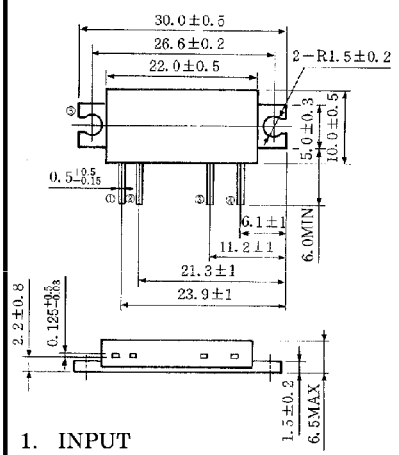
TOSHIBA RF POWER AMPLIFIER MODULE

S-AV23AL, S-AV23AH, S-AV23AVH

VHF POWER AMPLIFIER MODULE

Unit in mm

- S-AV23AL : f=135~150MHz
- S-AV23AH : f=150~163MHz
- S-AV23AVH : f=160~175MHz



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

JEDEC	—
EIAJ	—
TOSHIBA	5-22K

Weight : 3.5g

MAXIMUM RATINGS (Tc = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V_{CC}	11	V
DC Supply Voltage	V_{BB}	6	V
Input Power	Pi	400	mW
Operating Case Temperature Range	$T_{c\,(opr)}$	−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}	—	135	—	175	MHz
Output Power	Po	Pi=200mW V_{CC}=7.5V, V_{BB}=5V $Z_G=Z_L=50\Omega$	2.7	—	—	W
Power Gain	G_p		11.3	—	—	dB
Total Efficiency	ηT		35	—	—	%
Input VSWR	VSWRin		—	1.5	2.5	—
Harmonics	HRM		—	—	−20	dB
Load Mismatch	—	V_{CC}=9V V_{BB}=5V Pi=200mW VSWR load 20:1 all phase	No Degradation			—
Stability	—	V_{CC}=6~9V V_{BB}=5V Pi=200mW 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.

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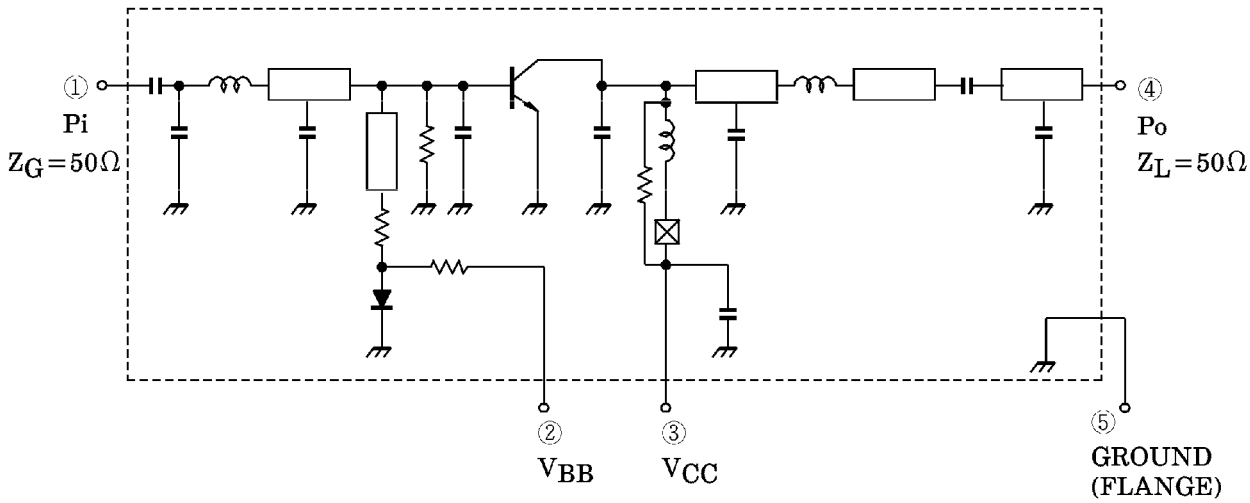
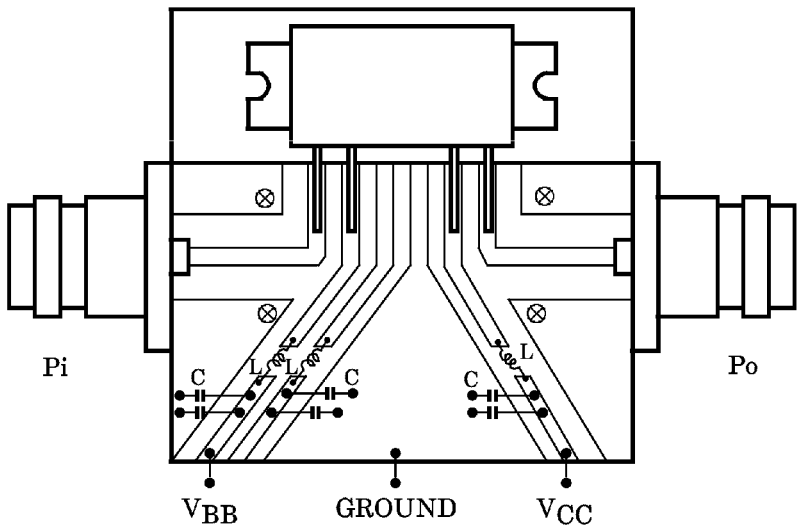
SCHEMATIC



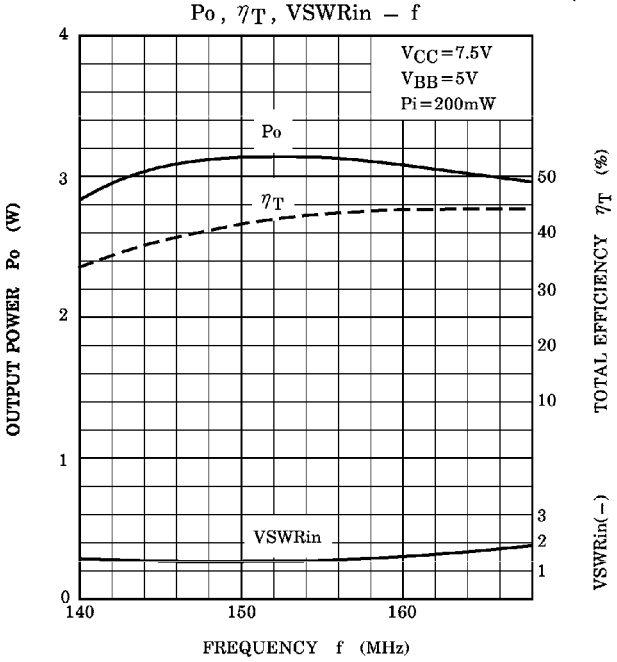
TEST FIXTURE



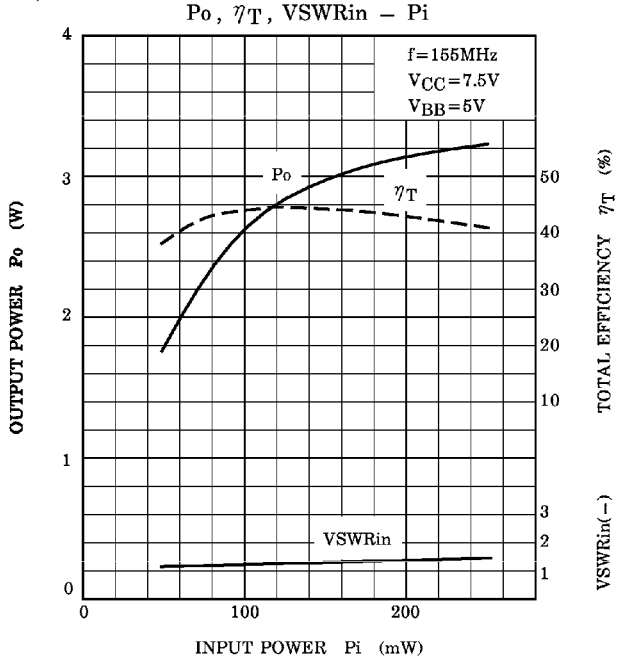
C : 22000pF, 10μF PARALLEL
L : ϕ0.5 ENAMEL WIRE 3ID, 5T

TYPICAL PERFORMANCE CURVE
(S-AV23AH)

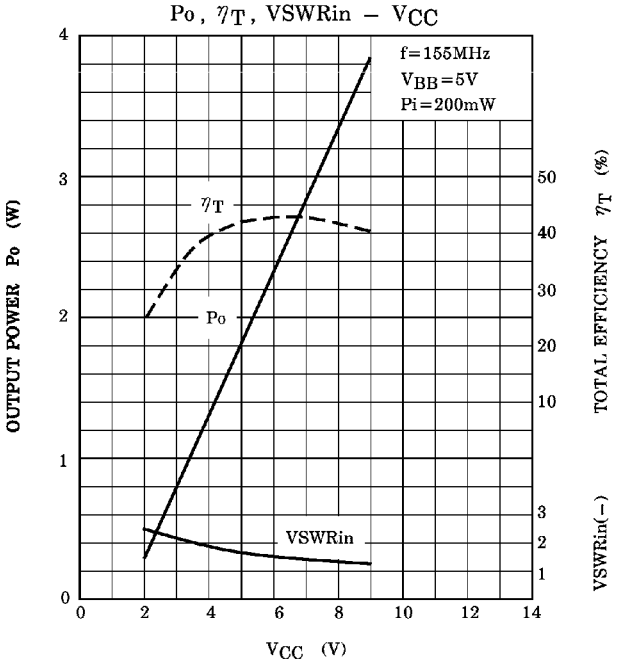
Po, η_T, VSWRin – f



Po, η_T, VSWRin – Pi



Po, η_T, VSWRin – V_{CC}



CAUTION

These are only typical curves and devices are not necessarily guaranteed at these curves.