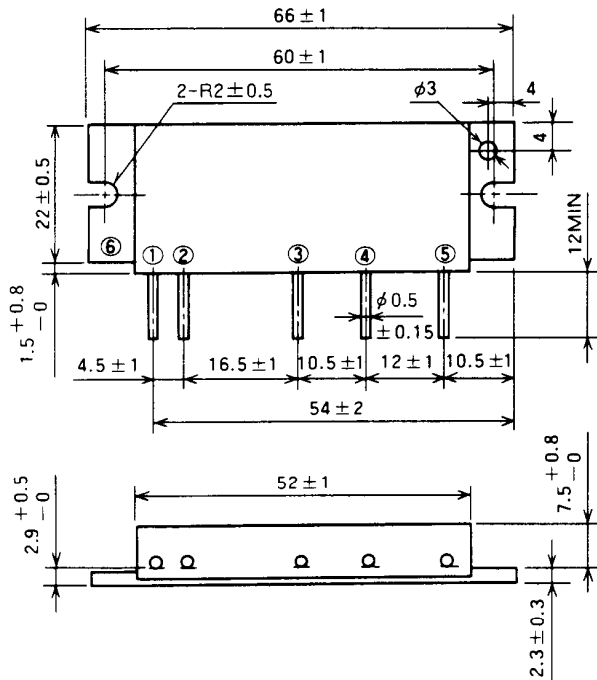


M67712

220-225MHz, 12.5V, 30W, SSB MOBILE RADIO

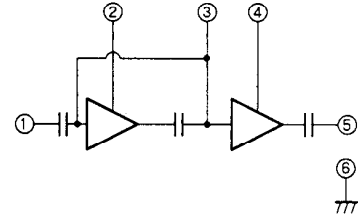
OUTLINE DRAWING

Dimensions in mm



H3

BLOCK DIAGRAM



PIN :

- ① Pin : RF INPUT
- ② Vcc1 : 1st. DC SUPPLY
- ③ Vbb : BASE BIAS SUPPLY
- ④ Vcc2 : 2nd. DC SUPPLY
- ⑤ Po : RF OUTPUT
- ⑥ GND : FIN

ABSOLUTE MAXIMUM RATINGS (T_c = 25 °C unless otherwise noted)

| Symbol | Parameter | Conditions | Ratings | Unit |
|----------------------|----------------------------|--|-------------|------|
| V _{cc} | Supply voltage | | 17 | V |
| V _{bb} | Base bias | | 10 | V |
| I _{cc} | Total current | | 7 | A |
| P _{in(max)} | Input power | Z _G = Z _L = 50 Ω, V _{cc1} ≤ 12.5V | 0.6 | W |
| P _{o(max)} | Output power | Z _G = Z _L = 50 Ω | 40 | W |
| T _{c(OP)} | Operation case temperature | | - 30 to 110 | °C |
| T _{stg} | Storage temperature | | - 40 to 110 | °C |

Note. Above parameters are guaranteed independently.

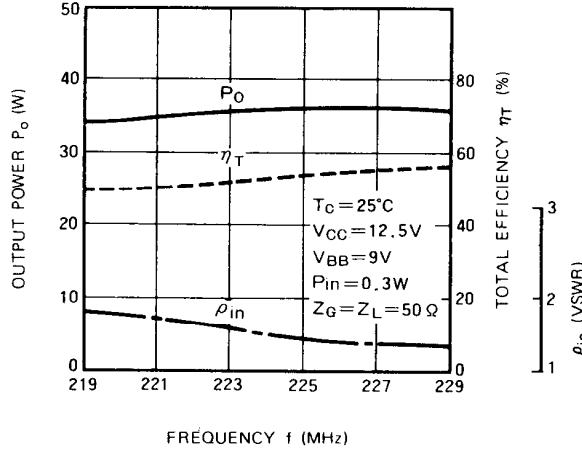
ELECTRICAL CHARACTERISTICS (T_c = 25 °C unless otherwise noted)

| Symbol | Parameter | Test conditions | Limits | | Unit |
|-----------------|---------------------|---|---------------------------|------|------|
| | | | Min | Max | |
| f | Frequency range | P _{in} = 0.3W V _{cc} = 12.5V, V _{bb} = 9V Z _G = Z _L = 50 Ω | 220 | 225 | MHz |
| P _o | Output power | | 30 | | W |
| η _T | Total efficiency | | 43 | | % |
| 2f _o | 2nd. harmonic | | | - 30 | dBc |
| 3f _o | 3rd. harmonic | | - 35 | dBc | |
| ρ _{in} | Input VSWR | | | 2.8 | - |
| - | Load VSWR tolerance | V _{cc} = 15.2V, V _{bb} = 9V P _o = 30W (P _{in} : controlled) Load VSWR=20:1(All phase), 2sec. Z _G = 50 Ω | No degradation or destroy | | - |

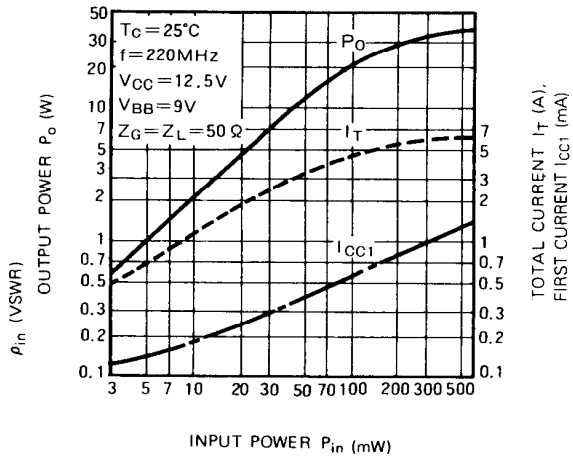
Note. Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

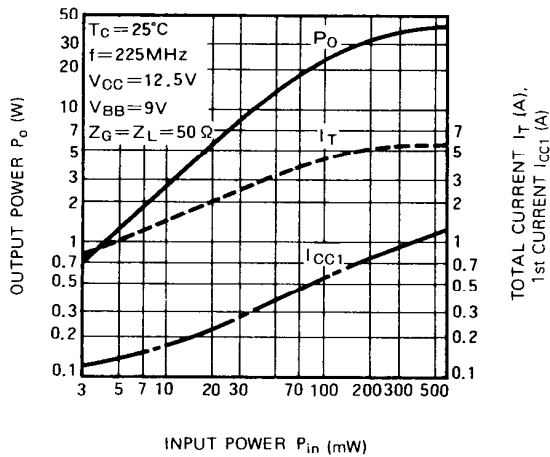
OUTPUT POWER, TOTAL EFFICIENCY, ρ_{in} VS. FREQUENCY CHARACTERISTICS



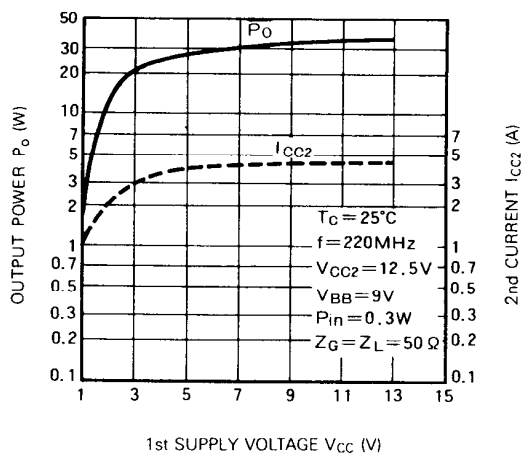
OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. INPUT POWER CHARACTERISTICS



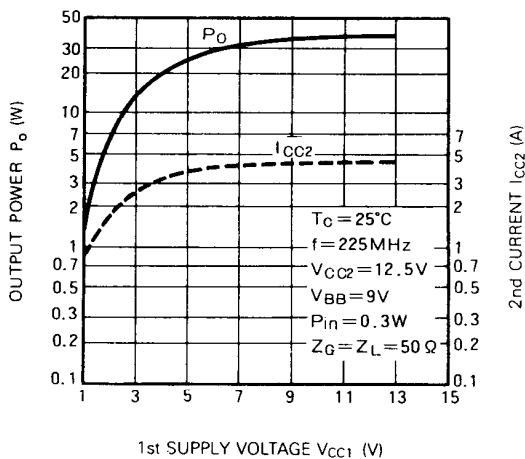
OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. INPUT POWER CHARACTERISTICS



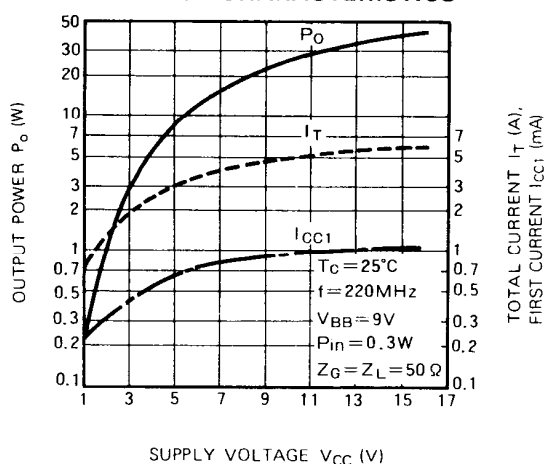
OUTPUT POWER, 2nd CURRENT VS. 1st SUPPLY VOLTAGE CHARACTERISTICS



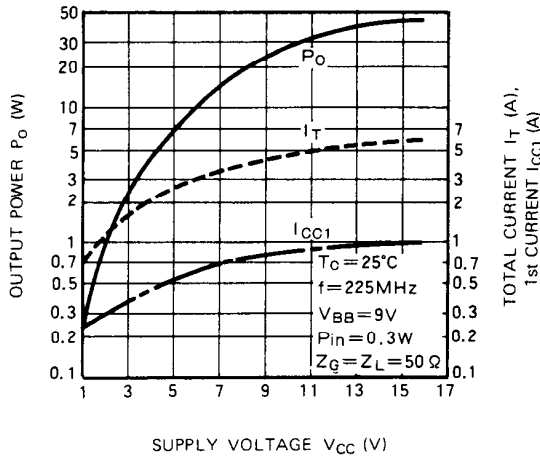
OUTPUT POWER, 2nd CURRENT VS. 1st SUPPLY VOLTAGE CHARACTERISTICS



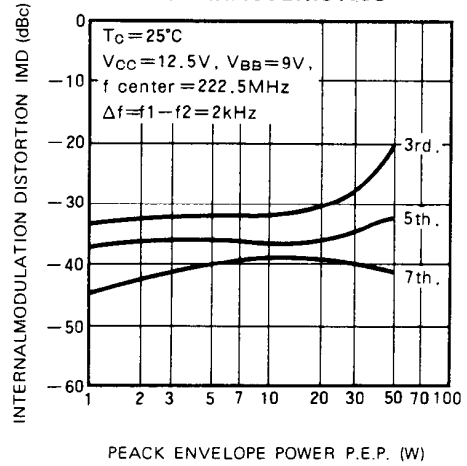
OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. SUPPLY VOLTAGE CHARACTERISTICS



OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. SUPPLY VOLTAGE CHARACTERISTICS



INTERNAL MODULATION DISTORTION VS. PEACK ENVELOPE POWER CHARACTERISTICS



2nd, 3rd HARMONIC VS. FREQUENCY CHARACTERISTICS

