

TOSHIBA RF POWER AMPLIFIER MODULE

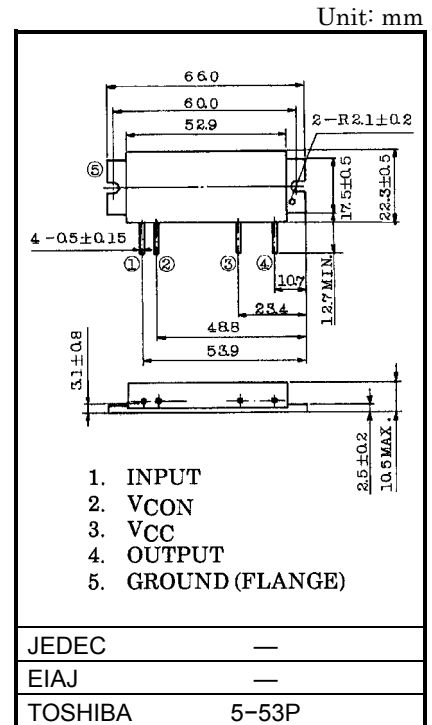
S-AV6

VHF MARINE FM RF POWER AMPLIFIER MODULE

- High Gain : $P_o \geq 28W$, $G_p \geq 21.4dB$, $\eta_T \geq 45\%$

MAXIMUM RATINGS (Tc = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|----------------------------------|----------------------|---------|------|
| DC Supply Voltage | V _{CC} | 16 | V |
| DC Supply Voltage | V _{CON} | 16 | V |
| Input Power | P _i | 300 | mW |
| Operating Case Temperature Range | T _{c (opr)} | -30~100 | °C |
| Storage Temperature Range | T _{stg} | -40~110 | °C |



ELECTRICAL CHARACTERISTICS (Tc = 25°C)

Weight: 35g

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN | TYP. | MAX | UNIT |
|------------------|--------------------|--|--|------|-----|------|
| Frequency Range | f _{range} | — | 154 | — | 162 | MHz |
| Output Power | P _o | P _i = 200mW V _{CC} = 12.5V, V _{CON} = 12.5V Z _G = Z _L = 50Ω | 28 | 33 | — | W |
| Power Gain | G _p | | 21.4 | 22.2 | — | dB |
| Total Efficiency | η _T | | 45 | 50 | — | % |
| Input VSWR | VSWR _{in} | | — | 1.5 | 2 | — |
| Harmonics | HRM | | — | -30 | -25 | dB |
| Load Mismatch | — | V _{CC} = 15V, V _{CON} = 12.5V P _o = 30W (P _i = adjust) VSWR load 20: 1 all phase | No Degradation | | | — |
| Power Slump | — | T _c = -30~80°C V _{CC} = 12.5V, P _i = 200mW P _o = 28W (@T _c = 25°C) | — | 0.8 | — | dB |
| Stability | — | V _{CC} = 12.5V, P _i = 200mW V _{CON} = 0~12.5V VSWR load 3: 1 all phase | All spurious output than 60dB below desired signal | | | — |

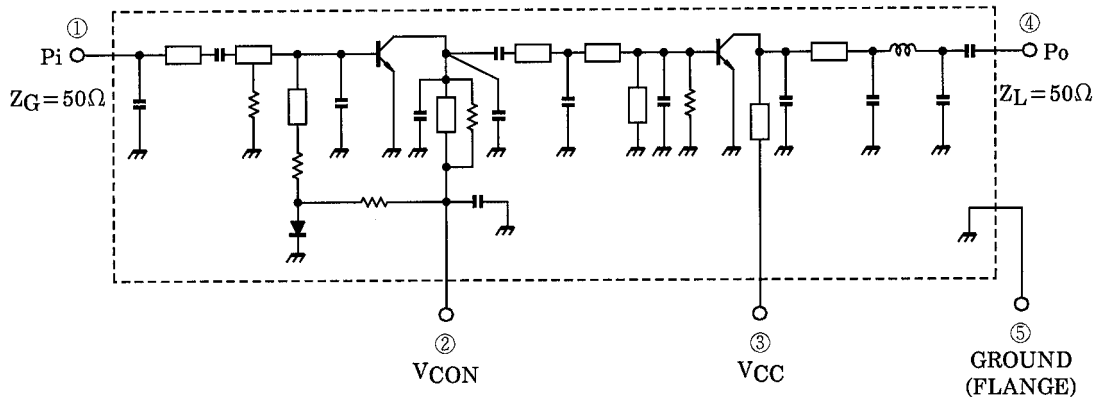
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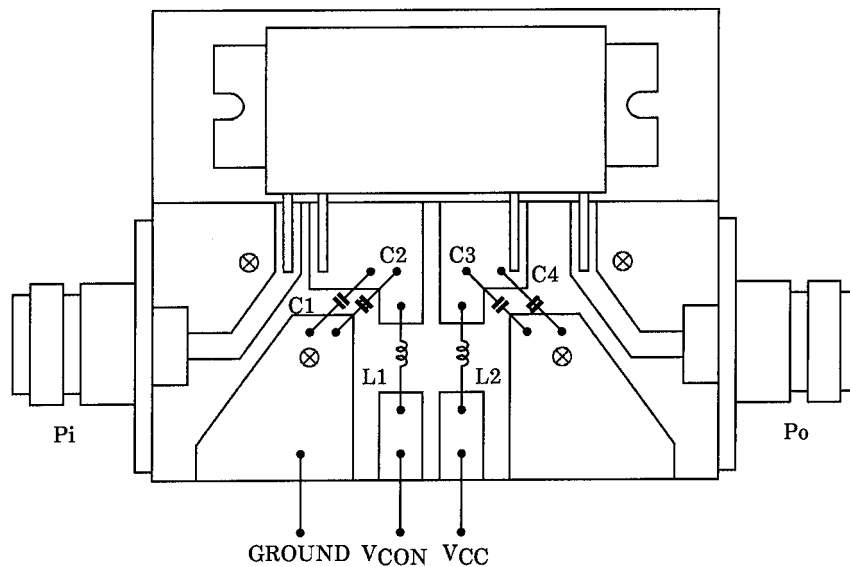
CAUTION

- 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



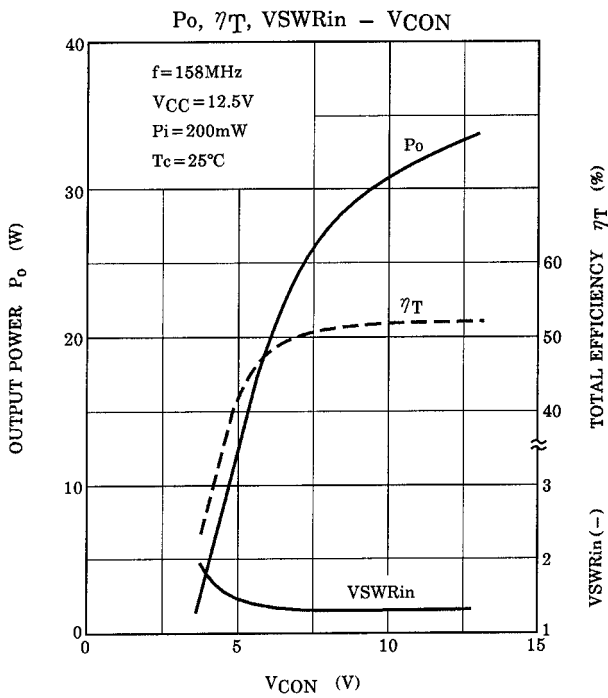
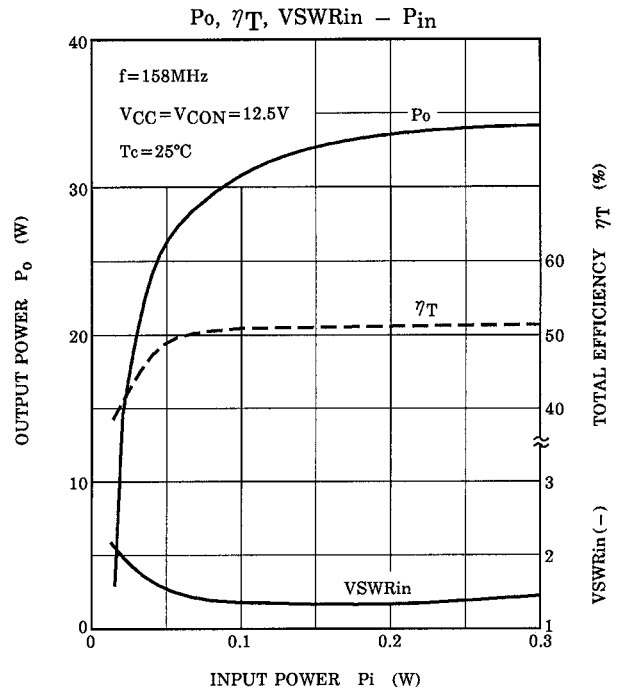
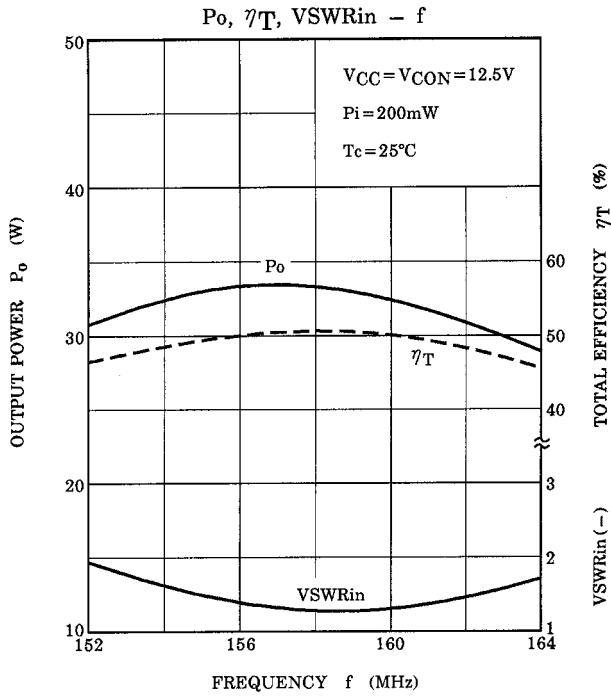
TEST FIXTURE



- C1, C3 : 15000pF
- C2, C4 : 10 μ F
- L1, L2 : ϕ 0.8 ENAMEL WIRE, 8T, 5ID

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CAUTION

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