

TOSHIBA RF POWER AMPLIFIER MODULE

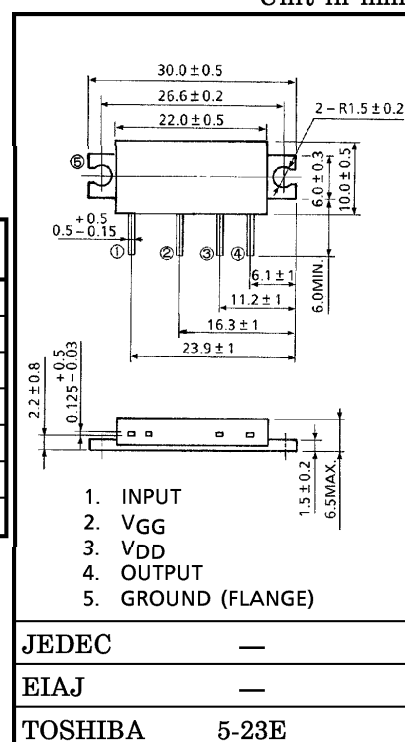
S - A U 6 8 M

UHF BAND FM POWER AMPLIFIER MODULE

Unit in mm

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V_{DD}	17	V
DC Supply Voltage	V_{GG}	6	V
Input Power	P_i	50	mW
Output Power	P_o	12	W
Total Current	I_T	3	A
Operating Case Temperature Range	$T_{c(opr)}$	$-30 \sim 100$	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-40 \sim 110$	$^\circ\text{C}$

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

Weight : 3.5g

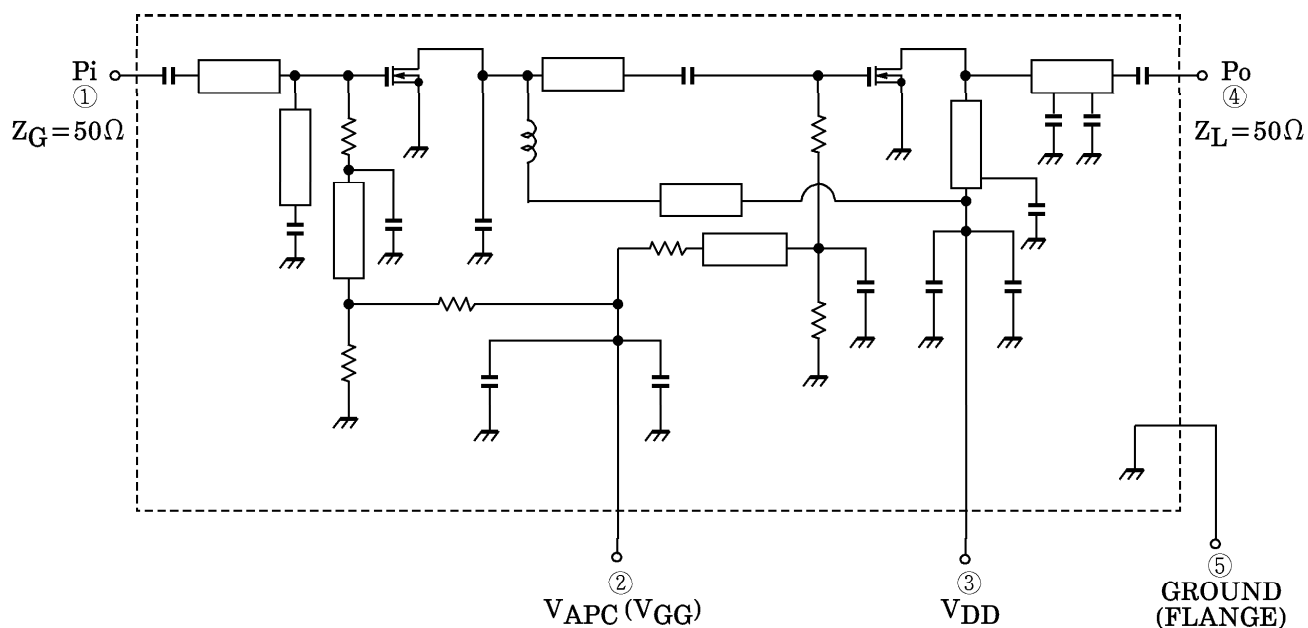
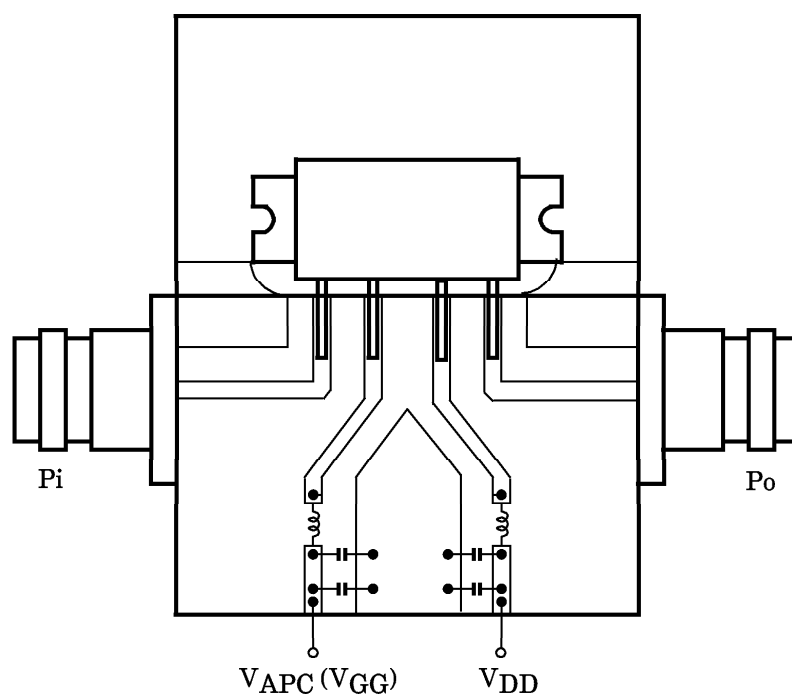
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Frequency Range	f_{range}	—	450	—	470	MHz
Output Power (1)	$P_o(1)$	$V_{GG} = 4V$, $P_i = 20mW$	7	—	—	W
Output Power (2)	$P_o(2)$	$Z_G = Z_L = 50\Omega$	2.7	—	—	
Total Efficiency	η_T	$V_{DD} = 9.6V$, $P_i = 20mW$	40	—	—	%
Input VSWR	VSWR _{in}	$P_o = 7W$ ($V_{GG} = \text{adjust}$)	—	—	2.5	—
Harmonics	HRM	$Z_G = Z_L = 50\Omega$	—	—	-25	dB
Load Mismatch	—	$V_{DD} = 15V$, $P_i = 20mW$ $P_o = 7W$ ($V_{GG} = \text{adjust}$) VSWR LOAD 20 : 1 ALL PHASE	No Degradation			—
Stability	—	$V_{DD} = 3.5 \sim 15.7V$, $V_{GG} = 0 \sim 4V$ $P_o < 12W$, $P_i = 20mW$ VSWR LOAD 3 : 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.
- Do not intermingle with normal industrial or domestic waste.
- This product is electrostatic sensitivity, please handle with caution.

961001EAA2

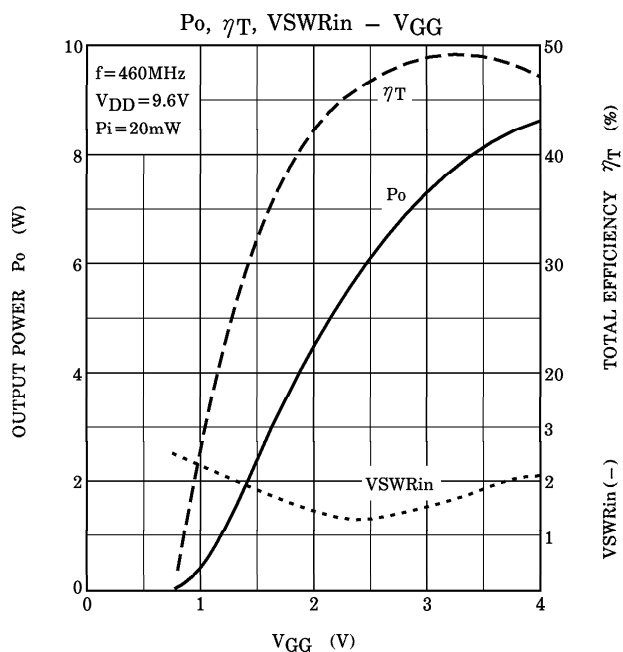
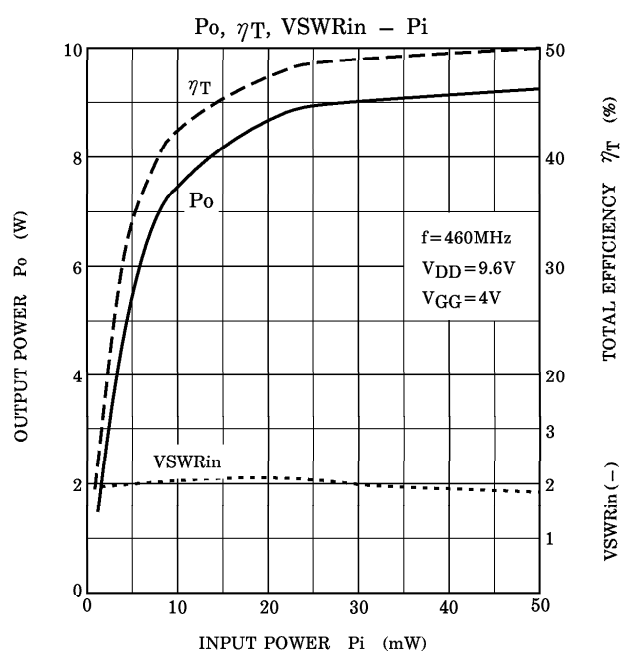
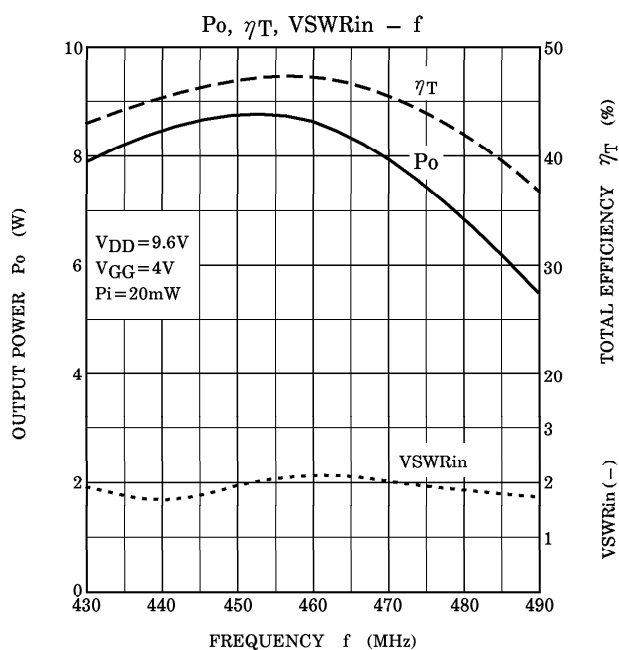
● TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

SCHEMATIC

TEST FIXTURE


C : 10000pF, 10 μ F PARALLEL
L : ϕ 0.5, 3ID, 5T ENAMEL WIRE

961001EAA2'

- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.
- The information contained herein is subject to change without notice.



CAUTION

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