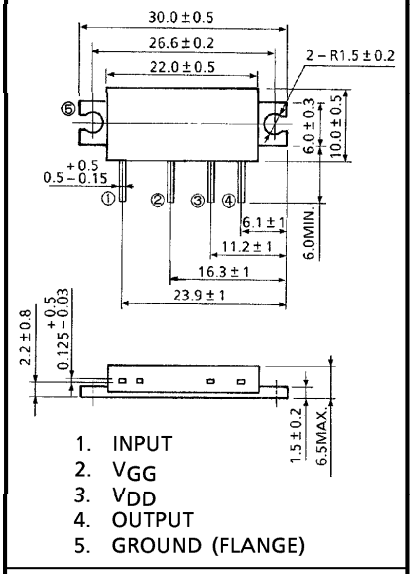
TOSHIBA RF POWER AMPLIFIER MODULE

S-AU50H

UHF BAND FM POWER AMPLIFIER MODULE

HAND-HELD TRANSCEIVER

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	5-23E

Weight : 3.5g

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	150	mW
Output Power	Po	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

ELECTRICAL CHARACTERISTICS (Tc = 25°C)

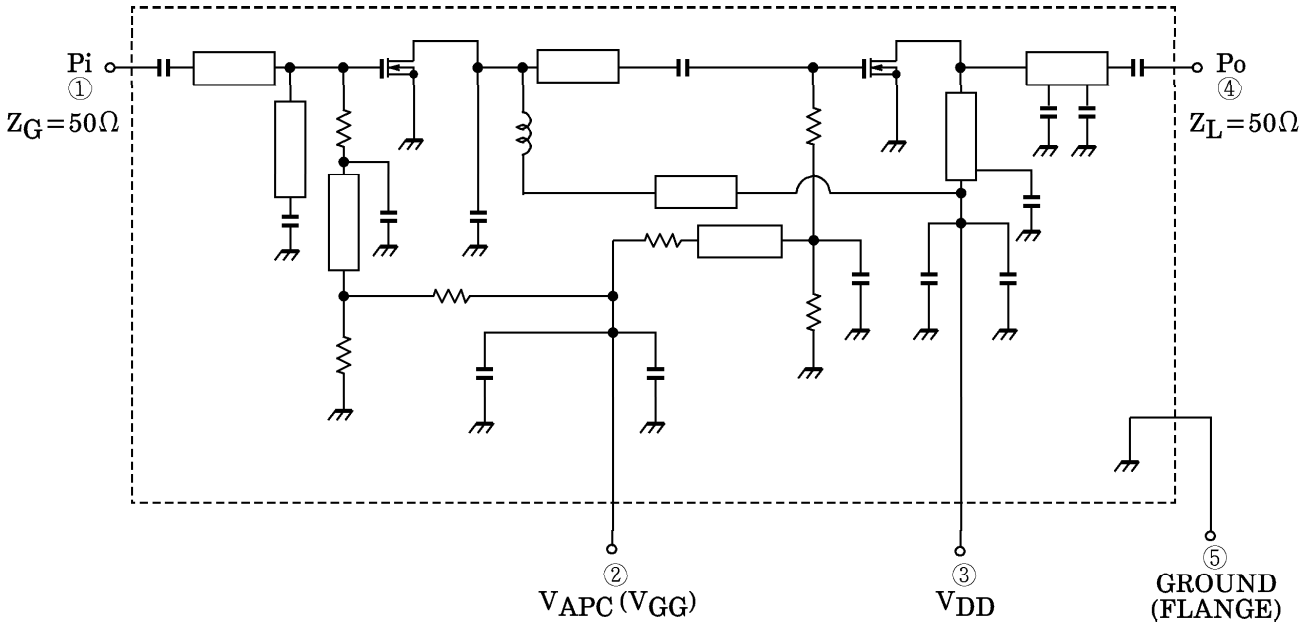
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Frequency Range	f_{range}	—	470	—	520	MHz
Output Power	Po	V_{DD}=9.6V, V_{GG}=4V Pi=50mW, Z_G=Z_L=50Ω	6.5	—	—	W
Power Gain	G_p		21.1	—	—	dB
Total Efficiency	η_T		40	—	—	%
Input VSWR	VSWRin		—	—	4.5	—
Harmonics	HRM		—	—	−30	dBc
Load Mismatch	—	V_{DD}=15V, Pi=50mW Po=7W (V_{GG}=adjust) VSWR LOAD 20 : 1 ALL PHASE	No Degradation			—
Stability	—	V_{DD}=7.5~11.5V, V_{GG}=0~4V Pi=50mW VSWR LOAD 3 : 1 ALL PHASE	All spurious output than 60dB below desired signal			—

CAUTION

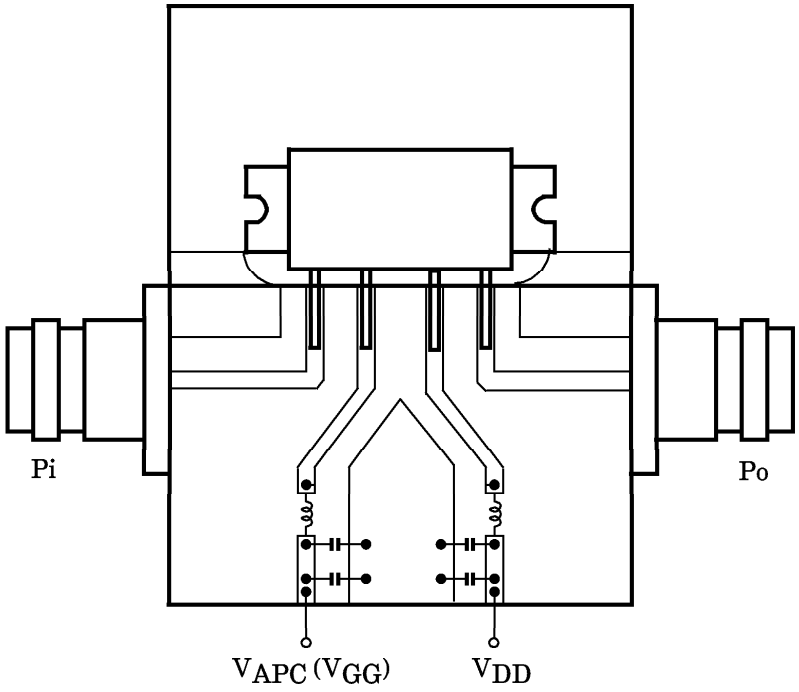
- This product has intersetting cap. Please pay attention for exceeding stress and foreign matter in your application. And not to take away the cap.
- Do not intermingle with normal industrial or domestic waste.
- This product is electrostatic sensitivity, please handle with caution.

961001EAA2

SCHEMATIC



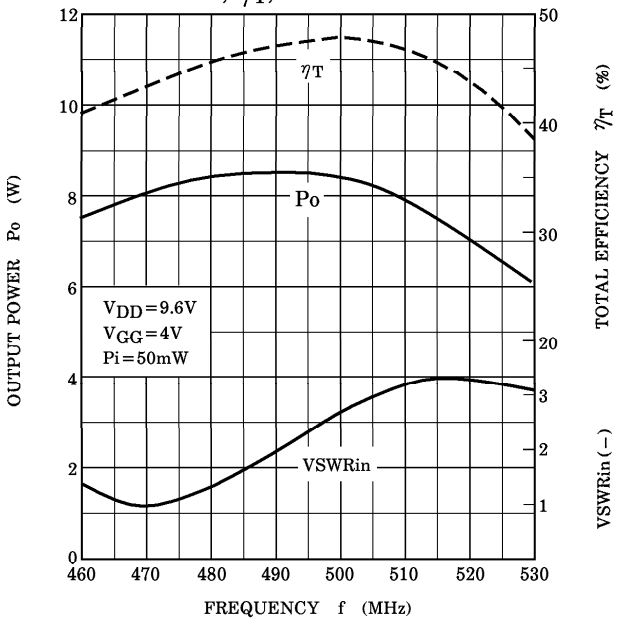
TEST FIXTURE



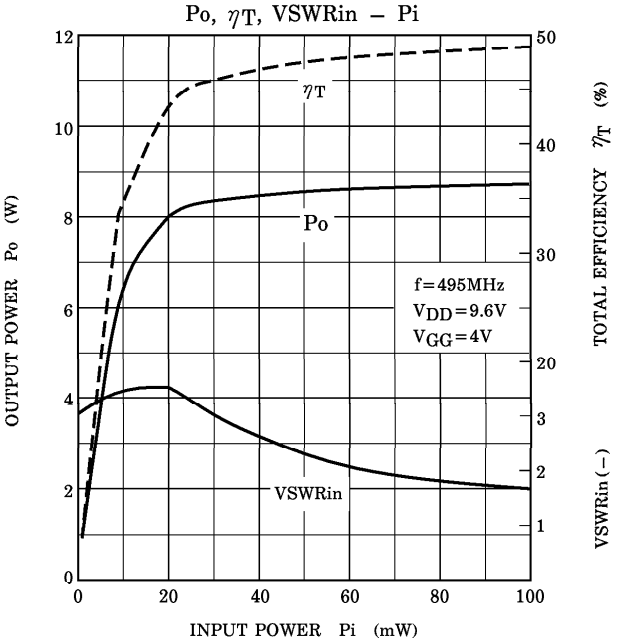
C : 10000pF, 10μF PARALLEL
L : ϕ0.5, 3ID, 5T ENAMEL WIRE

961001EAA2'

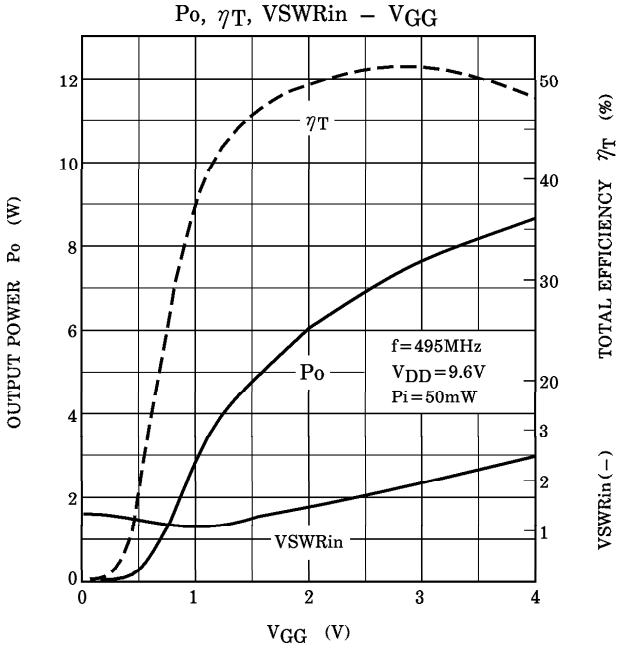
Po, ηT, VSWRin – f



Po, ηT, VSWRin – Pi



Po, ηT, VSWRin – V_{GG}



CAUTION

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