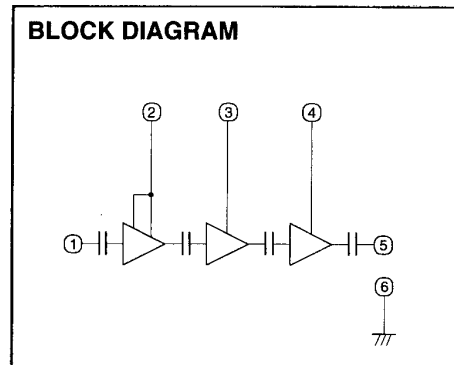
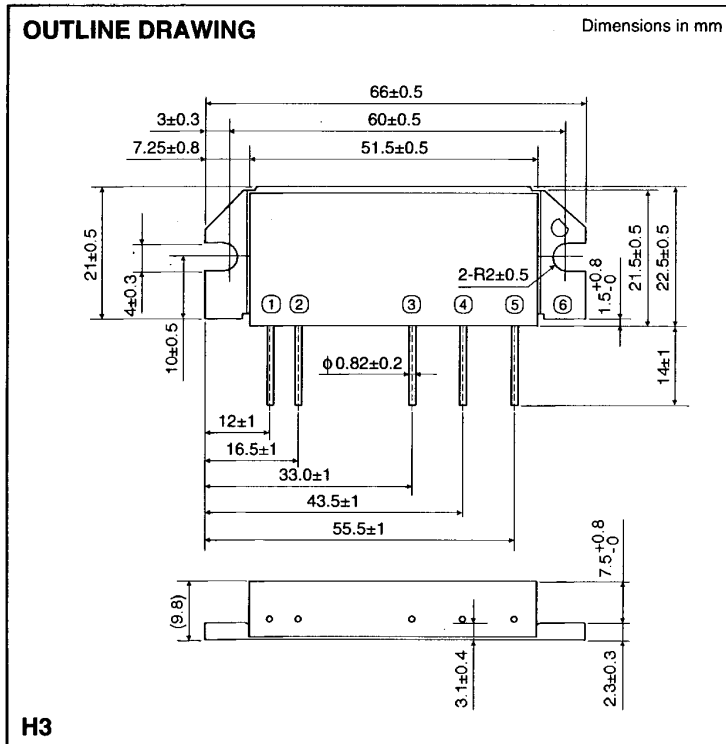


MITSUBISHI RF POWER MODULE

# M68769H

450-490MHz, 12.5V, 45W FM MOBILE RADIO



- PIN:
- ① Pin : RF INPUT
  - ② VCC1: 1st. DC SUPPLY
  - ③ VCC2: 2nd. DC SUPPLY
  - ④ VCC3: 3rd. DC SUPPLY
  - ⑤ Po : RF OUTPUT
  - ⑥ GND: FIN

**MAXIMUM RATINGS** (Tc=25deg.C unless otherwise noted)

| Symbol | Parameter                  | Conditions                | Ratings     | Unit   |
|--------|----------------------------|---------------------------|-------------|--------|
| Vcc    | SUPPLY VOLTAGE             | ZG=ZL=50 ohms             | 17          | V      |
| Icc    | TOTAL CURRENT              | ZG=ZL=50 ohms             | 15          | A      |
| Pin    | INPUT POWER                | ZG=ZL=50 ohms, Vcc1<12.5V | 600         | mW     |
| Po     | OUTPUT POWER               | ZG=ZL=50 ohms, Vcc1<12.5V | 60          | W      |
| Tc(OP) | OPERATION CASE TEMPERATURE | ZG=ZL=50 ohms, Vcc1<12.5V | -30 to +110 | deg. C |
| Tstg   | STORAGE TEMPERATURE        |                           | -40 to +110 | deg. C |

Note: Above parameters are guaranteed independently.

**ELECTRICAL CHARACTERISTICS** (Tc=25deg.C, ZG=ZL=50ohms unless otherwise noted)

| Symbol | Parameter           | Test conditions  | Limits                    |     | Unit  |
|--------|---------------------|--|---------------------------|-----|-------|
|        |                     |  | Min                       | Max |       |
| f      | Frequency range     |  | 450                       | 490 | MHz   |
| Po     | Output power        | Vcc1,2,3=12.5V, Pin=300mW, ZG=ZL=50 ohms                                 | 45                        |     | W     |
| η t    | Total efficiency    |  | 35                        |     | %     |
| 2fo    | 2nd. harmonic       |  |                           | -30 | dBc   |
| 3fo    | 3rd. harmonic       |  |                           | -30 | dBc   |
| ρ in   | Input VSWR          |  |                           |     | 2.8:1 |
| -      | Load VSWR tolerance | Vcc=15.2V, Po=45W (Pin: controlled)<br>ZG=50Ω, LOAD VSWR=8:1 (all phase) | No degradation or destroy |     | -     |

Note: above parameters, ratings, limits and test conditions are subject to change.

Keep safety first in your circuit designs!

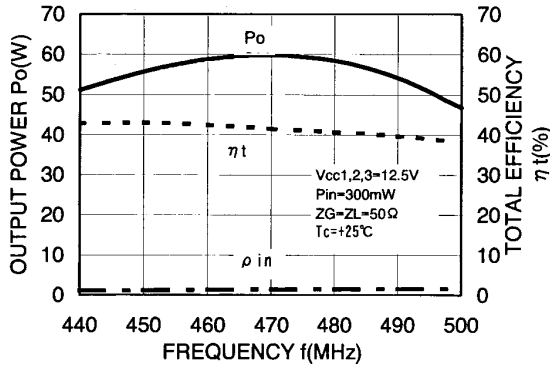
Mitsubishi Electric Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage. Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of non-flammable material or (iii) prevention against any malfunction or mishap.

# M68769H

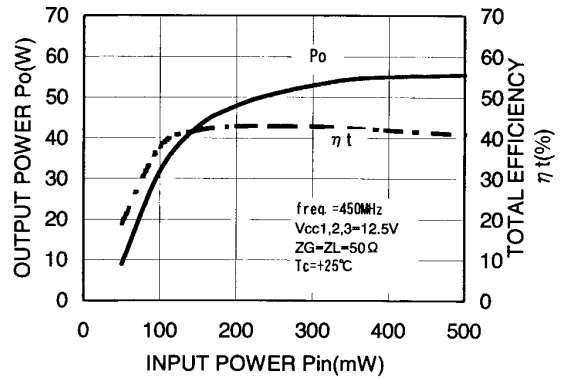
450-490MHz, 12.5V, 45W FM MOBILE RADIO

TYPICAL PERFORMANCE DATA

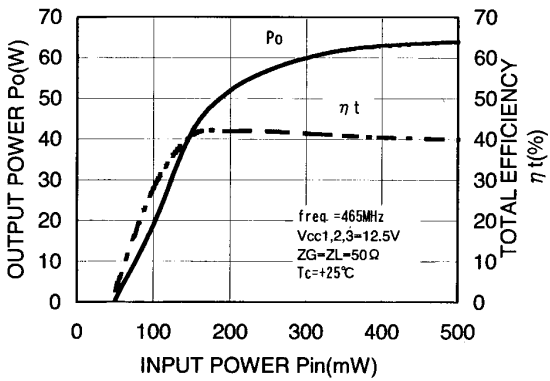
OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY



OUTPUT POWER, EFFICIENCY VS. INPUT POWER



OUTPUT POWER, EFFICIENCY VS. INPUT POWER



OUTPUT POWER, EFFICIENCY VS. INPUT POWER

