

S-AU4

TOSHIBA RF POWER AMPLIFIER MODULE

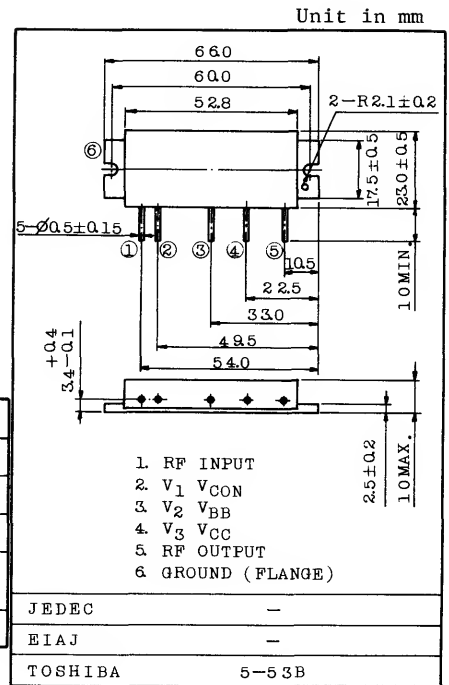
UHF POWER AMPLIFIER MODULE (HAM SSB/FM)

FEATURES:

- Output Power : $P_o \geq 17W$
- Minimum Gain : $G_p = 19.2dB$
- Efficiency : $\eta_T \geq 35\%$
- 50Ω Input/Output Impedance
- Guaranteed Stability

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

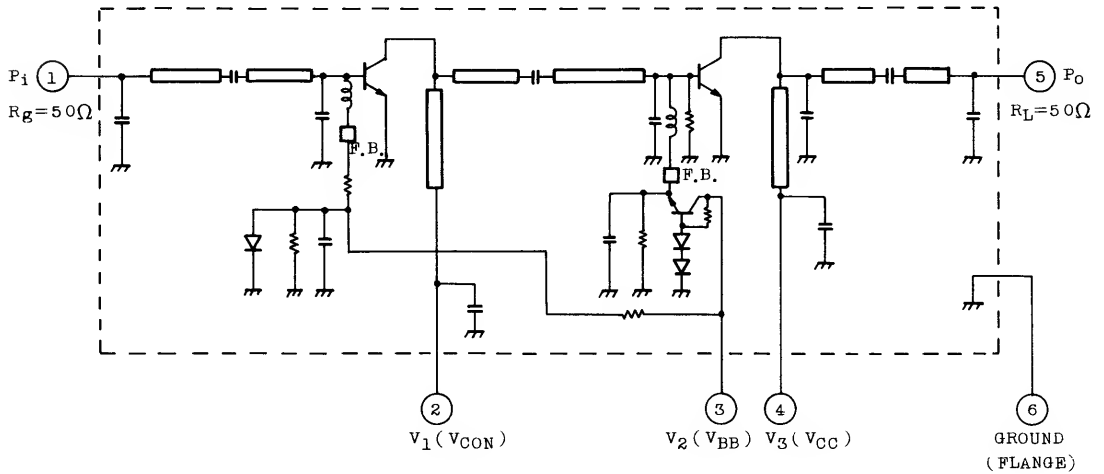
CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V_{CC}	16	V
DC Supply Voltage	V_{CON}	16	V
RF Input Power	P_i	300	mW
Operating Case Temperature Range	$T_c(OP)$	-30 ~ 100	$^\circ C$
Storage Temperature Range	T_{stg}	-40 ~ 110	$^\circ C$



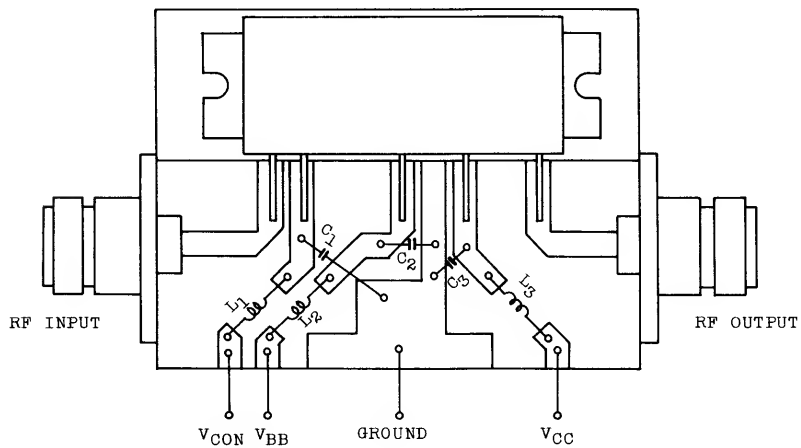
CHARACTERISTICS ($T_c = 25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Frequency Range	f_{range}	-	430	-	450	MHz
Output Power	P_o	$P_i = 200mW$ $V_{CC} = 12.5V, V_{CON} = 12.5V$ $Z_g = Z_1 = 50\Omega$	17	20	-	W
Power Gain	G_p		19.2	20	-	dB
Total Efficiency	η_T		35	45	-	%
Input VSWR	$VSWR_{in}$		-	1.5	2	-
Harmonics	HRM		-	-30	-25	dB
Load Mismatch	-	$V_{CC} = 15V, V_{CON} = 12.5V$ $P_o = 20W$ VSWR load 20:1 all phase	No Degradation			-
Stability	-	$V_{CC} = 12.5V, P_i = 200mW$ $V_{CON} = 0 \sim 12.5V$ VSWR Load 3:1 all phase	All spurious output than 60dB below desired signal			-
Intermodulation Distortion Ratio	IMD	$f_1 = 440.000MHz, f_2 = 440.002MHz$ $V_{CC} = V_{CON} = 12.5V, V_{BB} = 9V$ $P_o = 13W_{pEP}$	-	-32	-	dB

SCHEMATIC



TEST MOUNT



C_1, C_2, C_3 : 1500pF, 10 μ F

L_1, L_2, L_3 : $\phi 0.8$ COPPER WIRE , 8T, 5ID

