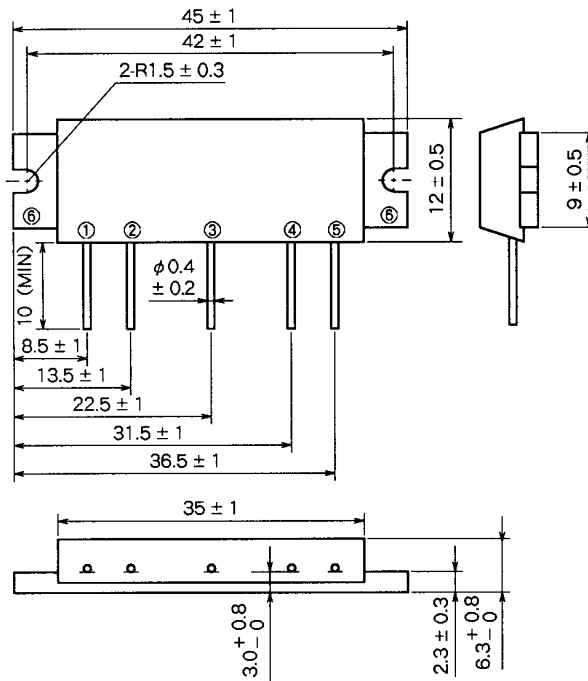


M67715

1240-1300MHz, 8V, 1.2W, SSB PORTABLE RADIO

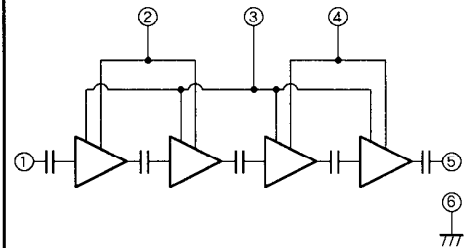
OUTLINE DRAWING

Dimensions in mm



H13

BLOCK DIAGRAM



PIN :

- ①Pin : RF INPUT
- ②VCC1 : 1st. DC SUPPLY
- ③VBB : BASE BIAS SUPPLY
- ④VCC2 : 2nd. DC SUPPLY
- ⑤Po : RF OUTPUT
- ⑥GND : FIN

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

| Symbol | Parameter | Conditions | Ratings | Unit |
|----------------------|----------------------------|----------------------------------------|-------------|------|
| V _{CC1} | Supply voltage | | 9 | V |
| V _{CC2} | | | 16 | V |
| V _{BB} | Base bias | | 9 | V |
| I _{CC} | Total current | | 1.5 | A |
| P _{in(max)} | Input power | Z _G = Z _L = 50 Ω | 10 | mW |
| P _{O(max)} | Output power | Z _G = Z _L = 50 Ω | 4 | W |
| T _{C(OP)} | Operation case temperature | | - 20 to 100 | °C |
| T _{stg} | Storage temperature | | - 40 to 110 | °C |

Note. Above parameters are guaranteed independently.

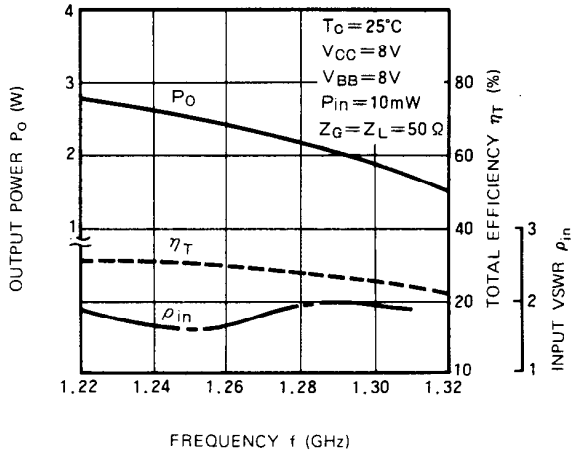
ELECTRICAL CHARACTERISTICS (T_c = 25 °C unless otherwise noted)

| Symbol | Parameter | Test conditions | Limits | | Unit |
|------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------|------|
| | | | Min | Max | |
| f | Frequency range | V _{CC1} = V _{CC2} = V _{BB} = 8V P _{in} = 10mW Z _G = Z _L = 50 Ω | 1240 | 1300 | MHz |
| P _o | Output power | | 1.2 | | W |
| η _T | Total efficiency | | 18 | | % |
| 2f _o | 2nd. harmonic | | | - 30 | dBc |
| 3f _o | 3rd. harmonic | | | - 35 | dBc |
| ρ _{in} | Input VSWR | | 2.5 | - | |
| - | Load VSWR tolerance | V _{CC1} = 9V, V _{CC2} = 15.2V, V _{BB} = 9V P _O = 1.5W(P _{in} : controlled), Z _G = 50Ω Load VSWR=10:1(All phase), 5sec | No degradation or destroy | | - |
| IMD ₃ | 3rd. inter modulation distortion | V _{CC1} =V _{CC2} =V _{BB} =8V P _{O(PEP)} =1.26W, Δf=20kHz, Z _G =Z _L =50Ω | | - 23 | dBc |
| IMD ₅ | 5th. inter modulation distortion | V _{CC1} =V _{CC2} =V _{BB} =8V P _{O(PEP)} =1.26W, Δf=20kHz, Z _G =Z _L =50Ω | | - 30 | dBc |

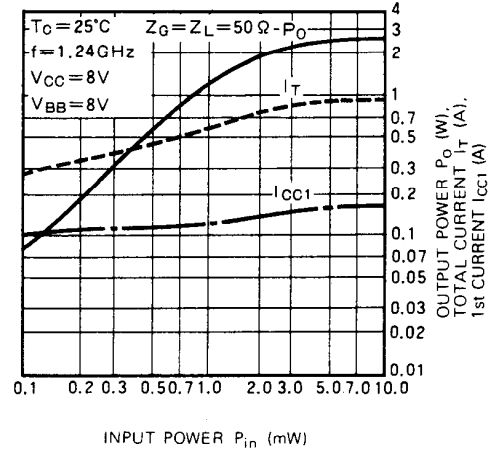
Note. Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

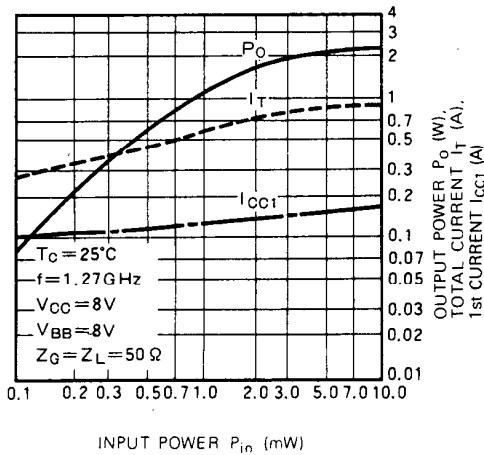
OUTPUT POWER, TOTAL EFFICIENCY, ρ_{in} VS. FREQUENCY CHARACTERISTICS



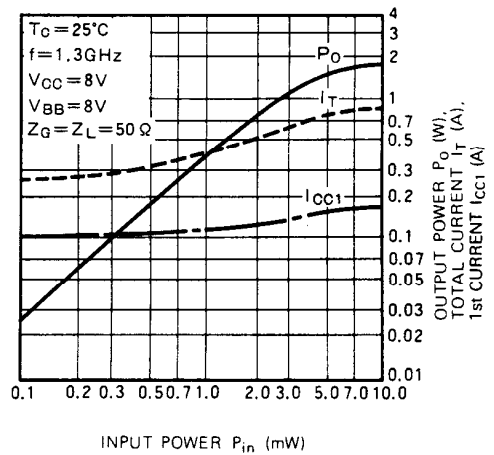
OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. INPUT POWER CHARACTERISTICS



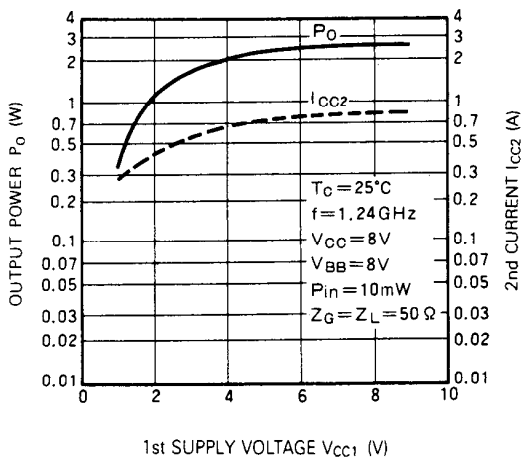
OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. INPUT POWER CHARACTERISTICS



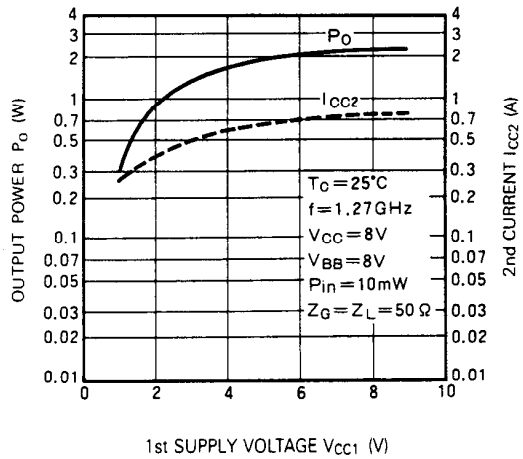
OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. INPUT POWER CHARACTERISTICS



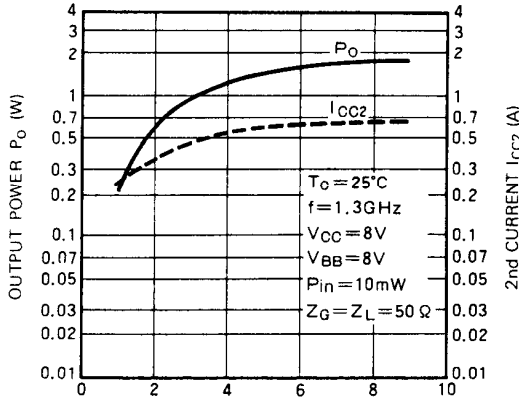
OUTPUT POWER, 2nd CURRENT VS. 1st SUPPLY VOLTAGE CHARACTERISTICS



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

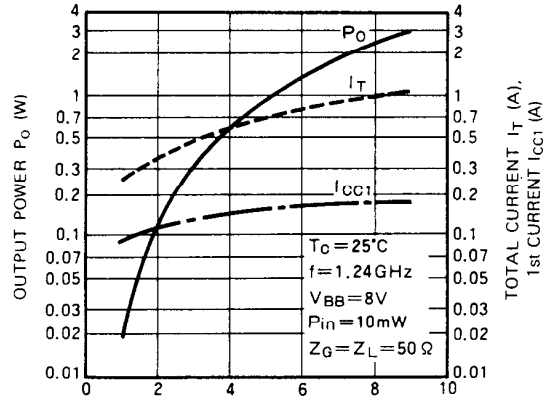


OUTPUT POWER, 2nd CURRENT VS. 1st SUPPLY VOLTAGE CHARACTERISTICS



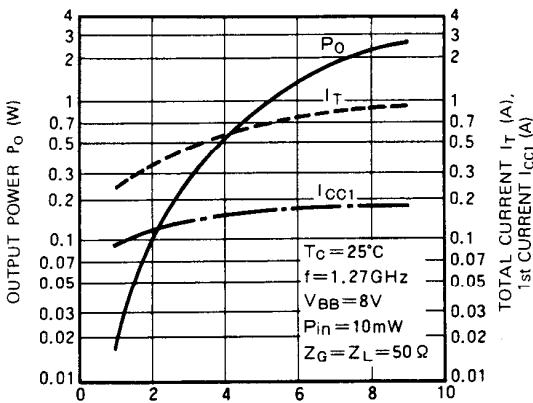
1st SUPPLY VOLTAGE V_{CC1} (V)

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



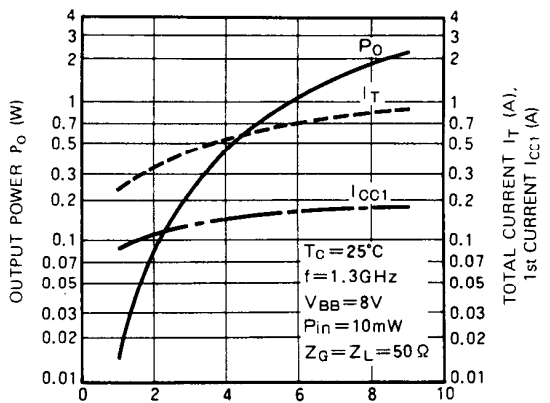
SUPPLY VOLTAGE V_{CC} (V)

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



SUPPLY VOLTAGE V_{CC} (V)

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



SUPPLY VOLTAGE V_{CC} (V)

2nd, 3rd HARMONIC VS. FREQUENCY CHARACTERISTICS

