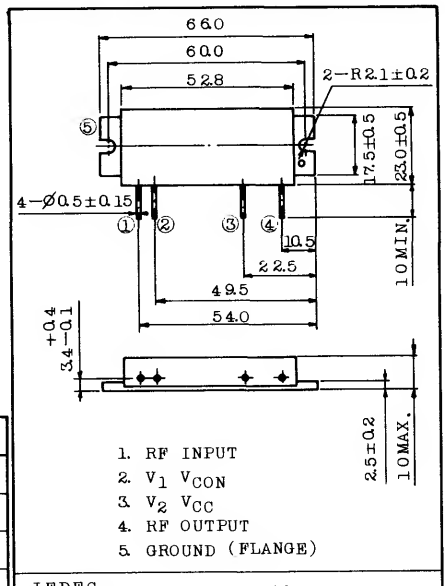
S-AV9L
S-AV9H

VHF POWER AMPLIFIER MODULE

FEATURES:

- Output Power : $P_O \geqq 8W$
- Minimum Gain : $G_p = 16dB$
- Efficiency : $\eta_T \geqq 40\%$
- 50Ω Input and Output Impedance
- Guaranteed Stability

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	5-53C

MAXIMUM RATINGS (Tc=25°C)

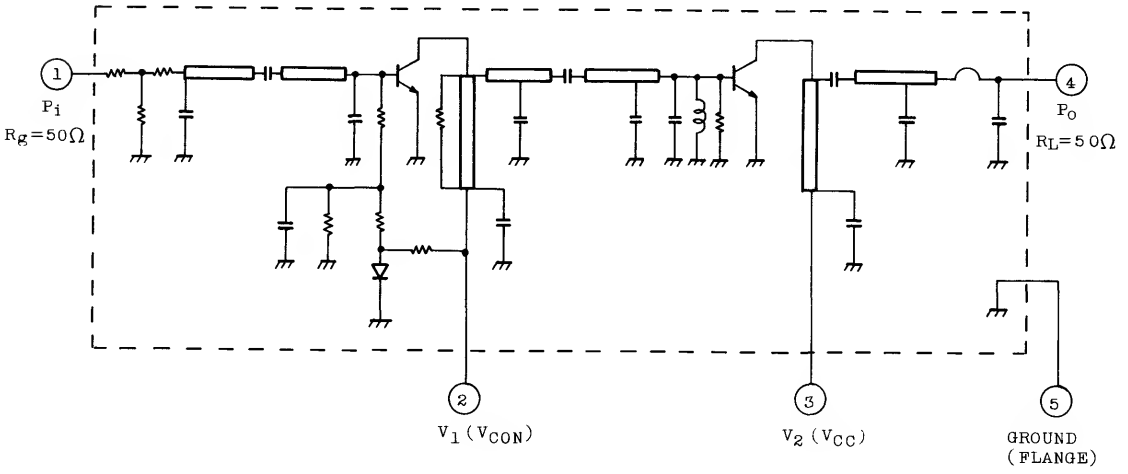
CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V_{CC}	16	V
DC Supply Voltage	V_{CON}	16	V
RF Input Power	P_i	300	mW
Operating Case Temperature Range	$T_{C(OP)}$	-30 ~ 100	°C
Storage Temperature Range	T_{stg}	-40 ~ 110	°C

CHARACTERISTICS (Tc=25°C)

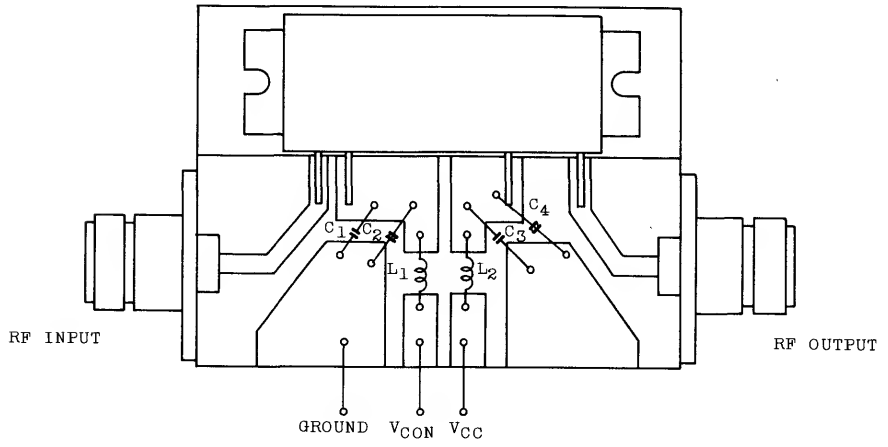
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Frequency Range (1)	f_{range}	-	135	-	175	MHz
Output Power	P_O	P_i=200mW V_{CC}=12.5V, V_{CON}=12.5V $Z_g=Z_l=50\Omega$	8	-	-	W
Power Gain	G_P		16	-	-	dB
Total Efficiency	η_T		40	-	-	%
Input VSWR	$VSWR_{in}$		-	-	2	-
Harmonics	HRM		-	-	-25	dB
Load Mismatch	-	V_{CC}=15V, V_{CON}=12.5V P_O=12W VSWR load 20:1 all phase	No Degradation			—
Stability	-	V_{CC}=12.5V, Pi=200mW V_{CON}=0 ~ 12.5V VSWR Load 3:1 all phase	All spurious output than 60dB below desired signal			—

(1) Frequency range is covered in two bands S-AV9L 135-155MHz
S-AV9H 150-175MHz

SCHEMATIC

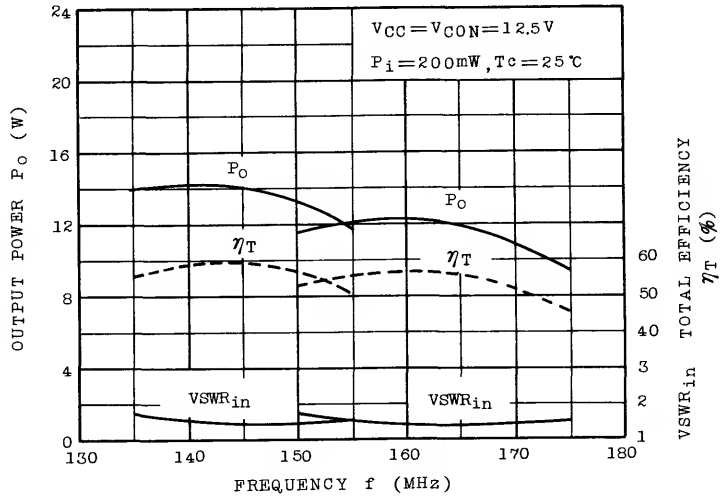


TEST MOUNT

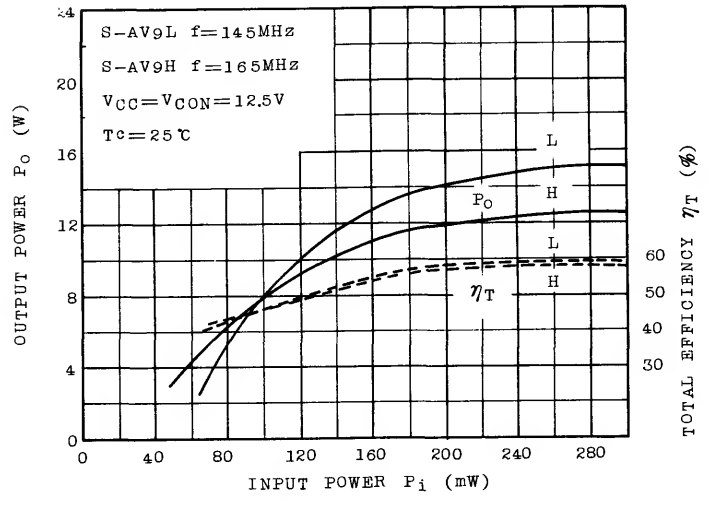


C_1, C_3	15000pF
C_2, C_4	1μF
L_1, L_2	Ø0.8 COPPER WIRE 8T 5ID

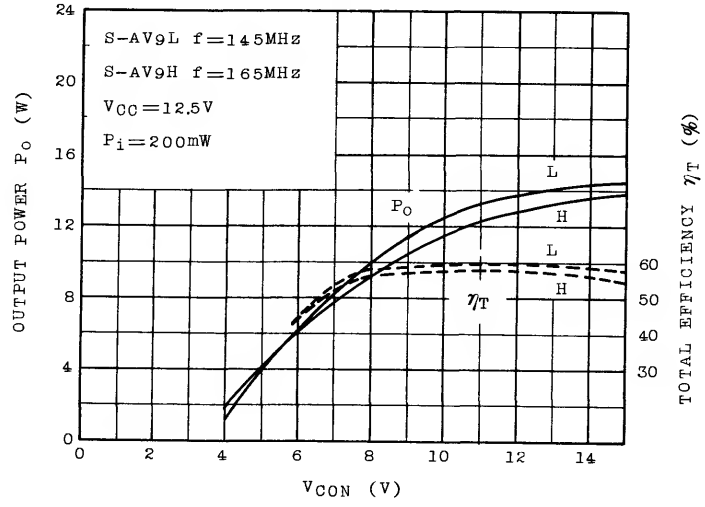
$P_O, \eta_T, VSWR_{in}$ - f



P_O, η_T - P_i



P_O, η_T - V_{CON}



P_O, η_T - V_{CC}, V_{CON}