

TOSHIBA RF POWER AMPLIFIER MODULE

**S-AV17**

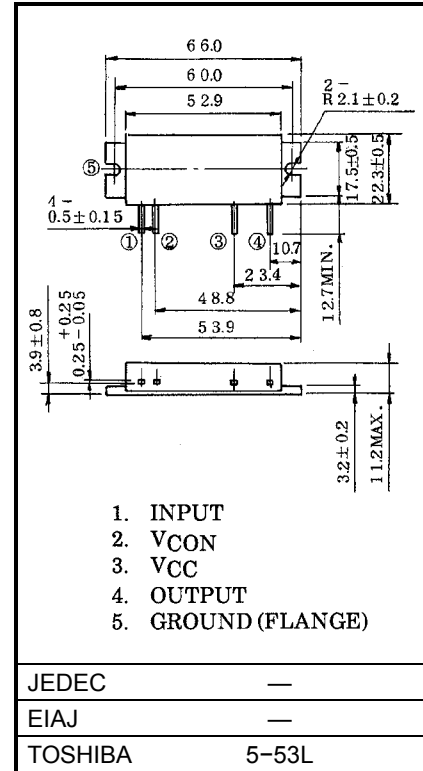
VHF 50W FM RF POWER AMPLIFIER MODULE

HAM Application

Unit in mm

**MAXIMUM RATINGS (Tc = 25°C)**

CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V <sub>CC</sub>	16	V
DC Supply Voltage	V <sub>CON</sub>	16	V
Total Current	I <sub>T</sub>	14	A
Input Power	P <sub>i</sub>	600	mW
Output Power	P <sub>o</sub>	65	W
@ 12.5V < V <sub>CC</sub> ≤ 16V V <sub>CON</sub> ≤ 12.5V P <sub>i</sub> = 400mW Z <sub>G</sub> = Z <sub>L</sub> = 50Ω			
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)**

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

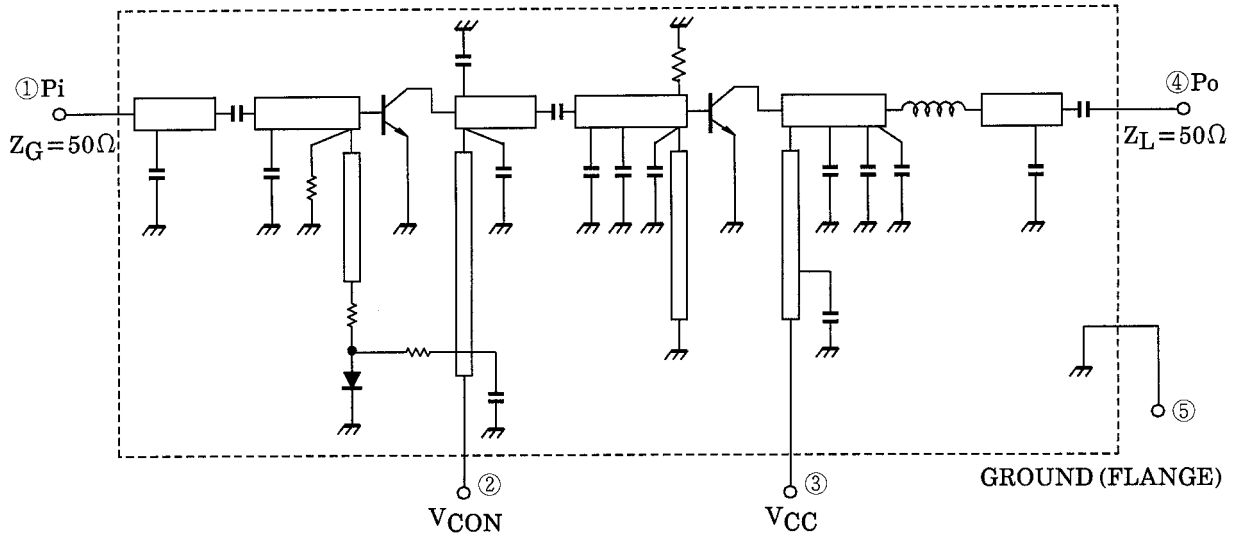
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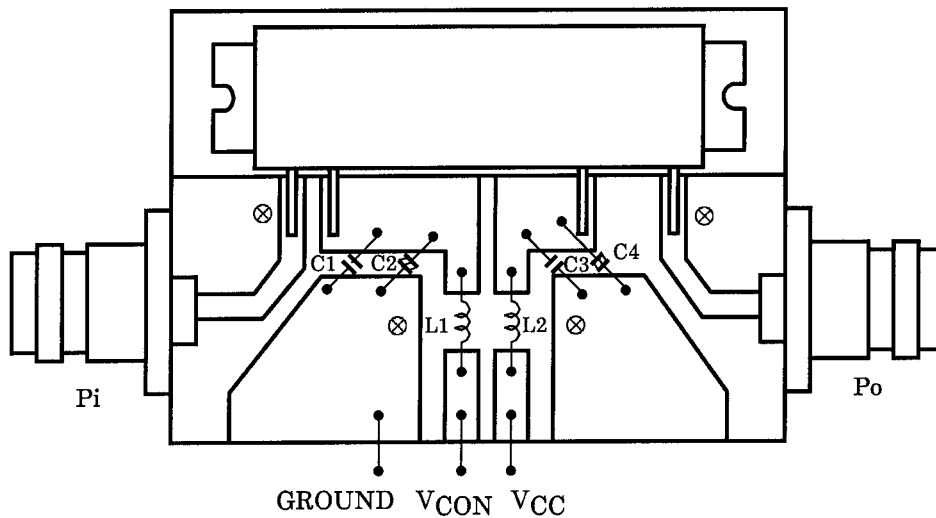
## CAUTION

- 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



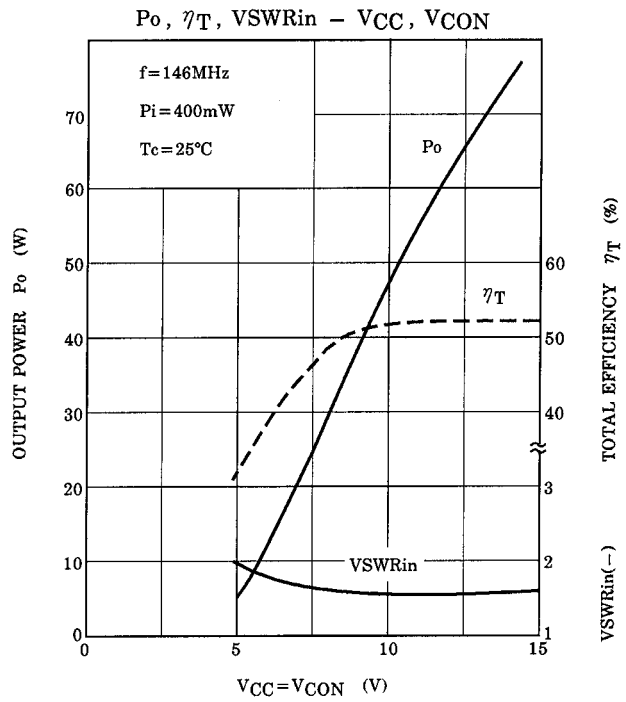
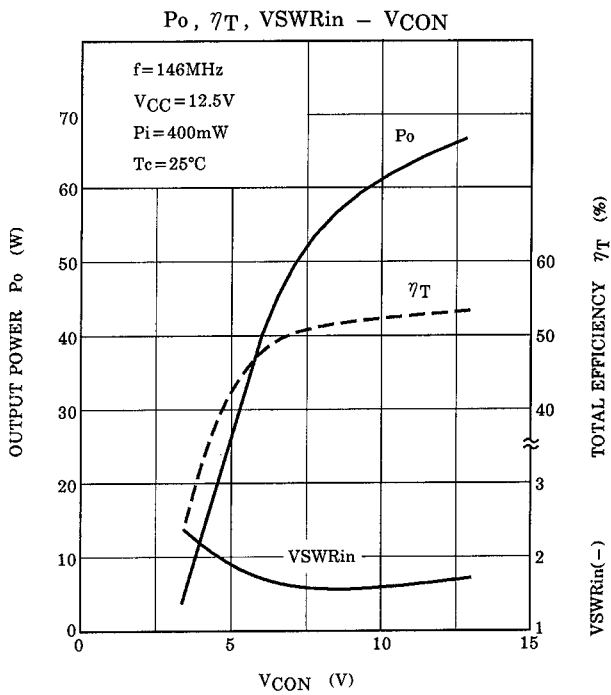
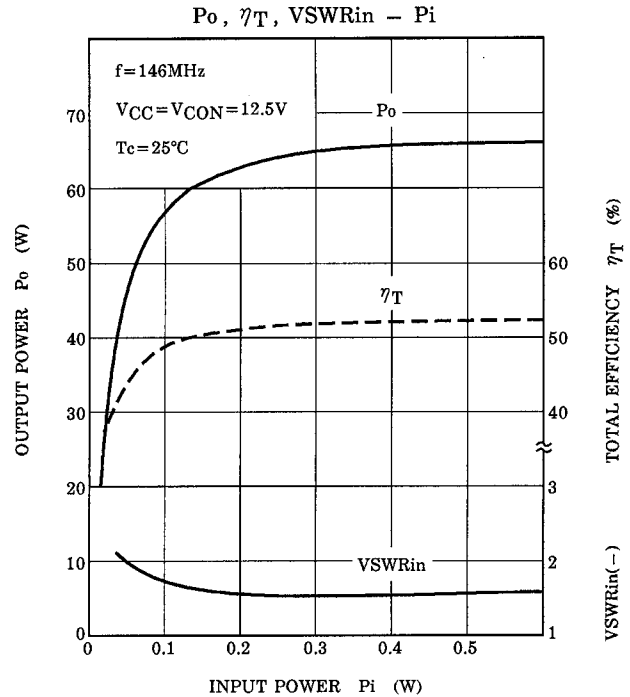
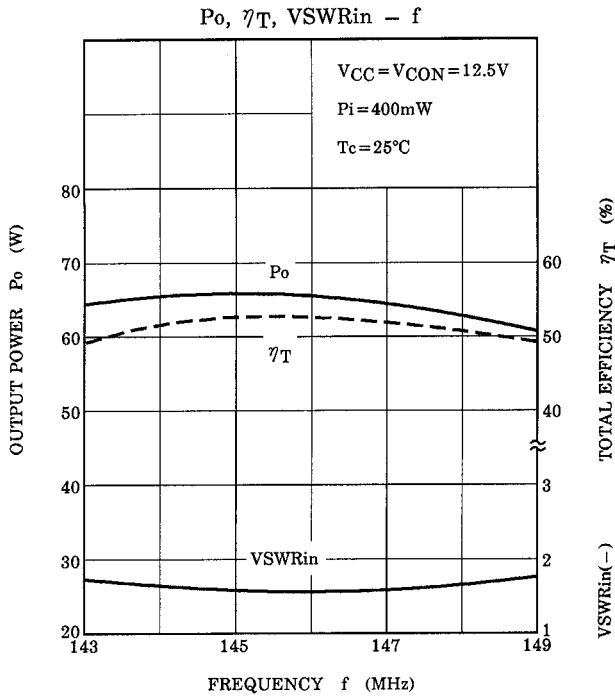
## TEST FIXTURE



- C1, C3 : 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.