

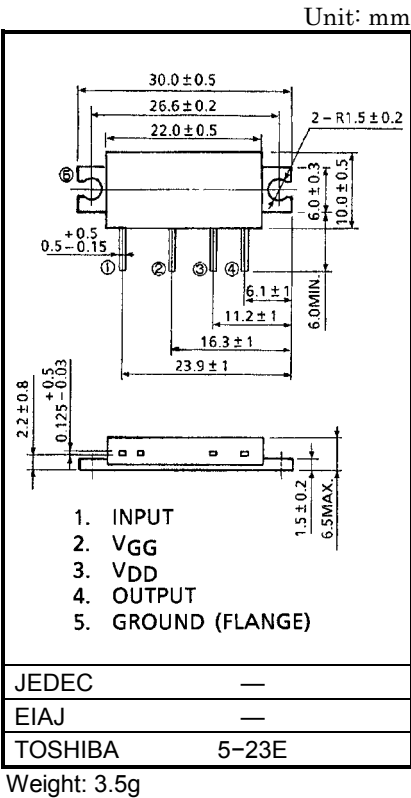
TOSHIBA RF POWER AMPLIFIER MODULE

S-AU50M

UHF BAND FM POWER AMPLIFIER MODULE
HAND-HELD TRANSCEIVER

MAXIMUM RATINGS (Tc = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V _{DD}	17	V
DC Supply Voltage	V _{GG}	6	V
Input Power	P _i	150	mW
Output Power	P _o	12	W
Total Current	I _T	3	A
Operating Case Temperature Range	T _c (opr)	-30~100	°C
Storage Temperature Range	T _{stg}	-40~110	°C



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In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent TOSHIBA products specifications. Also, please keep in mind the precautions and conditions set forth in the "Handling Guide for Semiconductor Devices," or "TOSHIBA Semiconductor Reliability Handbook" etc..
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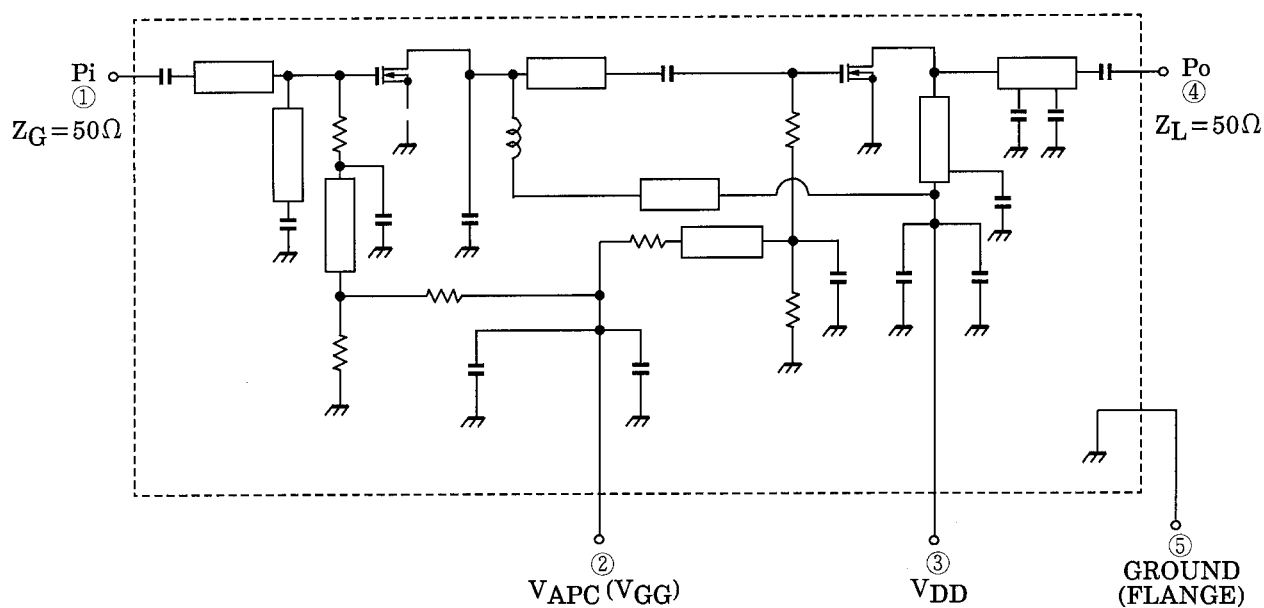
ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Frequency Range	f_{range}	—	430	—	480	MHz
Output Power	P_o	$V_{DD} = 9.6\text{V}$, $V_{GG} = 4\text{V}$ $P_i = 50\text{mW}$, $Z_G = Z_L = 50\Omega$	7	—	—	W
Power Gain	G_p		21.4	—	—	dB
Total Efficiency	η_T		40	—	—	%
Input VSWR	VSWR _{in}		—	—	3.0	—
Harmonics	HRM		—	—	-25	dBc
Load Mismatch	—	$V_{DD} = 15\text{V}$, $P_i = 50\text{mW}$ $P_o = 7\text{W}$ ($V_{GG} = \text{adjust}$) VSWR LOAD 20: 1 ALL PHASE	No Degradation			—
Stability	—	$V_{DD} = 7.5\sim 11.5\text{V}$, $V_{GG} = 0\sim 4\text{V}$ $P_i = 50\text{mW}$ VSWR LOAD 3: 1 ALL PHASE	All spurious output than 60dB below desired signal			—

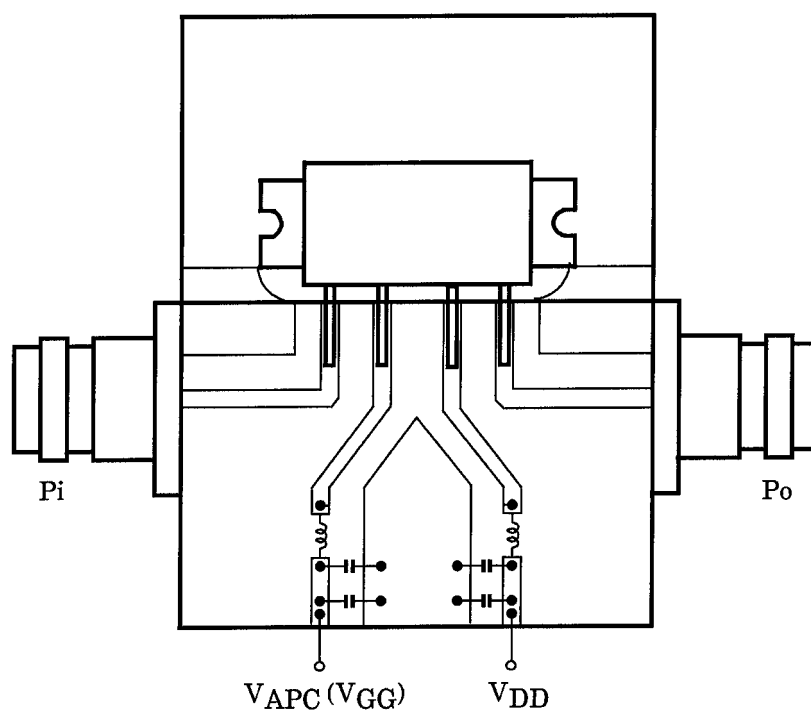
CAUTION

- 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.

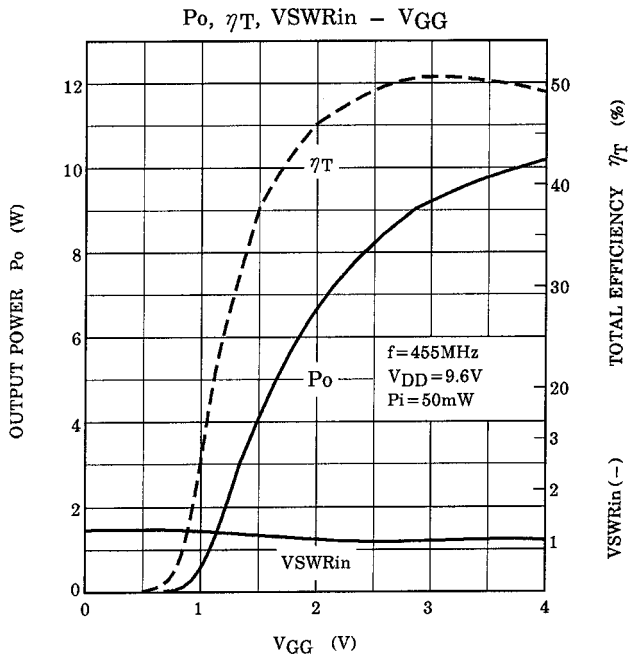
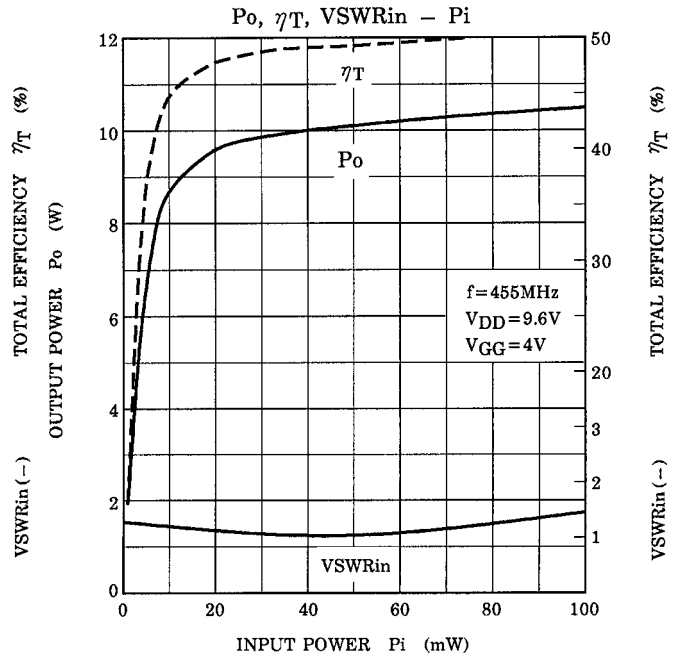
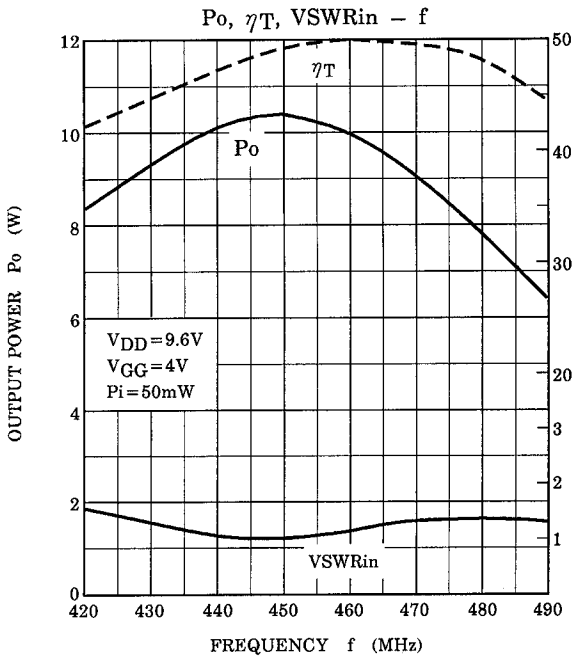
SCHEMATIC



TEST FIXTURE



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



CAUTION

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