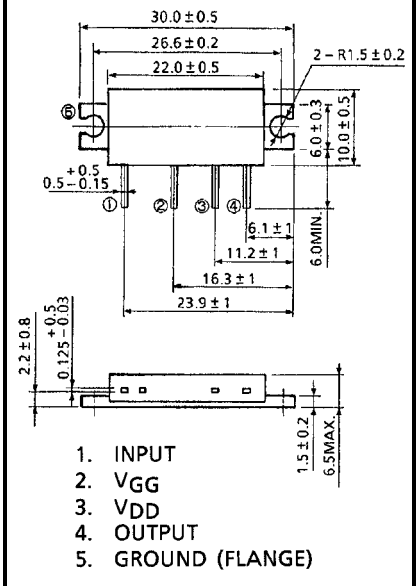
TOSHIBA RF POWER AMPLIFIER MODULE

# S−AU50M

UHF BAND FM POWER AMPLIFIER MODULE
HAND-HELD TRANSCEIVER

Unit: mm




| | |
|---|---|
| JEDEC | — |
| EIAJ | — |
| TOSHIBA | 5−23E |

Weight: 3.5g

## MAXIMUM RATINGS (Tc = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---|---|---|---|
| DC Supply Voltage | $V_{DD}$ | 17 | V |
| DC Supply Voltage | $V_{GG}$ | 6 | V |
| Input Power | Pi | 150 | mW |
| Output Power | Po | 12 | W |
| Total Current | $I_T$ | 3 | A |
| Operating Case Temperature Range | $T_{c\ (opr)}$ | −30~100 | °C |
| Storage Temperature Range | $T_{stg}$ | −40~110 | °C |

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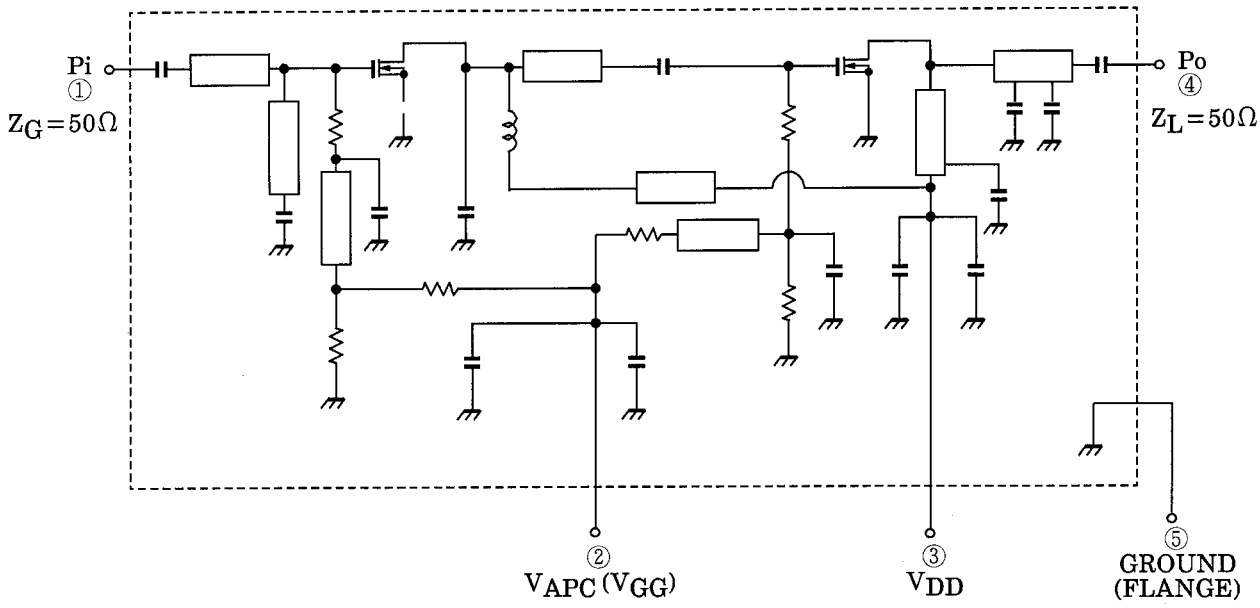
## ELECTRICAL CHARACTERISTICS (Tc = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| Frequency Range | $f_{range}$ | — | 430 | — | 480 | MHz |
| Output Power | Po | $V_{DD}$ = 9.6V, $V_{GG}$ = 4V<br>Pi = 50mW, $Z_G$ = $Z_L$ = 50Ω | 7 | — | — | W |
| Power Gain | $G_p$ | | 21.4 | — | — | dB |
| Total Efficiency | $\eta_T$ | | 40 | — | — | % |
| Input VSWR | VSWRin | | — | — | 3.0 | — |
| Harmonics | HRM | | — | — | −25 | dBc |
| Load Mismatch | — | $V_{DD}$ = 15V, Pi = 50mW<br>Po = 7W ($V_{GG}$ = adjust)<br>VSWR LOAD 20: 1 ALL PHASE | No Degradation | | | — |
| Stability | — | $V_{DD}$ = 7.5~11.5V, $V_{GG}$ = 0~4V<br>Pi = 50mW<br>VSWR LOAD 3: 1 ALL PHASE | All spurious output than 60dB below desired signal | | | — |

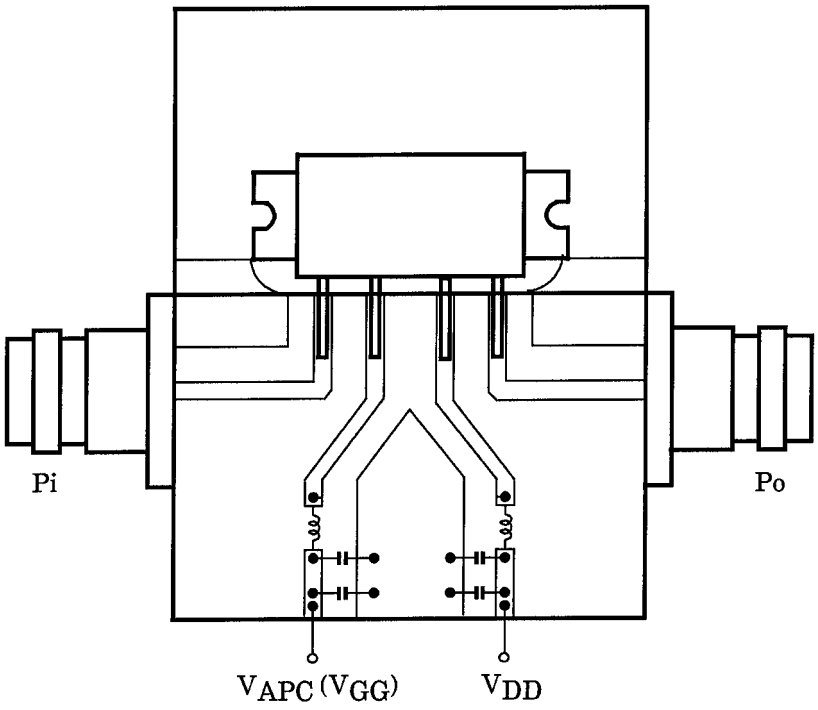
## CAUTION

- 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 intermingle with normal industrial or domestic waste.
- This product is electrostatic sensitivity, please handle with caution.

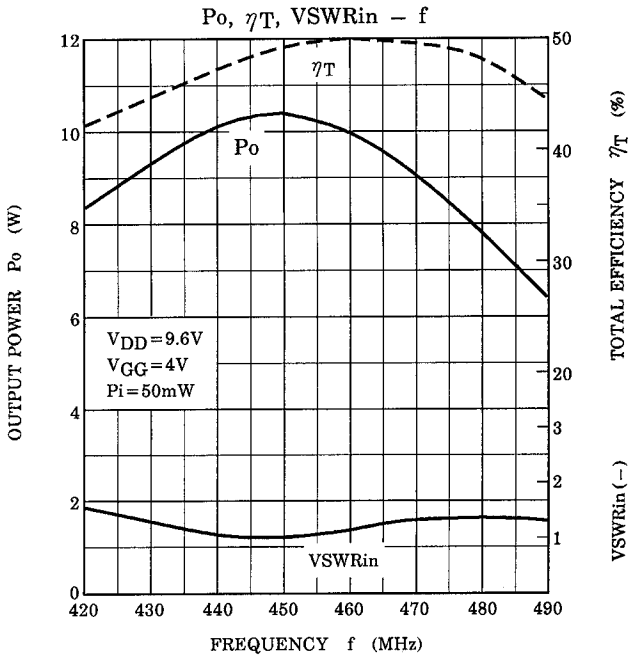
## SCHEMATIC

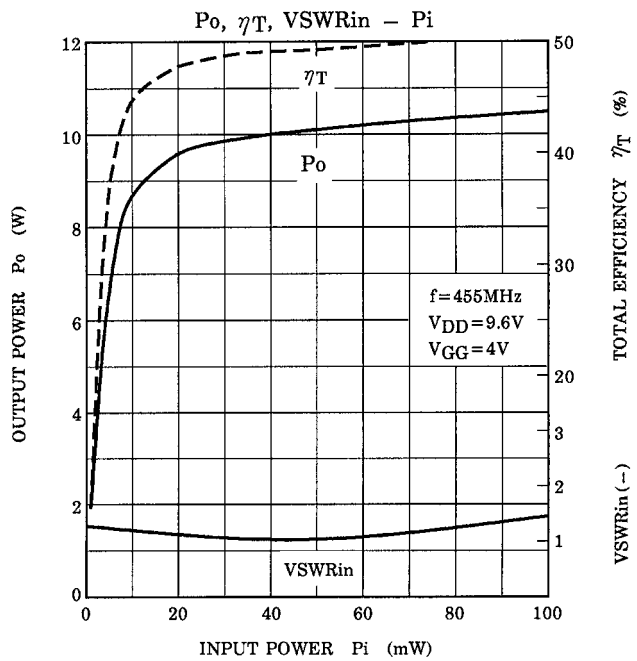


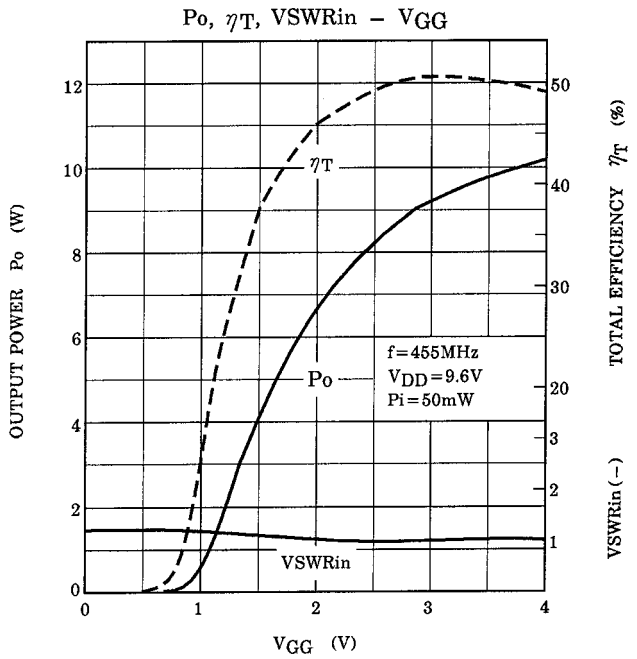

## TEST FIXTURE




C : 10000pF, 10$\mu$F PARALLEL
L : $\phi$0.5, 3ID, 5T ENAMEL WIRE




## CAUTION

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