

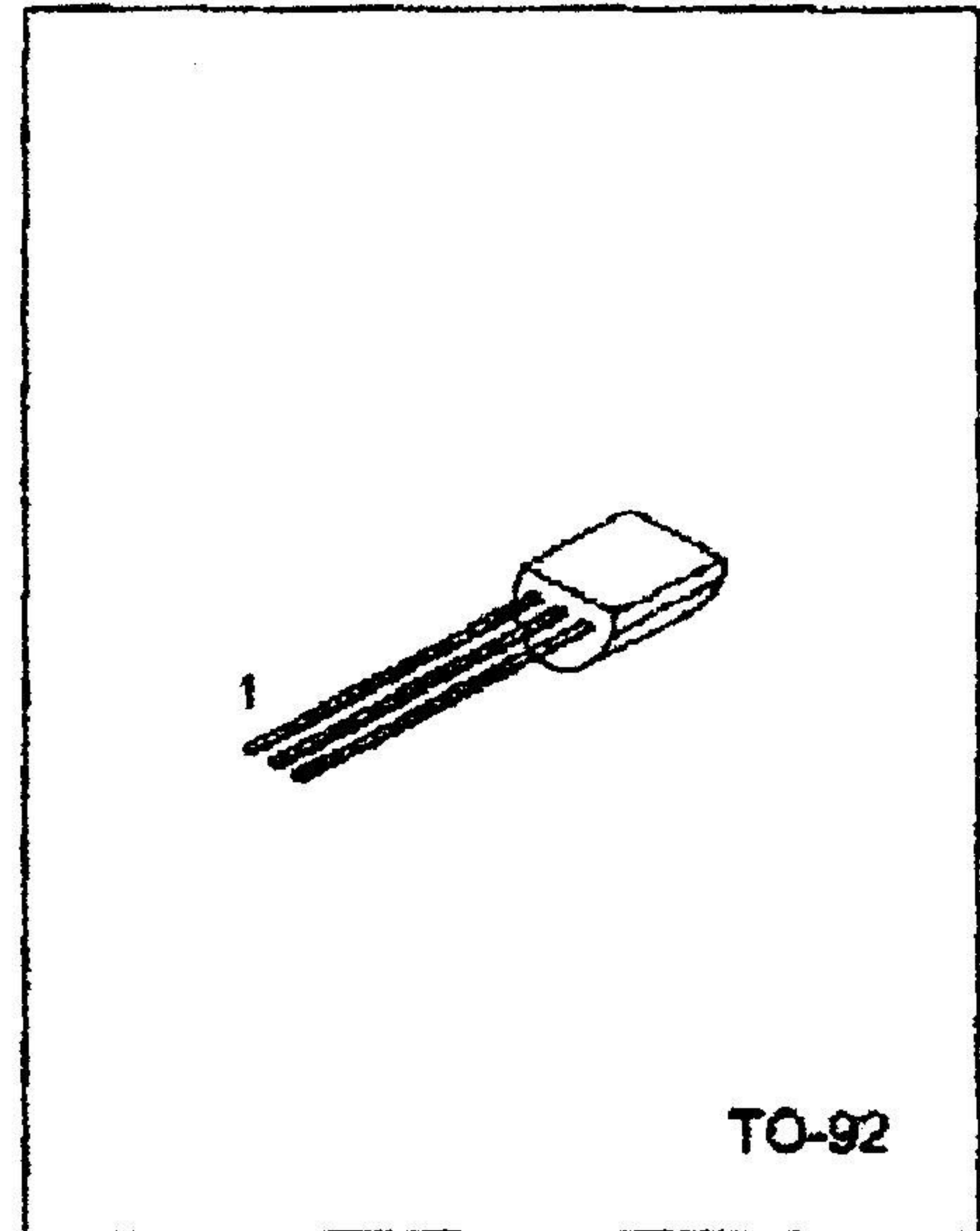
## ONE CHIP AM RADIO CIRCUIT

### DESCRIPTION

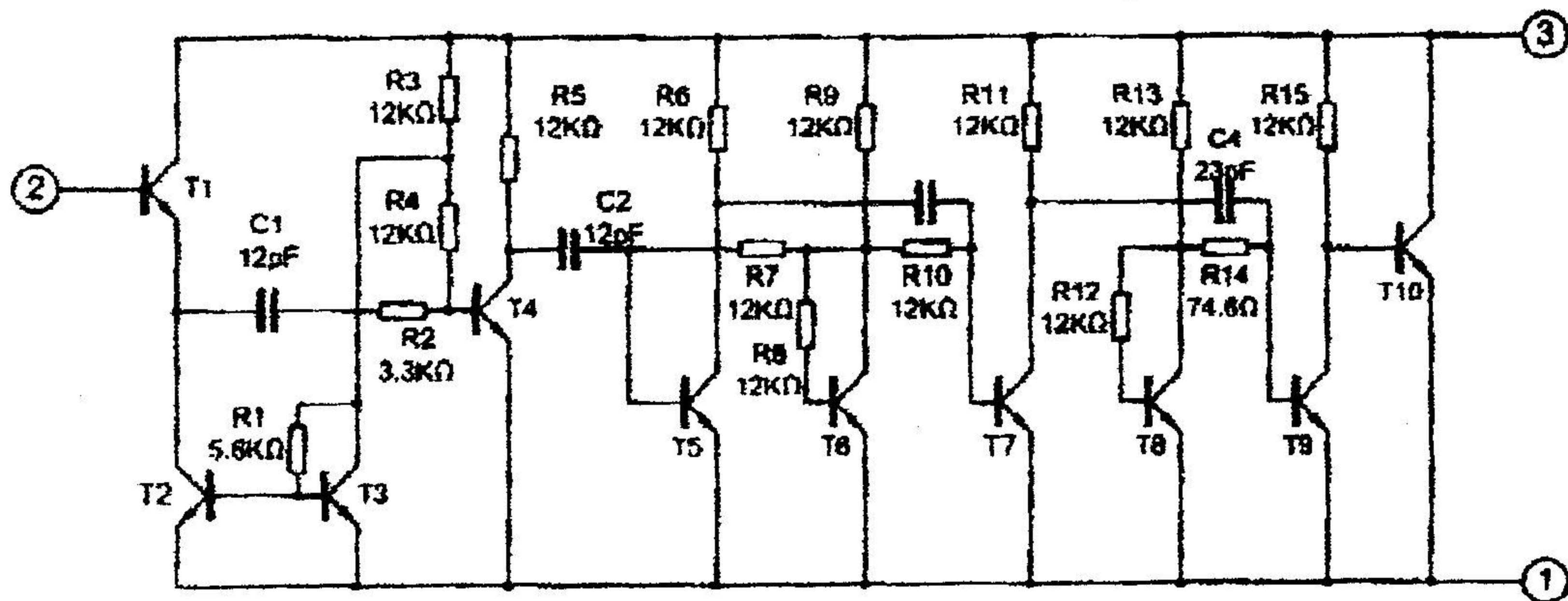
The TA7642 is suitable for low voltage portable Radio, cassette system and other wireless AM system. The package of UTC7642 is TO-92.

### FEATURES

- \*Low operating voltage: Down to  $V_{CC}=1.3V$
- \*Low Quiescent Current:  $I_{CCQ}=0.2mA$
- \*Low external component required.



### EQUIVALENT CIRCUIT



### ABSOLUTE MAXIMUM RATINGS (Tested at $T_a=25^{\circ}C$ , unless otherwise specified)

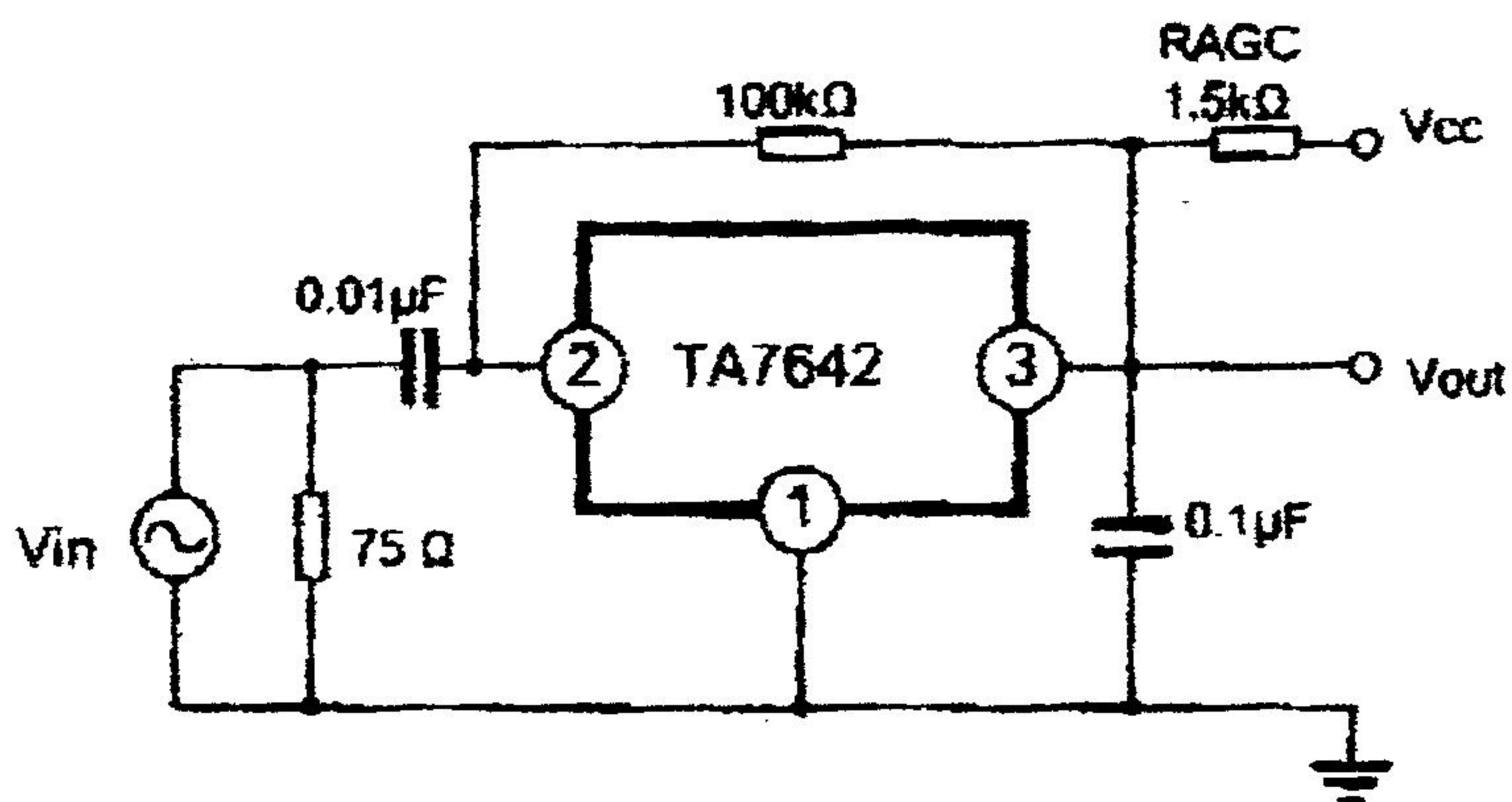
| Parameters            | Symbols   | Min. | Max. | Unit        |
|-----------------------|-----------|------|------|-------------|
| Supply Voltage        | $V_{CC}$  |      | 6    | V           |
| Operating Temperature | $T_{opr}$ | -10  | 60   | $^{\circ}C$ |
| Storage temperature   | $T_{STG}$ | -55  | 150  | $^{\circ}C$ |

## ELECTRICAL CHARACTERISTICS

(Tested at  $T_a=25^\circ\text{C}$ ,  $V_{cc}=1.3\text{V}$ ,  $f_m=1\text{kHz}$ ,  $f_0=1\text{MHz}$ ,  $\text{MOD}=30\%$ , unless other specified)

| Parameters              | Symbols    | Test conditions     | Min. | Typ. | Max. | Unit          |
|-------------------------|------------|---------------------|------|------|------|---------------|
| Supply Voltage          | $V_{cc}$   |                     | 1.2  | 1.3  | 1.6  | V             |
| Quiescent Current       | $I_{ccQ}$  | $V_i=0$             | 0.14 | 0.20 | 0.30 | mA            |
| Input Resistance        | $R_i$      |                     | —    | 3    | —    | MΩ            |
| Maximum sensitivity     | SM         | $V_{00}=3\text{mV}$ | —    | 600  | —    | $\mu\text{V}$ |
| Detector Output Voltage | $V_{00}$   | $V_i=10\text{mV}$   | 5    | 15   | 30   | mV            |
| The Range of AGC        | $\Delta A$ |                     | —    | 30   | —    | dB            |

## TEST CIRCUIT



## APPLICATION CIRCUIT

