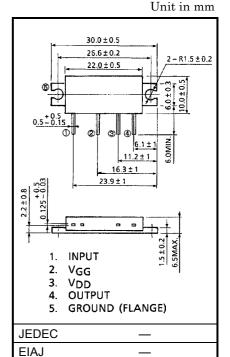
TOSHIBA RF POWER AMPLIFIER MODULE

S-AU68M

UHF BAND FM POWER AMPLIFIER MODULE

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	Pi	50	mW	
Output Power	Po	12	W	
Total Current	I _T	3	Α	
Operating Case Temperature Range	T _{c (opr)}	-30~100	°C	
Storage Temperature Range	T _{stg}	-40~110	°C	



5-23E

TOSHIBA Weight: 3.5g

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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 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.

[•] TOSHIBA is continually working to improve the quality and 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 comply with the standards of safety in making a safe design for the entire system, and to avoid situations in which a malfunction or failure of such TOSHIBA products could cause loss of human life, bodily injury or damage to property.

 [•] The TOSHIBA products listed in this document are intended for usage in general electronics applications (computer, personal equipment, office equipment, measuring equipment, industrial robotics, domestic appliances, etc.). These TOSHIBA products are neither intended nor warranted for usage in equipment that requires extraordinarily high quality and/or reliability or a malfunction or failure of which may cause loss of human life or bodily injury ("Unintended Usage"). Unintended Usage include atomic energy control instruments, airplane or spaceship instruments, transportation instruments, traffic signal instruments, combustion control instruments, medical instruments, all types of safety devices, etc.. Unintended Usage of TOSHIBA products listed in this document shall be made at the customer's own risk.

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.



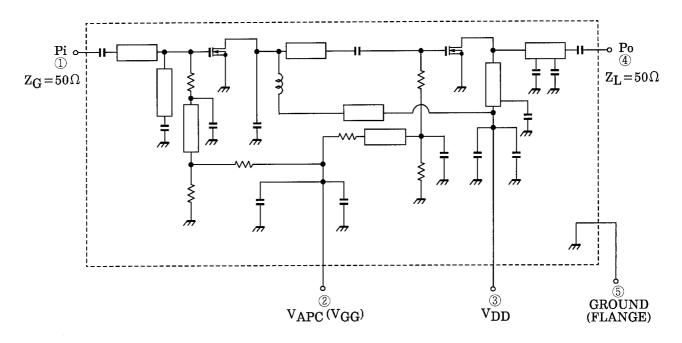
ELECTRICAL CHARACTERISTICS (Tc=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Frequency Range	f _{range}	_		450	_	470	MHz
Output Power (1)	Po (1)	V _{GG} = 4V, Pi = 20mW	V _{DD} =9.6V	7	-	1	· w
Output Power (2)	Po (2)	$Z_G=Z_L=50\Omega$	V _{DD} =6.0V	2.7	_	_	
Total Efficiency	ηT	V _{DD} = 9.6V, Pi = 20mW		40	_	_	%
Input VSWR	VSWRin	$P_0 = 7W (V_{GG} = adjust)$	_	_	2.5	_	
Harmonics	HRM	$Z_{G} = Z_{L} = 50\Omega$		_	_	-25	dB
Load Mismatch	_	V_{DD} = 15V, Pi = 20mW Po = 7W (V_{GG} = adjust) VSWR LOAD 20: 1 ALL PHASE		No Degradation			-
Stability	_	V _{DD} = 3.5~15.7V, V _{GG} = 0~4V Po<12W, Pi = 20mW VSWR LOAD 3: 1 ALL PHASE		All spurious output than 60dB below desired signal			ı

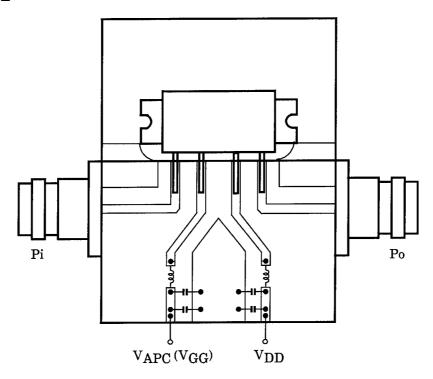
CAUTION

- 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, 10μ F PARALLEL L : $\phi 0.5$, 3ID, 5T ENAMEL WIRE

50

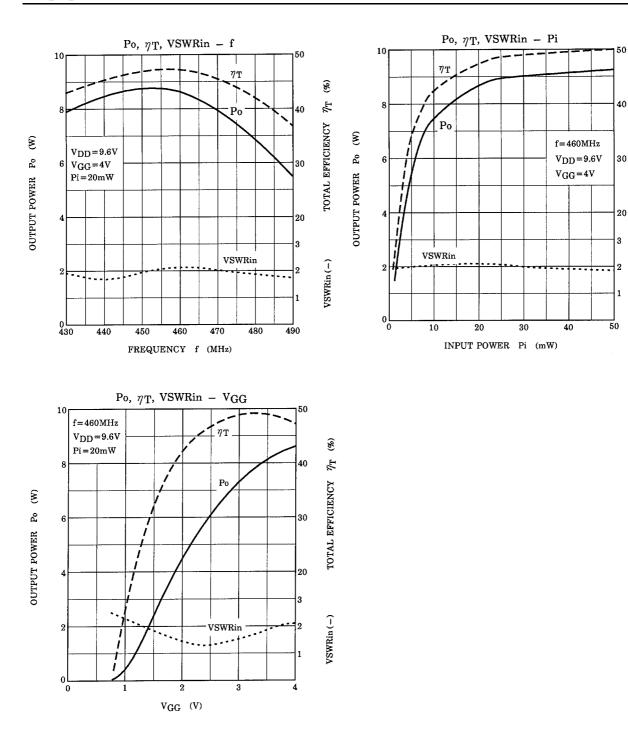
40

(%)

 $\gamma_{\rm T}$

TOTAL EFFICIENCY

VSWRin(-)



CAUTION

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