

TOSHIBA RF POWER AMPLIFIER MODULE

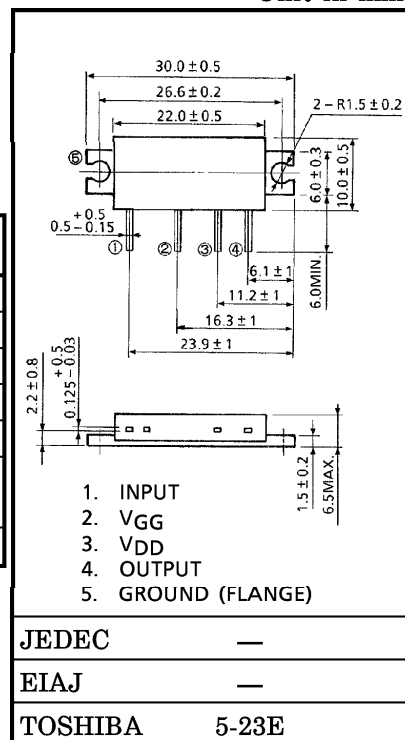
**S-AU57**

UHF BAND HAM FM RF POWER AMPLIFIER MODULE  
HAND-HELD TRANSCEIVER

Unit in mm

MAXIMUM RATINGS (Tc = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V <sub>DD</sub>	17	V
DC Supply Voltage	V <sub>GG</sub>	6	V
Input Power	P <sub>i</sub>	50	mW
Output Power	P <sub>o</sub>	12	W
Total Current	I <sub>T</sub>	3	A
Operating Case Temperature Range	T <sub>c (opr)</sub>	-30~100	°C
Storage Temperature Range	T <sub>stg</sub>	-40~110	°C



ELECTRICAL CHARACTERISTICS (Tc = 25°C)

Weight : 3.5g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Frequency Range	f <sub>range</sub>	—	430	—	450	MHz
Output Power	P <sub>o</sub>	V <sub>DD</sub> = 9.6V V <sub>GG</sub> = 4V P <sub>i</sub> = 20mW Z <sub>G</sub> = Z <sub>L</sub> = 50Ω	7	—	—	W
Power Gain	G <sub>p</sub>		25.4	—	—	dB
Total Efficiency	η <sub>T</sub>		40	—	—	%
Input VSWR	VSWR <sub>in</sub>		—	—	3.0	—
Harmonics	HRM		—	—	-25	dBc
Load Mismatch	—	V <sub>DD</sub> = 15V, P <sub>i</sub> = 20mW P <sub>o</sub> = 7W (V <sub>GG</sub> = adjust) VSWR LOAD 20 : 1 ALL PHASE	No Degradation			—
Stability	—	V <sub>DD</sub> = 7.5~11.5V, V <sub>GG</sub> = 0~4V P <sub>i</sub> = 20mW VSWR LOAD 3 : 1 ALL PHASE	All spurious output than 60dB below desired signal			—

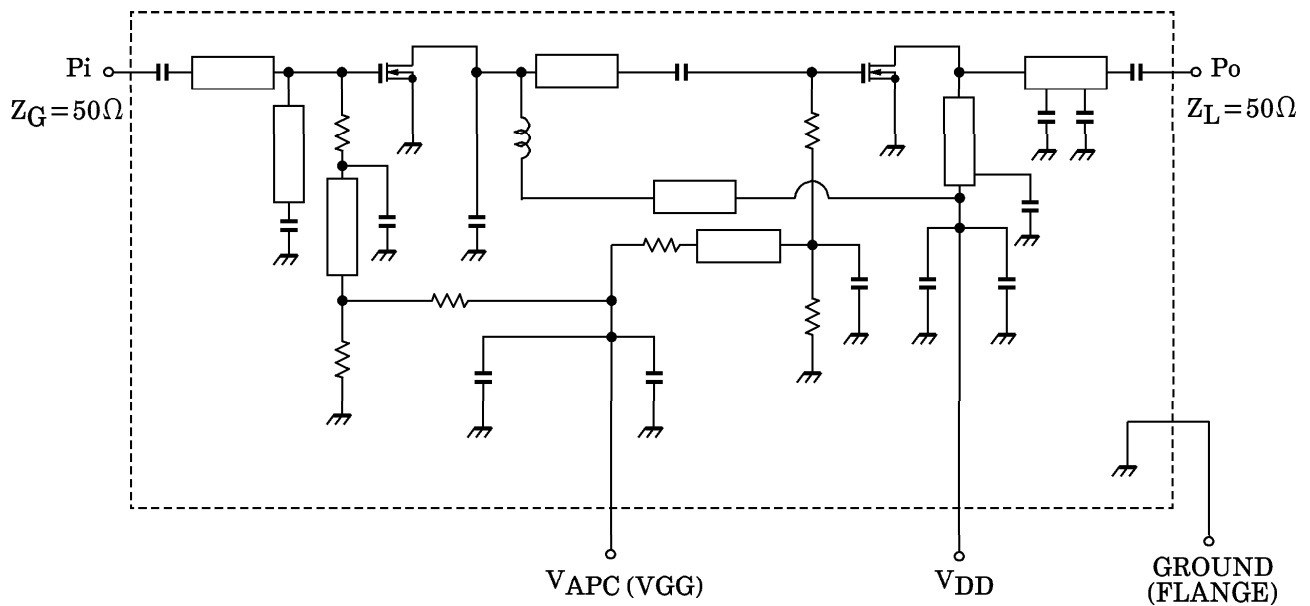
CAUTION

- 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.

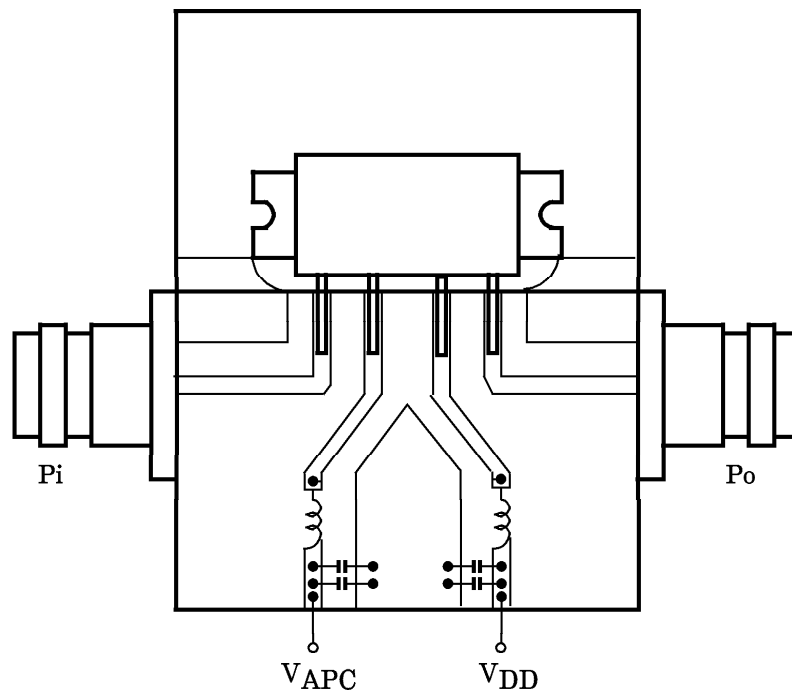
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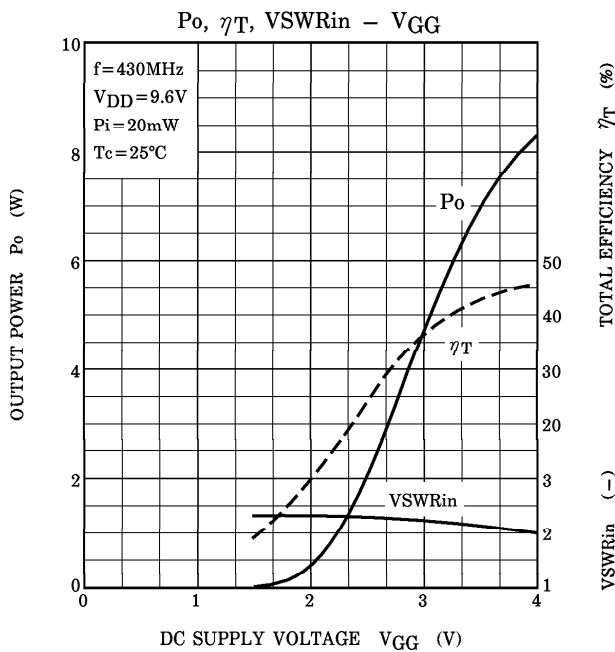
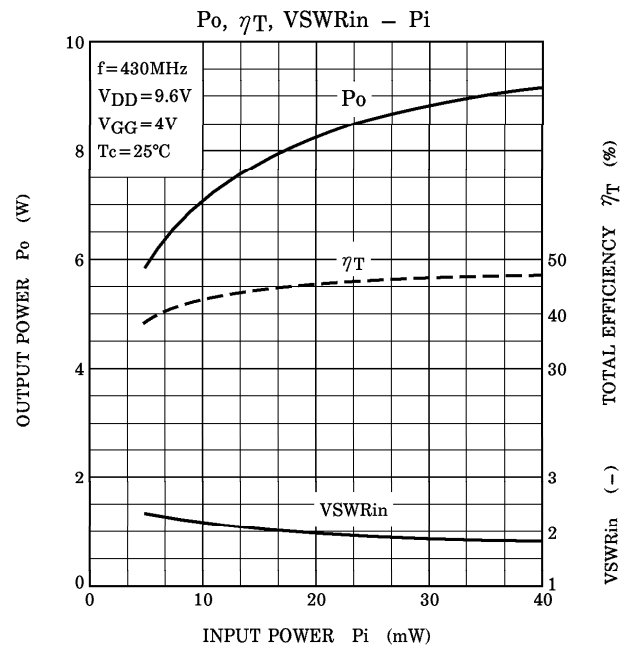
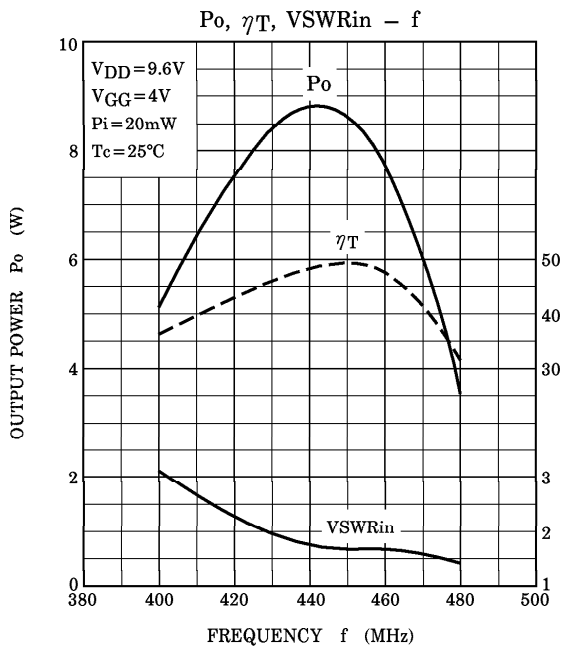
**SCHEMATIC**



**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.