

TOSHIBA RF POWER AMPLIFIER MODULE

S-AU82L

OFM RF POWER AMPLIFIER MODULE for UHF BAND

- Output Power :60W (Min.)
- Power Gain :30.7dB (Min.)
- Total Efficiency:40% (Min.)

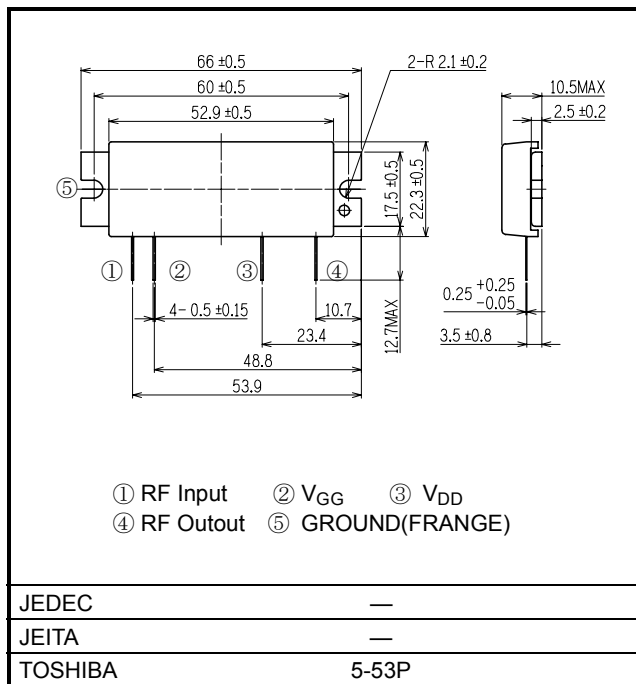
MAXIMUM RATINGS (T_c = 25°C, Z_G = Z_L = 50 Ω)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | RATING | UNIT |
|----------------------------------|----------------------|---|---------|------|
| DC Supply Voltage | V _{DD} | V _{GG} =0V, P _i =0mW | 16.5 | V |
| DC Supply Voltage | V _{DD} | V _{GG} ≤5V, P _i =50mW, P _o ≤60W | 16.5 | V |
| DC Supply Voltage | V _{GG} | V _{DD} ≤12.5V, P _i =50mW | 5.5 | V |
| Total Current | I _T | V _{DD} ≤12.5V, P _i =50mW | 15 | A |
| Input Power | P _i | V _{DD} ≤12.5V, V _{GG} ≤5V | 100 | mW |
| Output Power | P _o | 12.5V < V _{DD} ≤16.5V, V _{GG} ≤5V, P _i =50mW | 80 | W |
| Operating Case Temperature Range | T _c (opr) | V _{GG} ≤5V | -30~100 | °C |
| Storage Temperature Range | T _{stg} | | -40~110 | °C |

Caution: This maximum rating given in a sheet guarantees each item independently. When two items or more of maximum rated items joins a device at once. It becomes the outside of a guarantee. Please design in circuit to make it always operate within this reguration also on the worst condition.

PACKAGE OUTLINE

Unit in mm



Weight: 35g

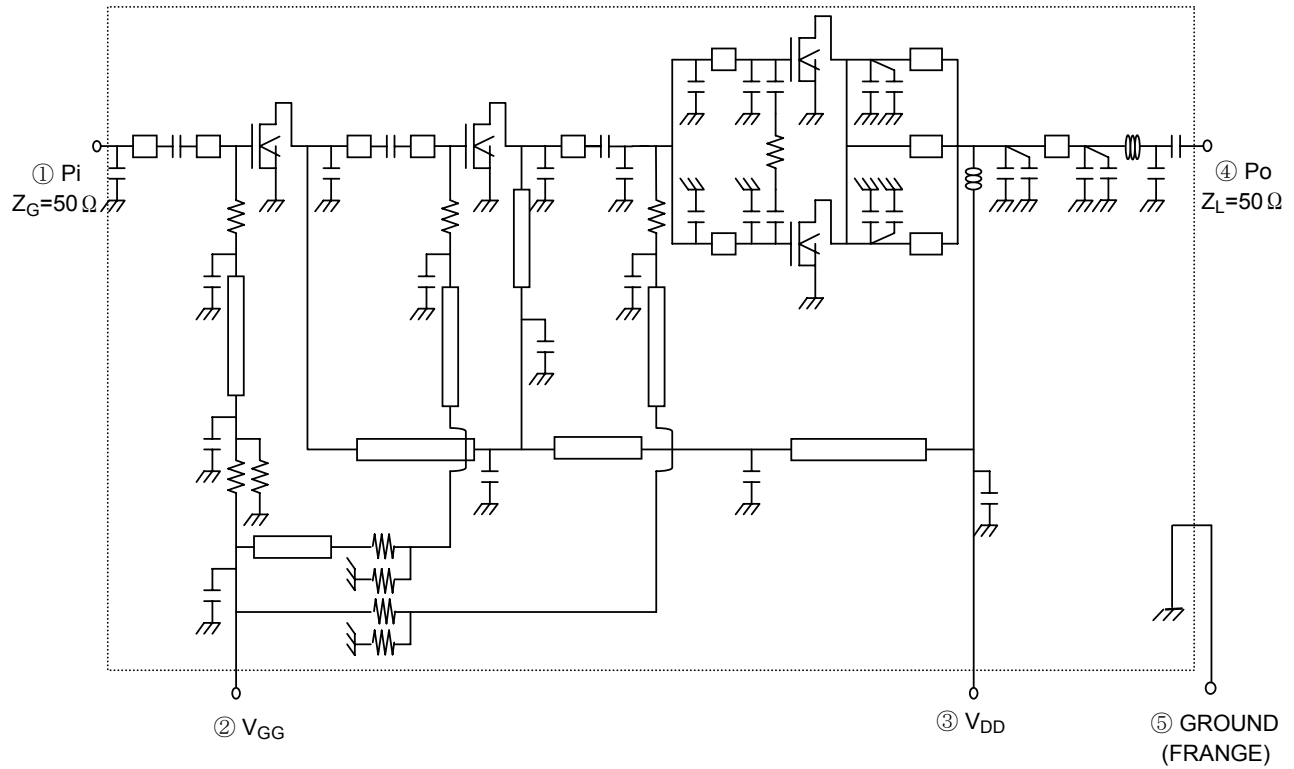
ELECTRICAL CHARACTERISTICS (T_c = 25°C, Z_G = 50 Ω)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------|--------------------|--|--|------|------|------|
| Frequency Range | f _{range} | — | 400 | — | 470 | MHz |
| Total Current (DC operation) | I _T | V _{DD} = 12.5V, V _{GG} = 5V, P _i = 0mW Z _L = 50 Ω | — | — | 15 | A |
| Output Power | P _o | V _{DD} = 12.5V V _{GG} = 5V P _i = 50mW Z _L = 50 Ω | 60 | — | — | W |
| Power Gain | G _p | | 30.7 | — | — | dB |
| Total Efficiency | η _T | | 40 | — | — | % |
| Input VSWR | VSWR _{in} | | — | — | 3.0 | — |
| Second Harmonic | 2nd HRM | | — | — | -30 | dB |
| Third Harmonic | 3rd HRM | | — | — | -30 | dB |
| Load Mismatch | — | V _{DD} = 10.5 to 16.5V, V _{GG} = 0 to 5V P _i = 50mW P _o = 60W (V _{GG} = adjust,@ Z _L = 50 Ω) VSWR LOAD 20: 1 ALL PHASE (@2s) | No Degradation | | | — |
| Stability | — | V _{DD} = 10.5 to 16.5V, V _{GG} = 0 to 5V P _i = 50mW P _o ≤ 60W (V _{GG} = adjust,@ Z _L = 50 Ω) VSWR LOAD 3: 1 ALL PHASE | All spurious output than 60dB below desired signal | | | — |

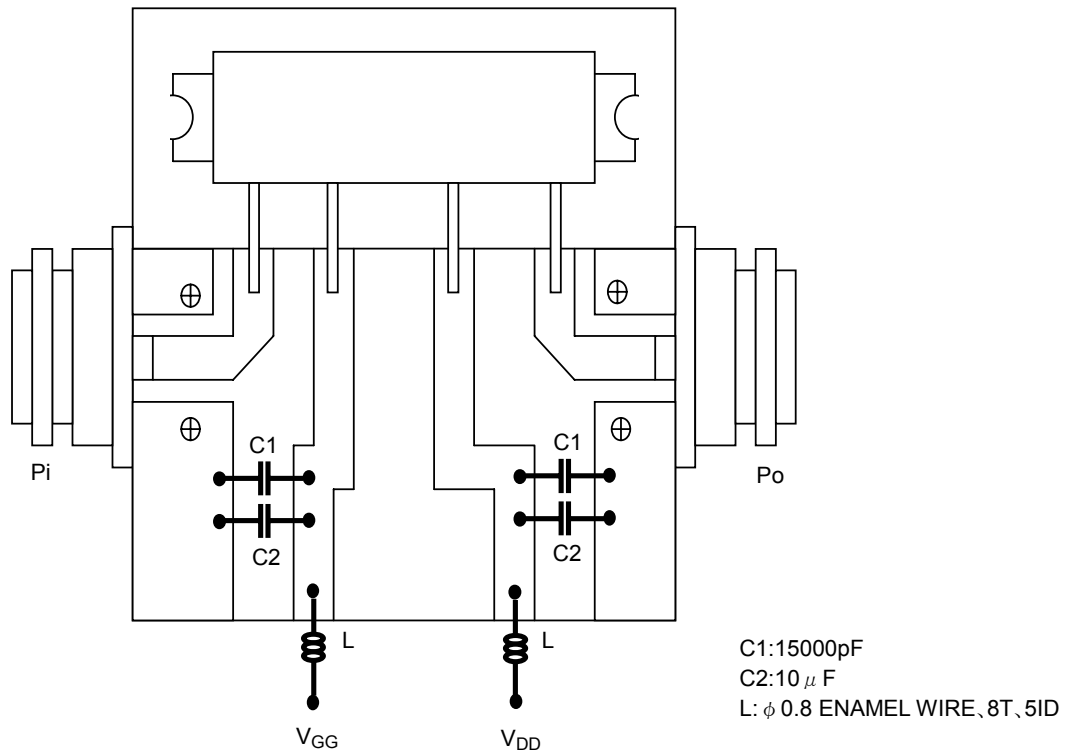
Caution

- This product has intersetting cap. Please pay attention for exceeding stress and foreign matter in your application. And not to take away the cap.
- 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.
- This product is electrostatic sensitivity, please handle with caution.
- This product is flowed high current for a VDD terminal at both RF ON and RF OFF. And it has large calorific value for high output poer. So please use it within the limit of the maximum rating.
The view of the maximum rating of our company,
"The absolute maximum ratings are rated values which must not be exceeded during operatin, even for an instant. And it guarantees each item independently. When two items or more of maximum rated items joins a device at once. It becomes the outside of a guarantee. "

SCHEMATIC



TEST FIXTURE



RESTRICTIONS ON PRODUCT USE

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