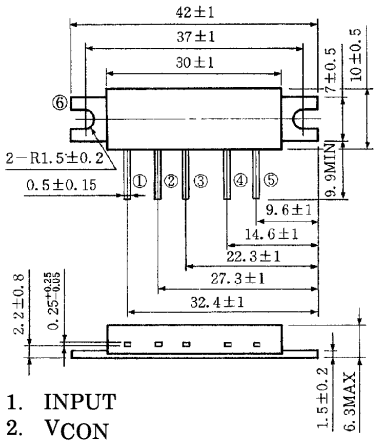
TOSHIBA RF POWER AMPLIFIER MODULE

S-AV22A

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

Unit in mm



1. INPUT
2. V_{CON}
3. V_{BB}
4. V_{CC}
5. OUTPUT
6. GROUND (FLANGE)

JEDEC	—
EIAJ	—
TOSHIBA	5-31A

Weight : 5.4g

- High Gain (Po ≧ 7W, G_p = 26.6dB Min.)
- Small Package

MAXIMUM RATINGS (Tc = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V_{CC}	16	V
DC Supply Voltage	V_{CON}	16	V
DC Supply Voltage	V_{BB}	5.5	V
Input Power	Pi	30	mW
Output Power	Po	10	W
Total current	I_T	2	A
Operating Case Temperature Range	Tc (opr)	−30~100	°C
Storage Temperature Range	T_{stg}	−40~110	°C

ELECTRICAL CHARACTERISTICS (Tc = 25°C)

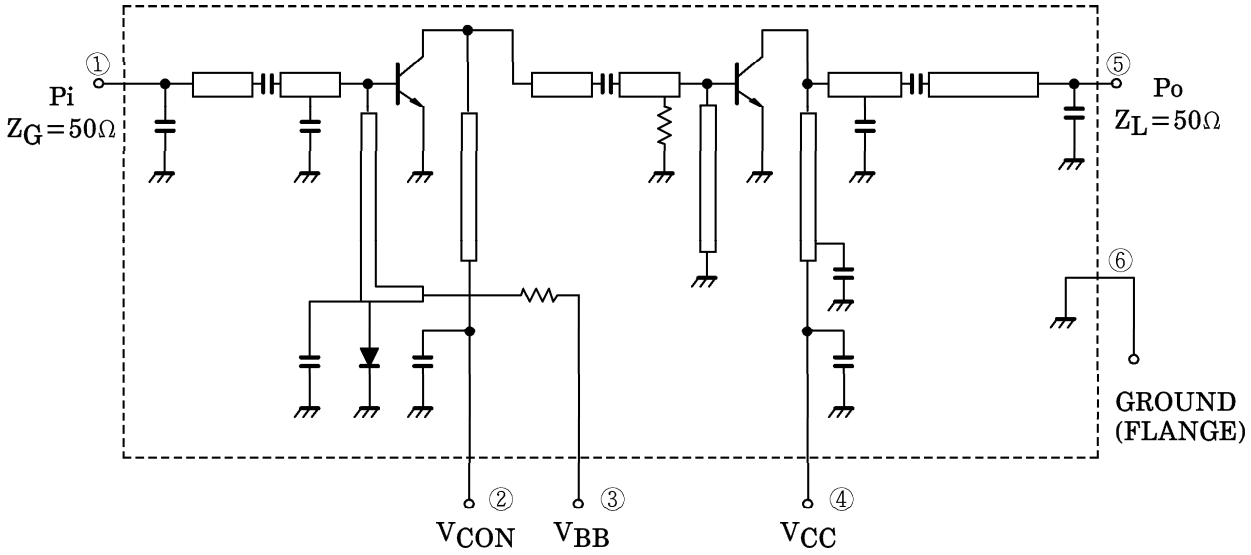
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Frequency Range	f_{range}	—	144	—	148	MHz
Output Power	Po	$V_{CC}=V_{CON}=12.5V$ $V_{BB}=5V$ Pi = 15mW $Z_G=Z_L=50\Omega$	7	—	—	W
Power Gain	G_p		26.6	—	—	dB
Total Efficiency	η_T		45	—	—	%
Input VSWR	VSWRin		—	—	2.5	—
Harmonics	HRM		—	—	−15	dB
Load Mismatch	—	Po = 7.5W, Pi = Adjust $V_{CC}=V_{CON}=15V$, $V_{BB}=5V$ VSWR load 20 : 1 all phase	No Degradation			—
Stability	—	$V_{CC}=V_{CON}=5$~13V $V_{BB}=5V$, Po < 10W Pi = 0~20mW VSWR load 6 : 1 all phase	All spurious output than 60dB below desired signal			—

Caution

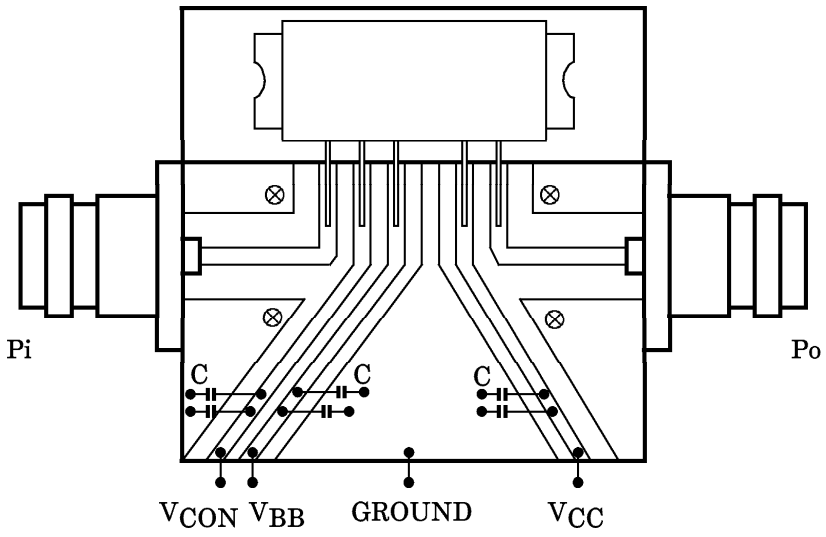
- This product has intersetting cap. Please pay attention for exceeding stress and foreign matter in your application. And not to take away the cap.
- Beryllia Ceramics is used in this product. The dust or vapor can be dangerous to humans. Do not break, cut, crush or dissolve chemically. Dispose of this product properly according to law. Do not intermingle with normal industrial or domestic waste.

961001EAA2

SCHEMATIC



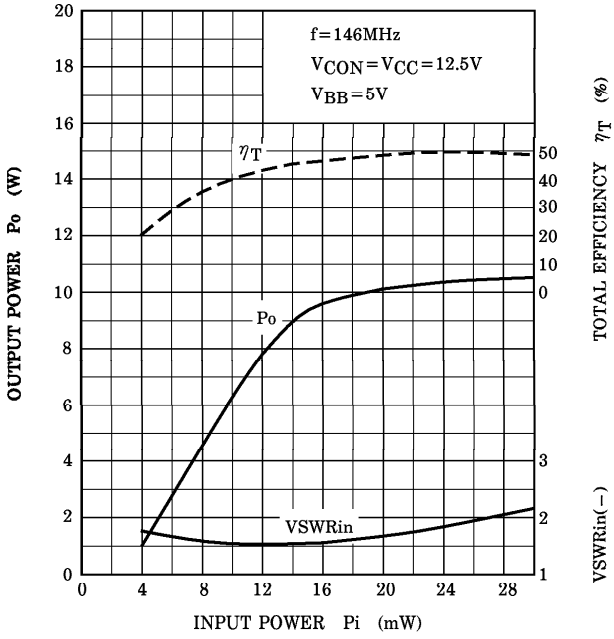
TEST FIXTURE



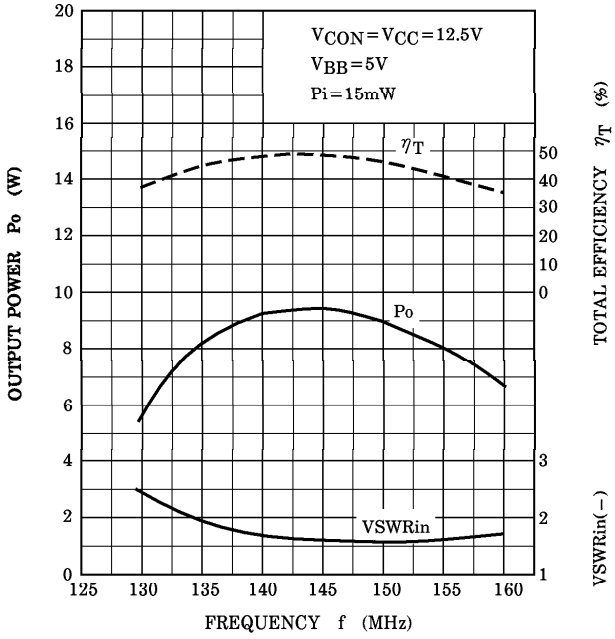
C : 0.1μF, 10μF PARALLEL

961001EAA2'

Po, η_T, VSWRin – Pi



Po, η_T, VSWRin – f



Po, η_T, VSWRin – V_{CON}, V_{CC}