

TOSHIBA RF POWER AMPLIFIER MODULE

S-AV17

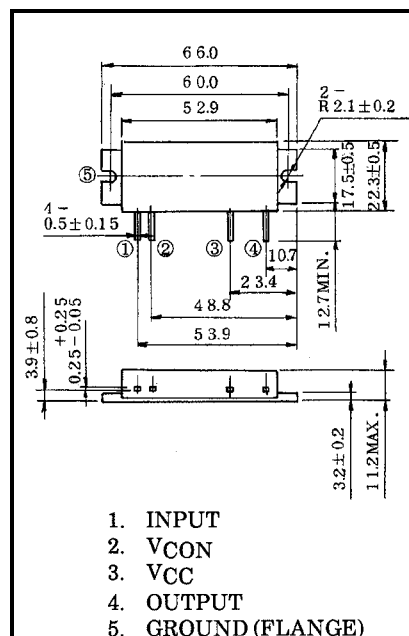
VHF 50W FM RF POWER AMPLIFIER MODULE

HAM Application

Unit in mm

MAXIMUM RATINGS (T_c = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|--|----------------------|---------|------|
| DC Supply Voltage | V _{CC} | 16 | V |
| DC Supply Voltage | V _{CON} | 16 | V |
| Total Current | I _T | 14 | A |
| Input Power | P _i | 600 | mW |
| Output Power | P _o | 65 | W |
| @ 12.5V < V _{CC} ≤ 16V V _{CON} ≤ 12.5V P _i = 400mW Z _G = Z _L = 50Ω | | | |
| Operating Case Temperature Range | T _{c (opr)} | -30~100 | °C |
| Storage Temperature Range | T _{stg} | -40~110 | °C |



| | |
|---------|-------|
| JEDEC | — |
| EIAJ | — |
| TOSHIBA | 5-53L |

Weight: 35g

ELECTRICAL CHARACTERISTICS (T_c = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|------------------|--------------------|--|--|------|------|------|
| Frequency Range | f _{range} | — | 144 | — | 148 | MHz |
| Output Power | P _o | P _i = 400mW V _{CC} = V _{CON} = 12.5V Z _G = Z _L = 50Ω | 60 | — | — | W |
| Power Gain | G _p | | 21.7 | — | — | dB |
| Total Efficiency | η _T | | 45 | — | — | % |
| Input VSWR | VSWR _{in} | | — | 1.5 | 2.0 | — |
| Harmonics | HRM | | — | -30 | -25 | dB |
| Load Mismatch | — | P _o = 60W (V _{CON} = adjust) V _{CC} = 15V P _i = 400mW VSWR load 20: 1 all phase | No Degradation | | | — |
| Stability | — | V _{CC} = 12.5V V _{CON} = 0~12.5V P _i = 400mW VSWR load 3: 1 all phase | All spurious output than 60dB below desired signal | | | — |

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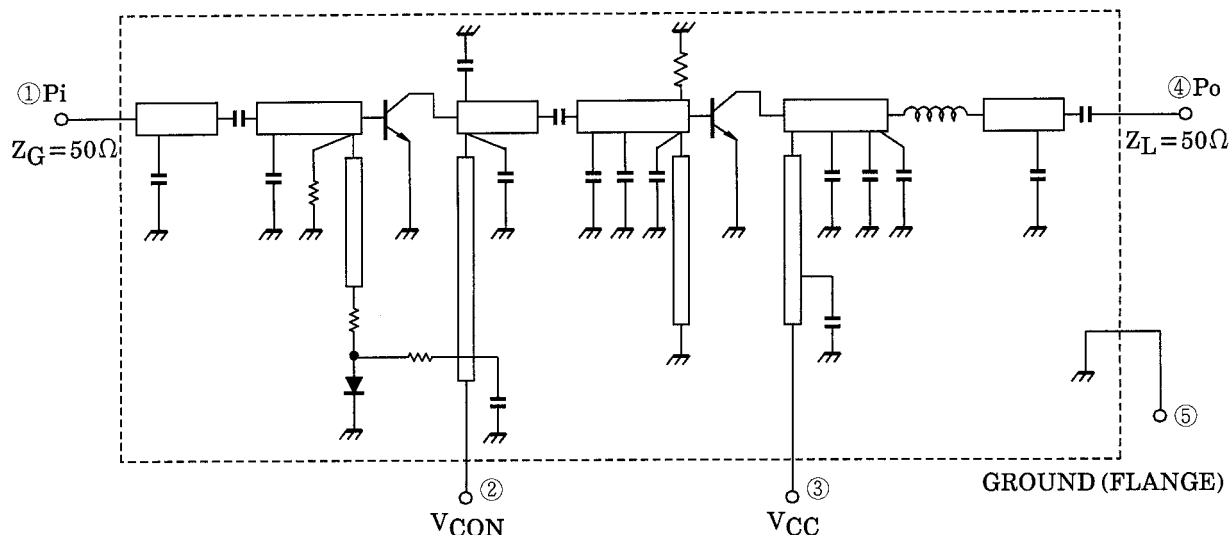
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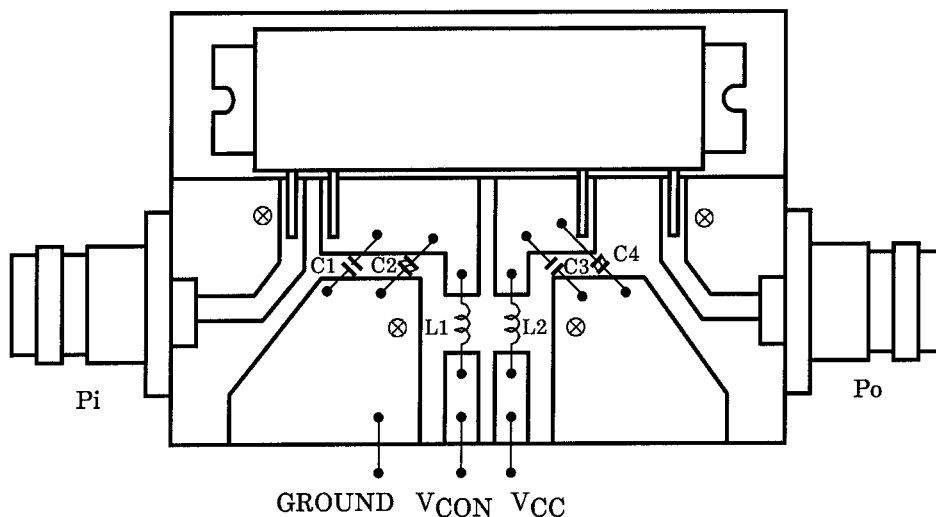
CAUTION

- This product has intersetting cap. Please pay attention for exceeding stress and foreign matter in your application. And not to take away the cap.
- Beryllia Ceramics is used in this product. The dust or vapor can be dangerous to humans. Do not break, cut, crush or dissolve chemically. Dispose of this product properly according to law. Do not intermingle with normal industrial or domestic waste.

SCHEMATIC



TEST FIXTURE



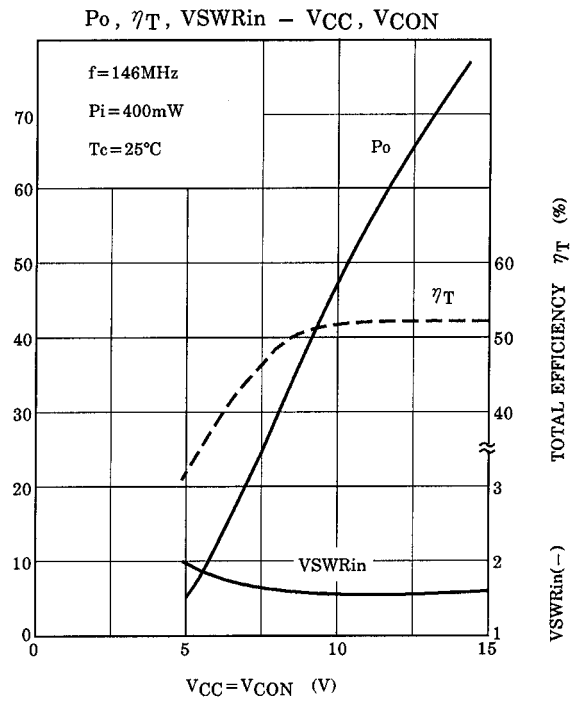
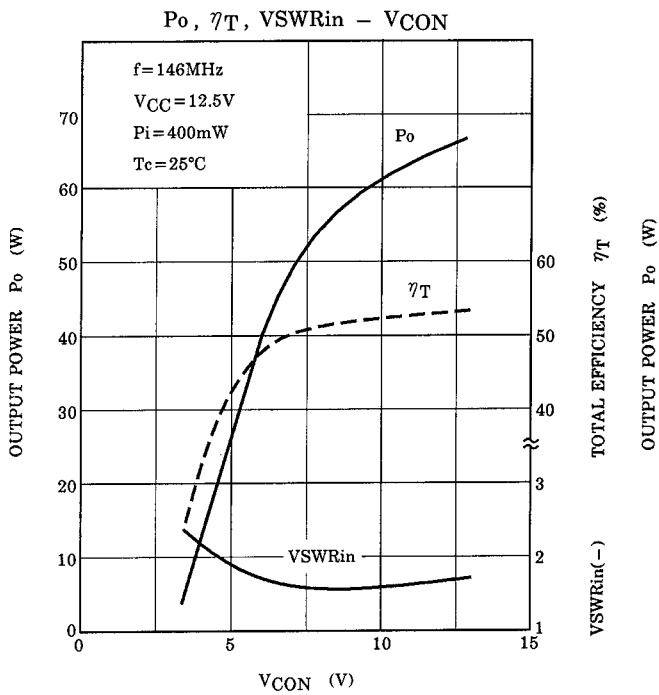
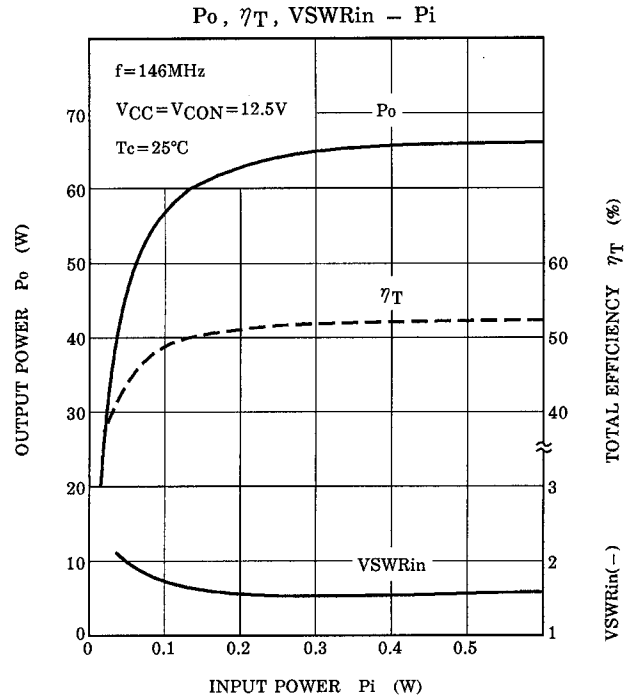
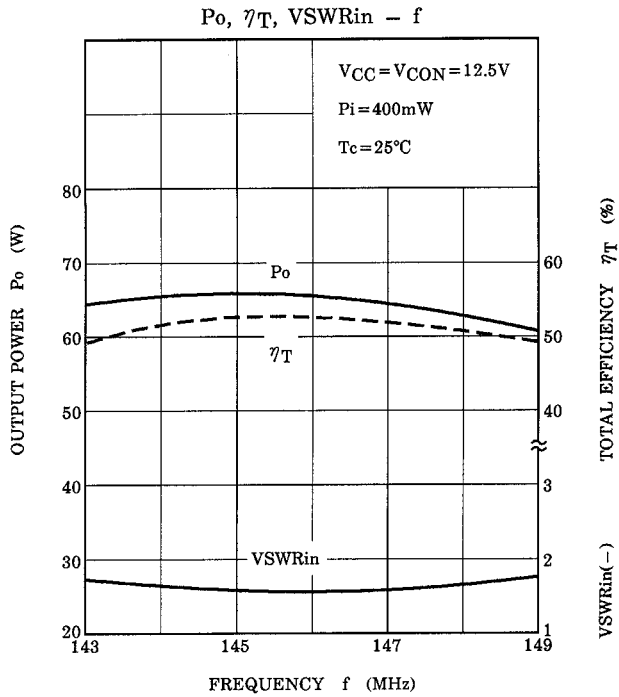
C1, C3 : 1500pF

C2, C4 : 10μF

L1, L2 : φ0.8ENAMEL WIRE, 8T, 5ID

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CAUTION

These are only typical curves and devices are not necessarily guaranteed at these curves.