

TOSHIBA RF POWER AMPLIFIER MODULE

**S-AV22A**

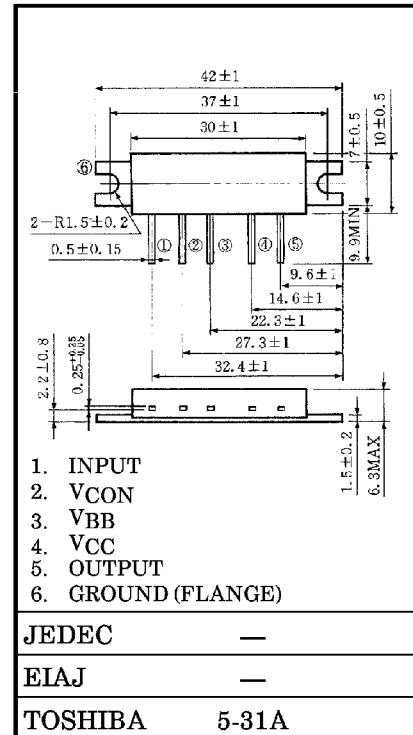
VHF BAND HAM FM RF POWER AMPLIFIER MODULE  
HAND-HELD TRANSCEIVER

Unit in mm

- High Gain ( $P_o \geq 7W$ ,  $G_p = 26.6dB$  Min.)
- Small Package

MAXIMUM RATINGS ( $T_c = 25^\circ C$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V <sub>CC</sub>	16	V
DC Supply Voltage	V <sub>CON</sub>	16	V
DC Supply Voltage	V <sub>BB</sub>	5.5	V
Input Power	P <sub>i</sub>	30	mW
Output Power	P <sub>o</sub>	10	W
Total current	I <sub>T</sub>	2	A
Operating Case Temperature Range	T <sub>c</sub> (opr)	-30~100	°C
Storage Temperature Range	T <sub>stg</sub>	-40~110	°C



ELECTRICAL CHARACTERISTICS ( $T_c = 25^\circ C$ )

Weight : 5.4g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Frequency Range	f <sub>range</sub>	—	144	—	148	MHz
Output Power	P <sub>o</sub>	V <sub>CC</sub> = V <sub>CON</sub> = 12.5V V <sub>BB</sub> = 5V P <sub>i</sub> = 15mW Z <sub>G</sub> = Z <sub>L</sub> = 50Ω	7	—	—	W
Power Gain	G <sub>p</sub>		26.6	—	—	dB
Total Efficiency	η <sub>T</sub>		45	—	—	%
Input VSWR	VSWR <sub>in</sub>		—	—	2.5	—
Harmonics	HRM		—	—	-15	dB
Load Mismatch	—	P <sub>o</sub> = 7.5W, P <sub>i</sub> = Adjust V <sub>CC</sub> = V <sub>CON</sub> = 15V, V <sub>BB</sub> = 5V VSWR load 20 : 1 all phase	No Degradation			—
Stability	—	V <sub>CC</sub> = V <sub>CON</sub> = 5~13V V <sub>BB</sub> = 5V, P <sub>o</sub> < 10W P <sub>i</sub> = 0~20mW VSWR load 6 : 1 all phase	All spurious output than 60dB below desired signal			—

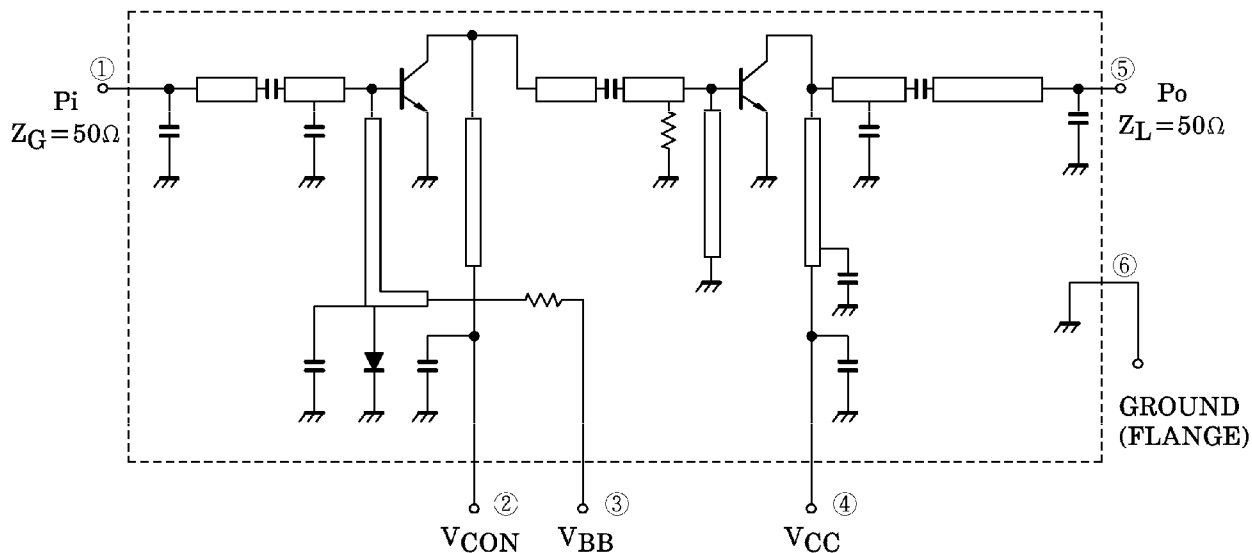
Caution

- 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.

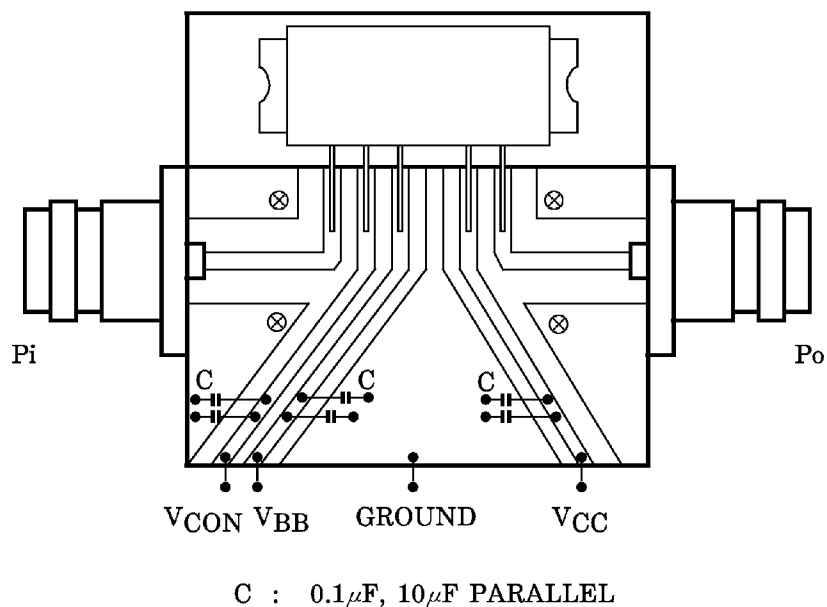
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**SCHEMATIC**



**TEST FIXTURE**



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