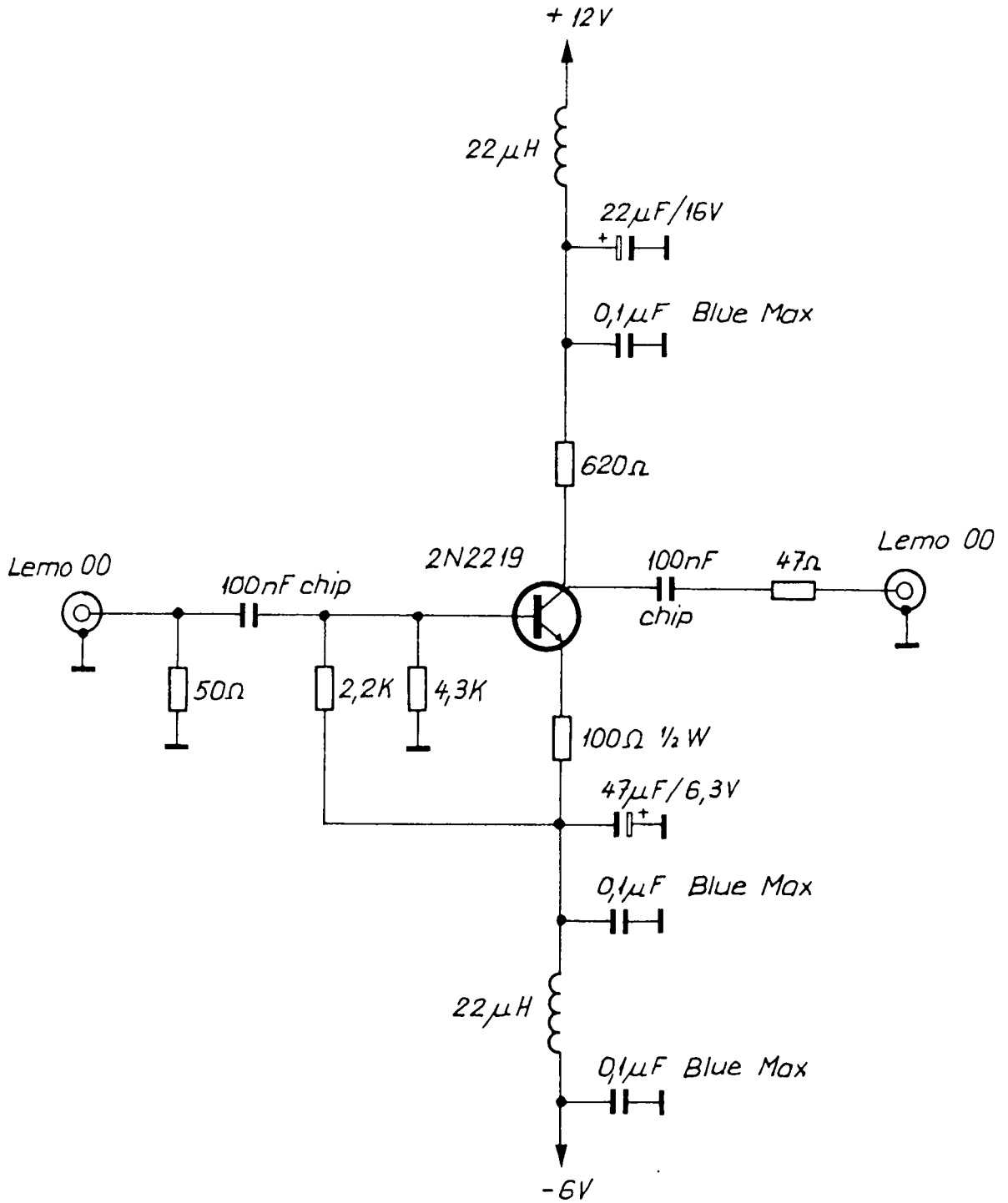
4 90.007 LE 203 4

OLD NUMBER

4

EDITIONS

- 1) 27.1.02 *habdm*
- 2) 28.5.02 *hadone*



TITLE *AVC LEAR Input Amplifier*

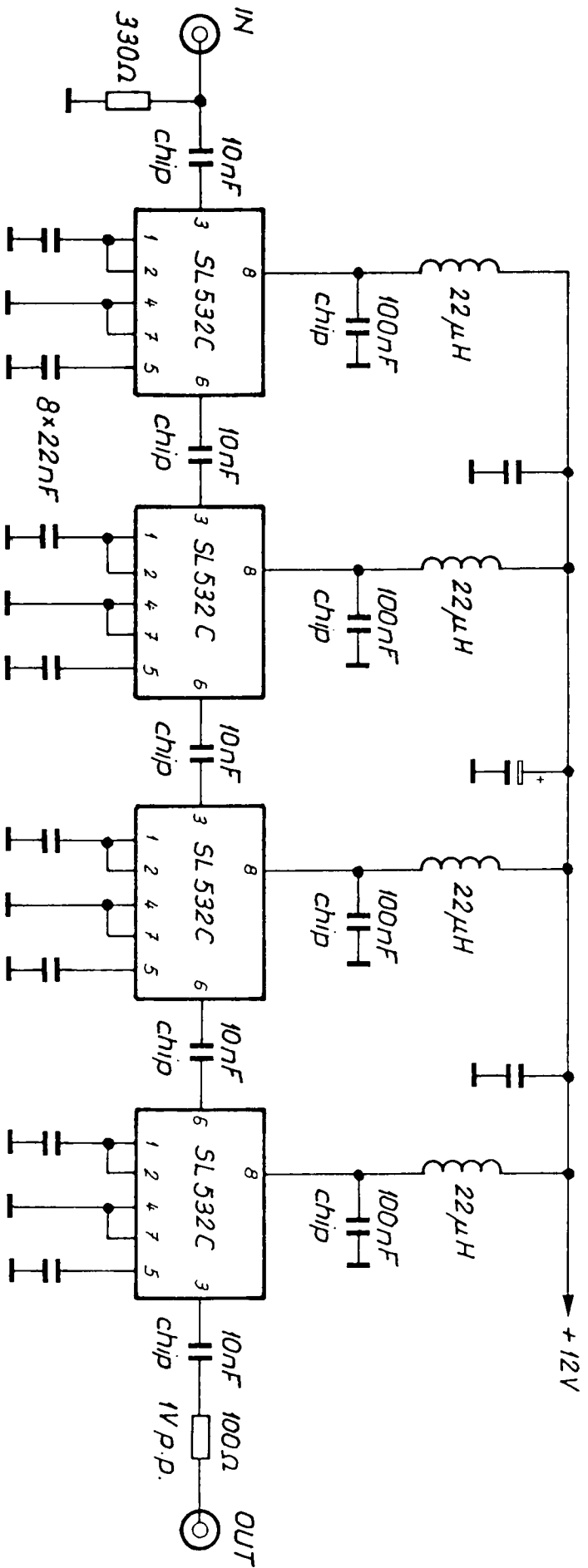
SCALE



4 90.007 LE 201 4

OLD NUMBER

4



EDITIONS

1. 15.3.83 *Radaru*

TITLE 10,7MHz AVC limiter amplifier module

SCALE



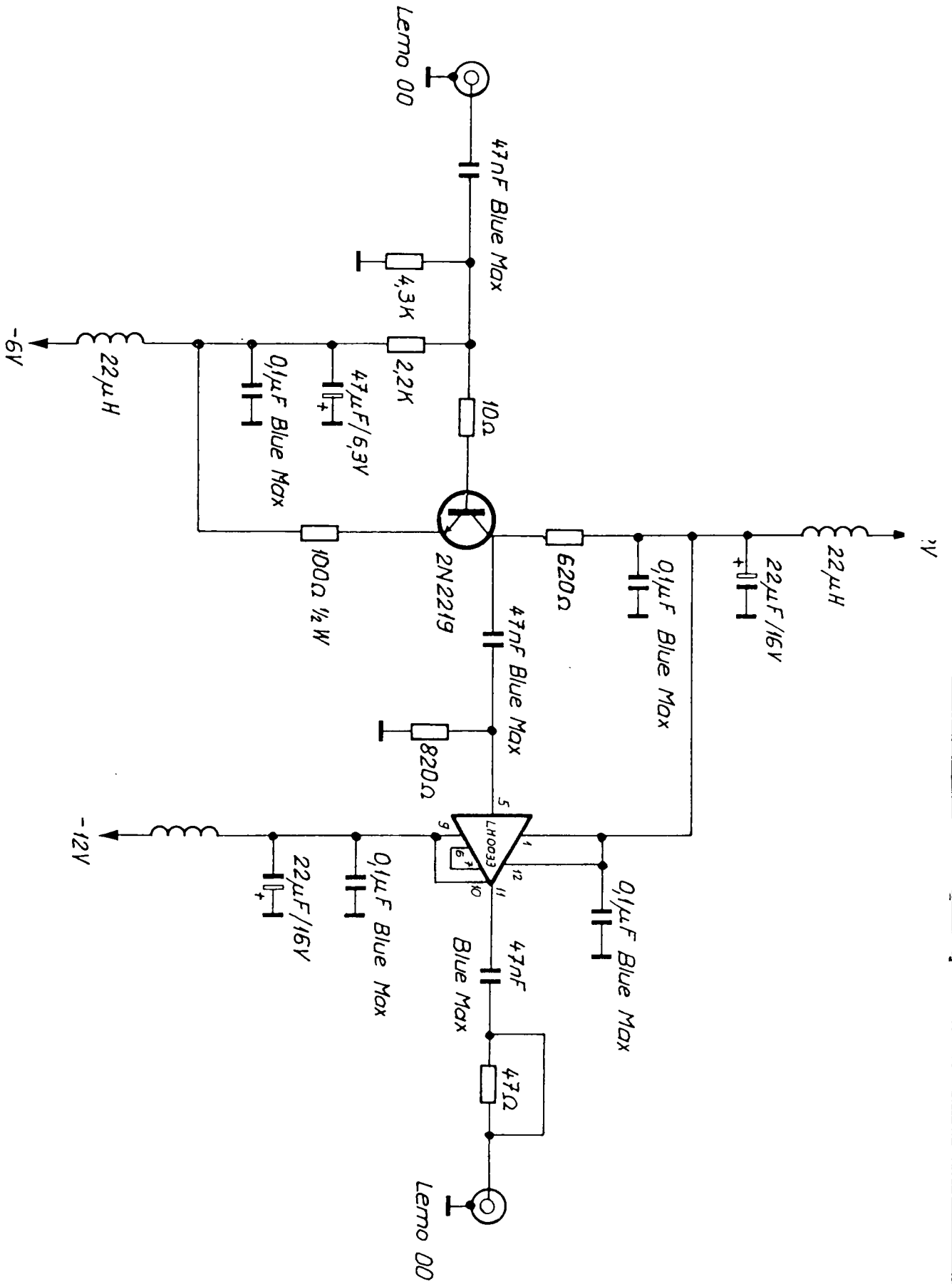
4 90.007 LE 2 0 4 4

OLD NUMBER

4

EDITIONS

1) 27.1.82 *Madame*  
2) 28.5.82 *Madame*



TITLE *AVC LEAR Output Amplifier*

SCALE



4 90.007 LE 2 0 2 4

OLD NUMBER

4