

TOSHIBA RF POWER AMPLIFIER MODULE

**S-AV17**

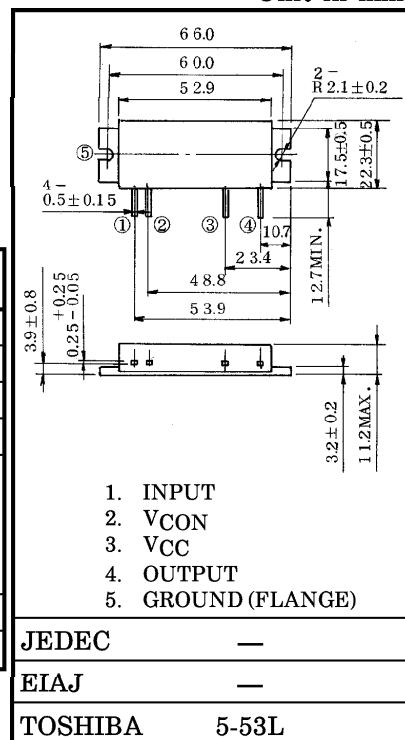
VHF 50W FM RF POWER AMPLIFIER MODULE

HAM Application

Unit in mm

MAXIMUM RATINGS (Tc = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	VCC	16	V
DC Supply Voltage	VCON	16	V
Total Current	IT	14	A
Input Power	Pi	600	mW
Output Power	Po	65	W
@ 12.5V < VCC ≤ 16V VCON ≤ 12.5V Pi = 400mW ZG = ZL = 50Ω			
Operating Case Temperature Range	Tc (opr)	-30~100	°C
Storage Temperature Range	Tstg	-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	Po	Pi = 400mW VCC = VCON = 12.5V ZG = ZL = 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	—	Po = 60W (VCON = adjust) VCC = 15V Pi = 400mW VSWR load 20 : 1 all phase	No Degradation			—
Stability	—	VCC = 12.5V VCON = 0~12.5V Pi = 400mW VSWR load 3 : 1 all phase	All spurious output than 60dB below desired signal			—

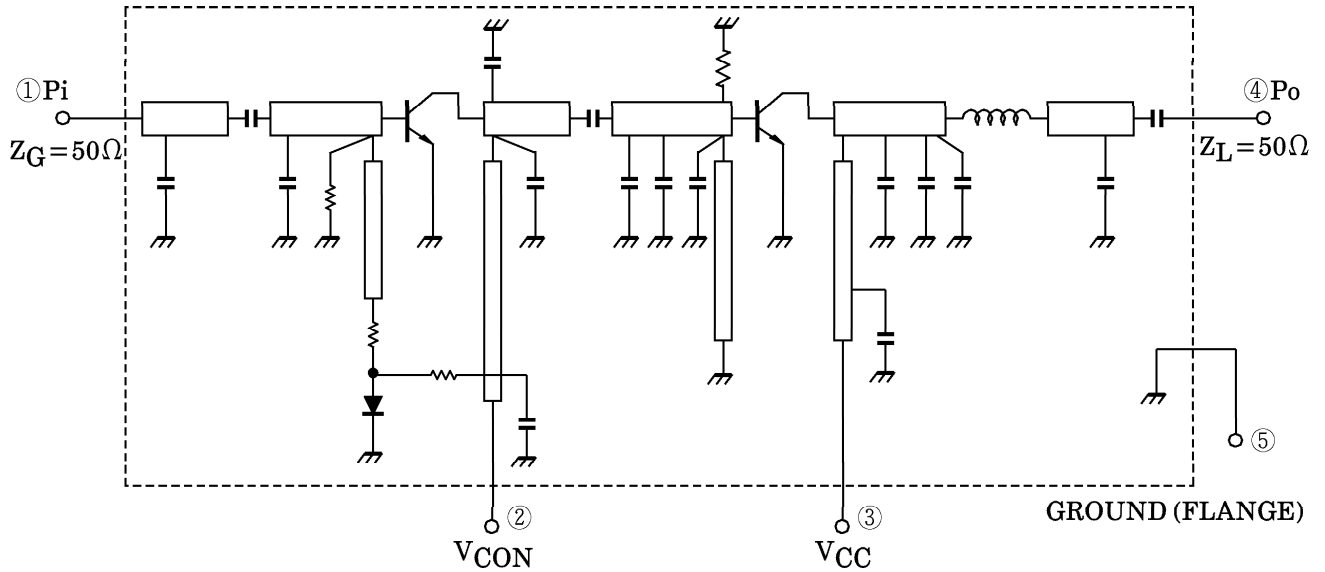
CAUTION

- This product has intersetting cap. Please pay attention for exceeding stress and foreign matter in your application. And not to take away the cap.
- 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.

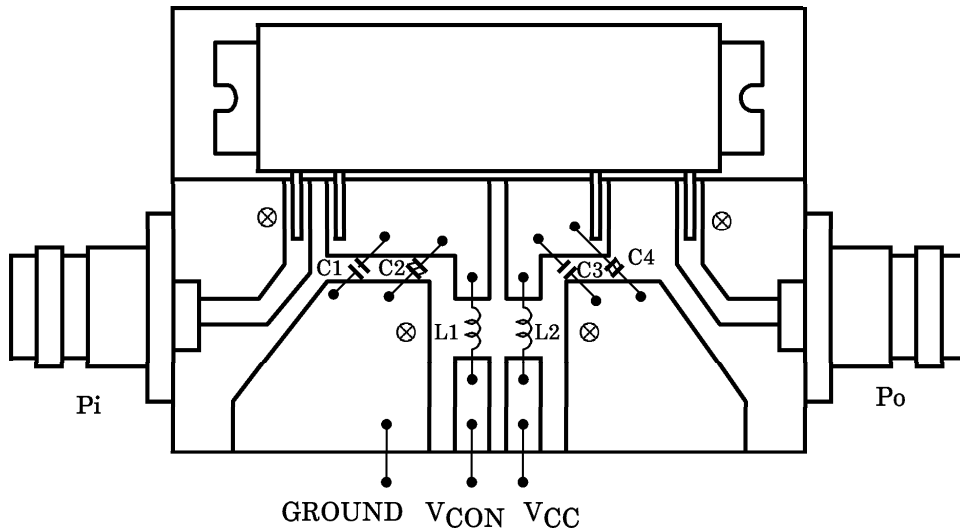
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**SCHEMATIC**



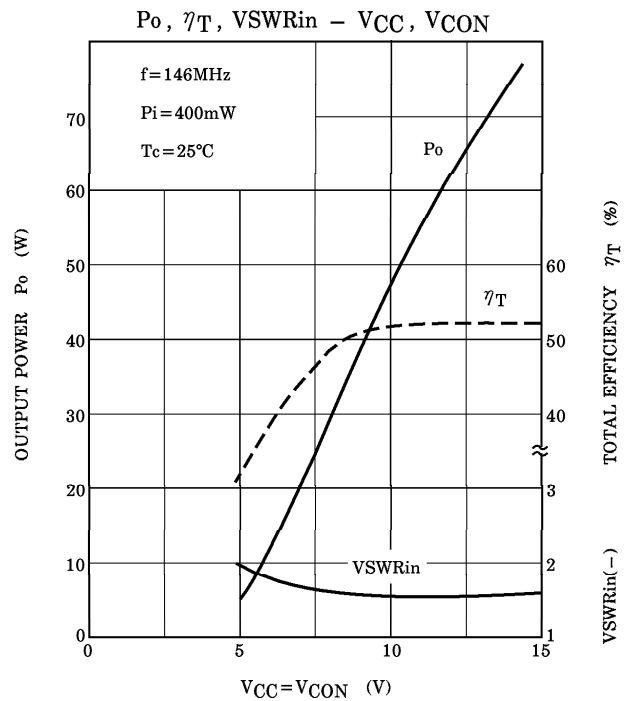
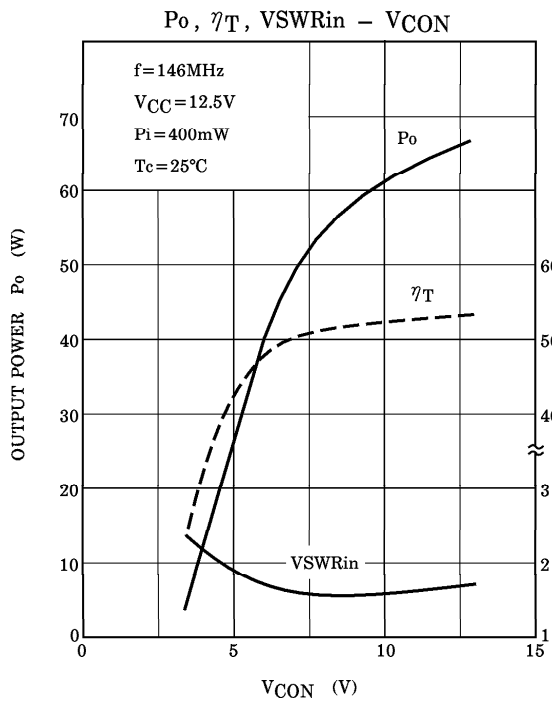
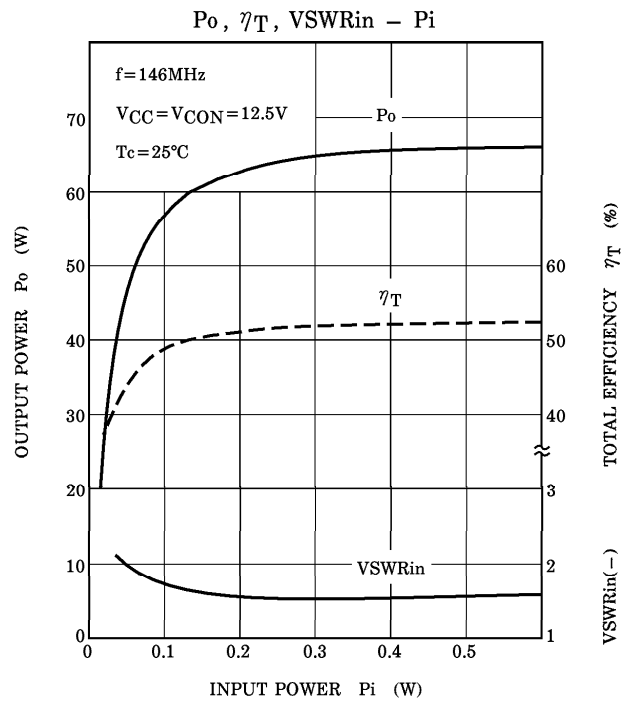
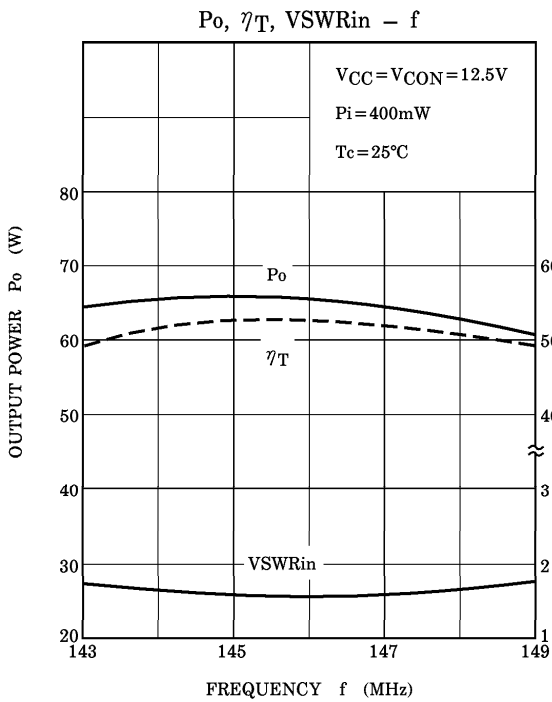
**TEST FIXTURE**



- 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.