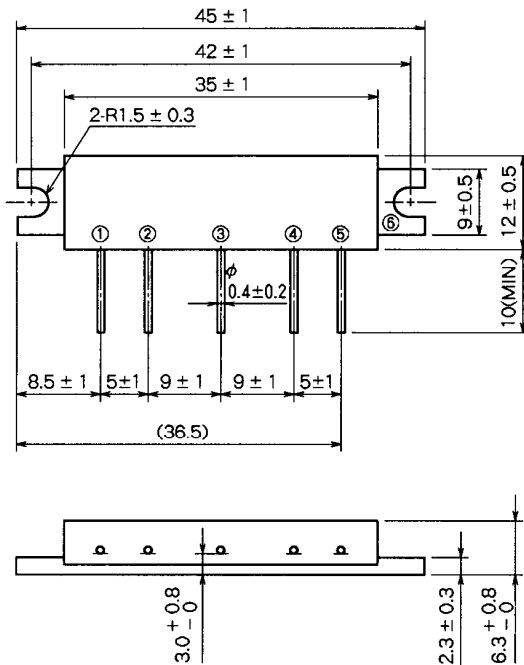


# M67706U

896-941MHz, 7.5V, 4W, FM PORTABLE RADIO

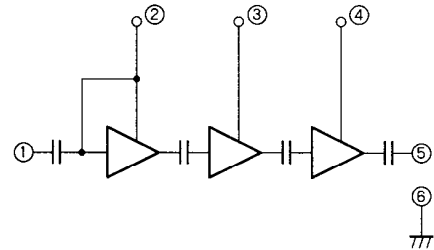
## OUTLINE DRAWING

Dimensions in mm



H13

## BLOCK DIAGRAM



PIN :

- ① P<sub>in</sub> : RF INPUT
- ② V<sub>CC1</sub> : 1st. DC SUPPLY
- ③ V<sub>CC2</sub> : 2nd. DC SUPPLY
- ④ V<sub>CC3</sub> : 3rd. DC SUPPLY
- ⑤ P<sub>o</sub> : RF OUTPUT
- ⑥ GND : FIN

## ABSOLUTE MAXIMUM RATINGS (T<sub>c</sub> = 25°C, unless otherwise noted)

| Symbol               | Parameter                  | Conditions   | Ratings     | Unit |
|----------------------|----------------------------|--|-------------|------|
| V <sub>CC</sub>      | Supply voltage             |  | 9           | V    |
| I <sub>CC</sub>      | Total current              | Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω                                     | 2.5         | A    |
| P <sub>in(max)</sub> | Input power                | f=896-941MHz, V <sub>CC1</sub> ≤ 7.2V, Z <sub>G</sub> =Z <sub>L</sub> =50Ω | 150         | mW   |
| P <sub>O(max)</sub>  | Output power               | f=896-941MHz, V <sub>CC1</sub> ≤ 7.2V, Z <sub>G</sub> =Z <sub>L</sub> =50Ω | 5           | W    |
| T <sub>C(OP)</sub>   | Operation case temperature | Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω                                     | - 30 to 110 | °C   |
| T <sub>stg</sub>     | Storage temperature        |  | - 40 to 110 | °C   |

Note. Above parameters are guaranteed independently.

## ELECTRICAL CHARACTERISTICS (T<sub>c</sub> = 25°C, unless otherwise noted)

| Symbol          | Parameter           | Test conditions  | Limits                    |      | Unit |
|-----------------|---------------------|--|---------------------------|------|------|
|                 |                     |  | Min                       | Max  |      |
| f               | Frequency range     | V <sub>CC</sub> = 7.5V,<br>P <sub>in</sub> = 100mW,<br>Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω  | 896                       | 941  | MHz  |
| P <sub>o</sub>  | Output power        |  | 4                         |      | W    |
| 2f <sub>o</sub> | 2nd. harmonic       |  |                           | - 30 | dBc  |
| ρ <sub>in</sub> | Input VSWR          |  |                           | 4    | -    |
| η <sub>T</sub>  | Total efficiency    | V <sub>CC2</sub> = V <sub>CC3</sub> = 7.5V, P <sub>in</sub> = 100mW<br>P <sub>o</sub> = 4W(V <sub>CC1</sub> = adj.) Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω     | 30                        |      | %    |
| -               | Load VSWR tolerance | f=896-902MHz, f=935-941MHz, V <sub>CC</sub> =9V,<br>P <sub>o</sub> = 4W(P <sub>in</sub> :controlled), Z <sub>G</sub> = 50Ω<br>Load VSWR=20:1(All phase), 5sec. | No degradation or destroy |      | -    |

Note. Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

