

TOSHIBA RF POWER AMPLIFIER MODULE

S-AV23AL, S-AV23AH, S-AV23AVH

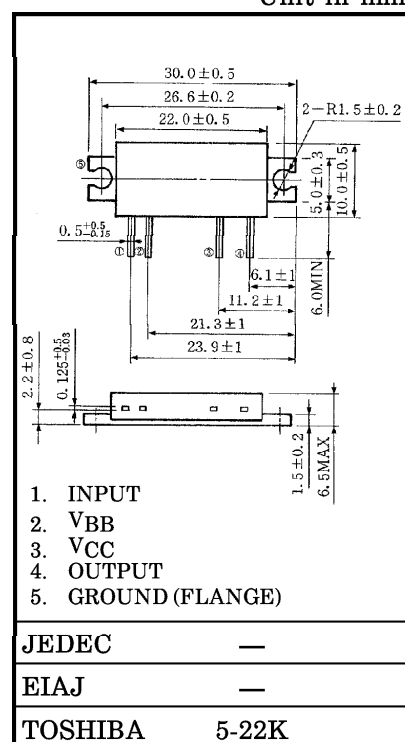
VHF POWER AMPLIFIER MODULE

Unit in mm

- S-AV23AL : $f=135\sim150\text{MHz}$
- S-AV23AH : $f=150\sim163\text{MHz}$
- S-AV23AVH : $f=160\sim175\text{MHz}$

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V_{CC}	11	V
DC Supply Voltage	V_{BB}	6	V
Input Power	P_i	400	mW
Operating Case Temperature Range	$T_{c(opr)}$	$-30\sim100$	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-40\sim110$	$^\circ\text{C}$

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

Weight : 3.5g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Frequency Range	f_{range}	—	135	—	175	MHz
Output Power	P_o	$P_i = 200\text{mW}$ $V_{CC} = 7.5\text{V}, V_{BB} = 5\text{V}$ $Z_G = Z_L = 50\Omega$	2.7	—	—	W
Power Gain	G_p		11.3	—	—	dB
Total Efficiency	η_T		35	—	—	%
Input VSWR	VSWR _{in}		—	1.5	2.5	—
Harmonics	HRM		—	—	-20	dB
Load Mismatch	—	$V_{CC} = 9\text{V}$ $V_{BB} = 5\text{V}$ $P_i = 200\text{mW}$ VSWR load 20 : 1 all phase	No Degradation			—
Stability	—	$V_{CC} = 6\sim9\text{V}$ $V_{BB} = 5\text{V}$ $P_i = 200\text{mW}$ VSWR load 6 : 1 all phase	All spurious output than 60dB below desired signal			—

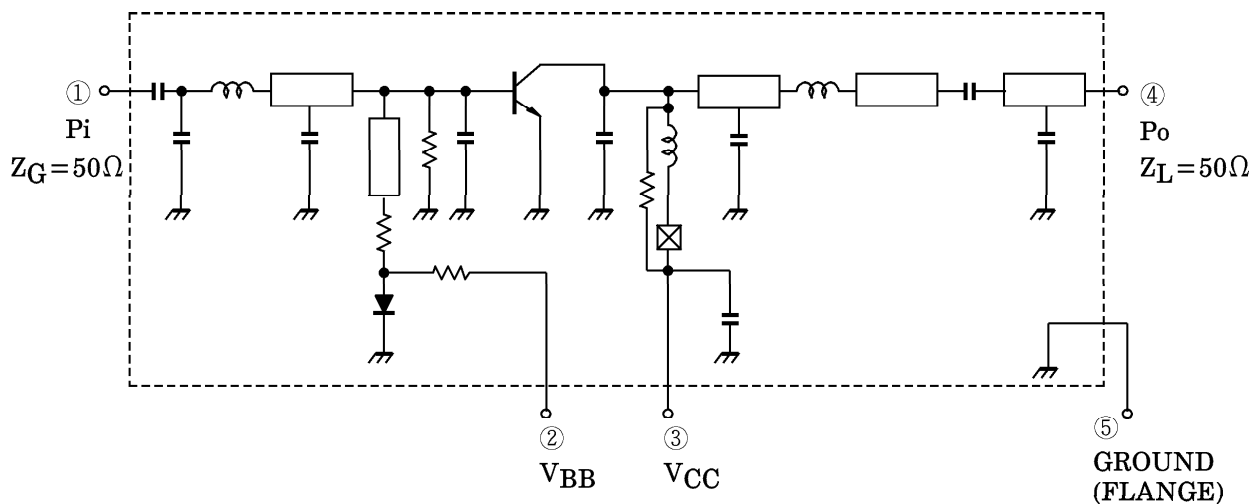
CAUTION

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

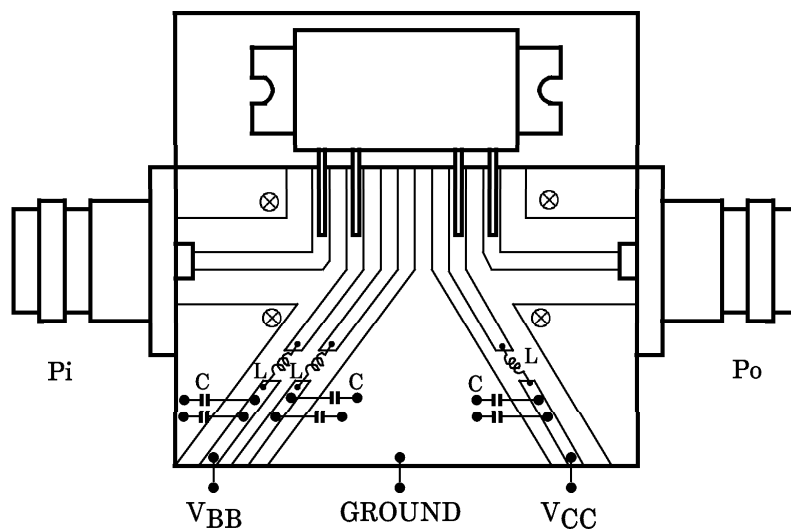
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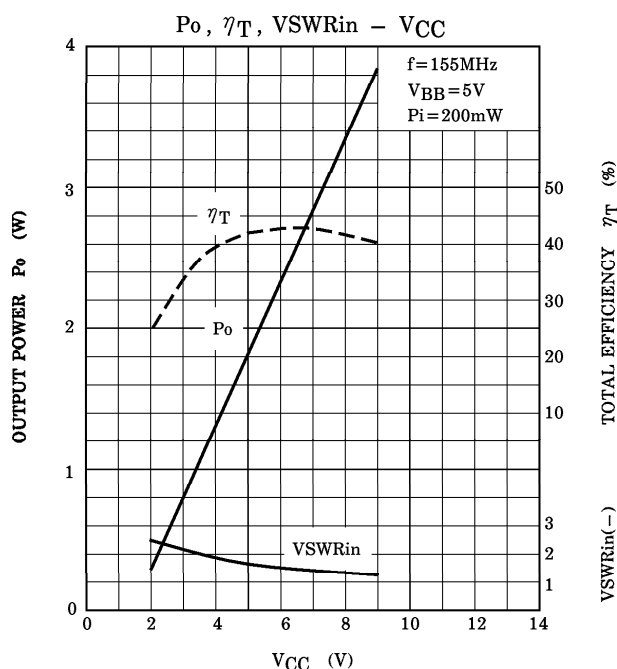
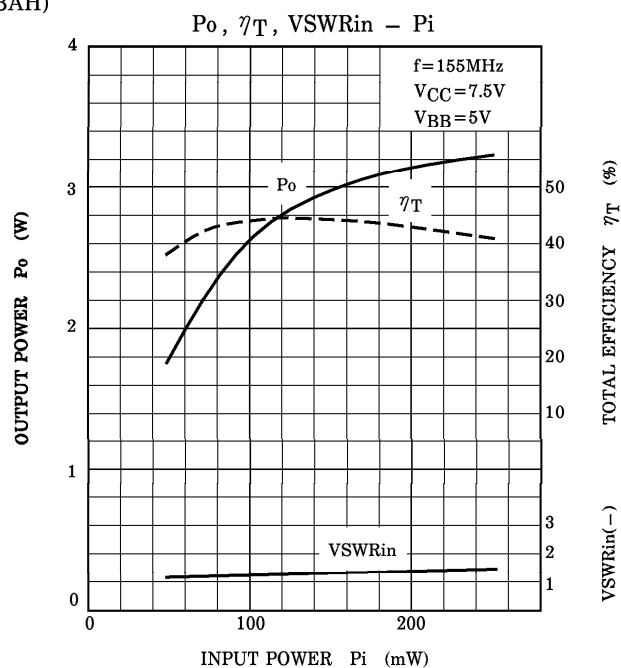
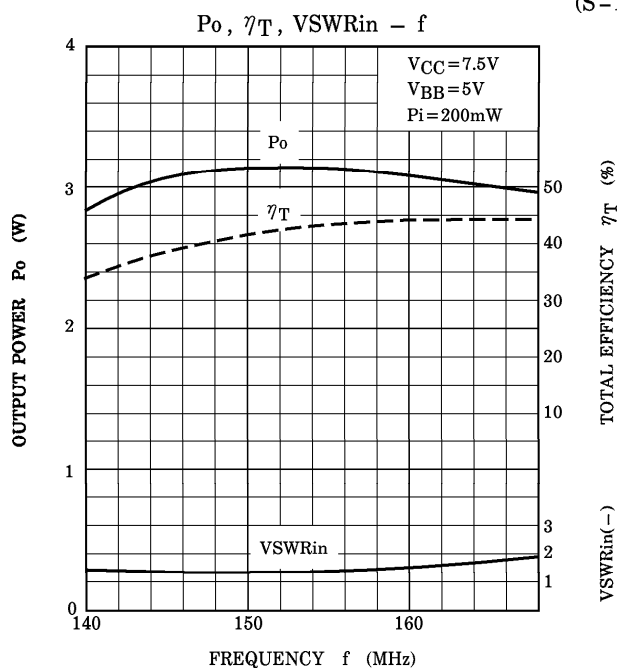
SCHEMATIC



TEST FIXTURE



C : 22000pF, 10 μ F PARALLEL
L : ϕ 0.5 ENAMEL WIRE 3ID, 5T

TYPICAL PERFORMANCE CURVE
(S-AV23AH)

CAUTION

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