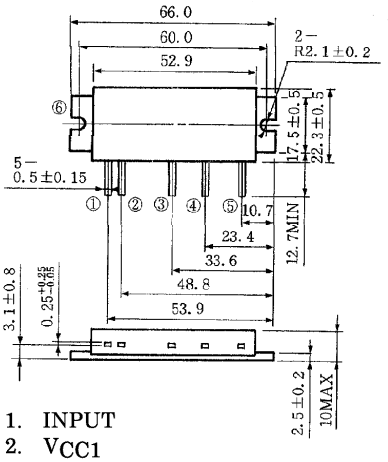
TOSHIBA RF POWER AMPLIFIER MODULE

S-AU39

JAPAN MULTI CHANNEL ACCESS SYSTEM
(FM) RF POWER AMPLIFIER MODULE

- High Gain : G_p = 18.1dB (Min)
- High Efficiency : η_T = 35% (Min)

Unit in mm



1. INPUT
2. V_{CC1}
3. V_{CC2}
4. V_{CC3}
5. OUTPUT
6. GROUND (FLANGE)

JEDEC	—
EIAJ	—
TOSHIBA	5-53M

Weight : 35g

MAXIMUM RATINGS (Tc = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V_{CC1}	16	V
DC Supply Voltage	V_{CC2}	17	V
DC Supply Voltage	V_{CC3}	17	V
Input Power	Pi	600	mW
Operating Case Temperature Range	$T_{c\ (opr)}$	−30~100	°C
Storage Temperature Range	T_{stg}	−40~110	°C

ELECTRICAL CHARACTERISTICS (Tc = 25°C)

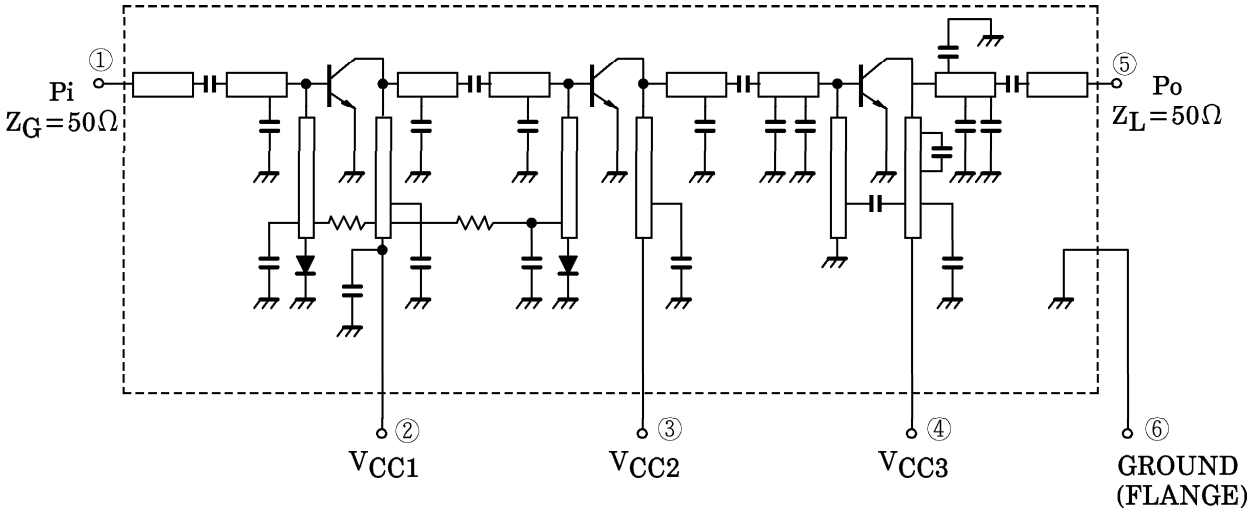
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Frequency Range	f_{range}	—	889	—	915	MHz
Output Power	Po	Pi = 200mW VCC1 = 11V VCC2 = VCC3 = 13.5V ZG = ZL = 50Ω	13	—	—	W
Power Gain	G_p		18.1	—	—	dB
Total Efficiency	η_T		35	—	—	%
Input VSWR	VSWRin		—	1.5	2.5	—
Harmonics	HRM		—	—	−30	dB
Load Mismatch	—	Po = 13W (V_{CC1} = adjust) $V_{CC2} = V_{CC3}$ = 15V Pi = 200mW VSWR load 20 : 1 all phase	No Degradation			—
Stability	—	$V_{CC2} = V_{CC3}$ = 13.5V V_{CC1} = 0~11V Pi = 200mW VSWR load 3 : 1 all phase	All spurious output than 60dB below desired signal			—

CAUTION

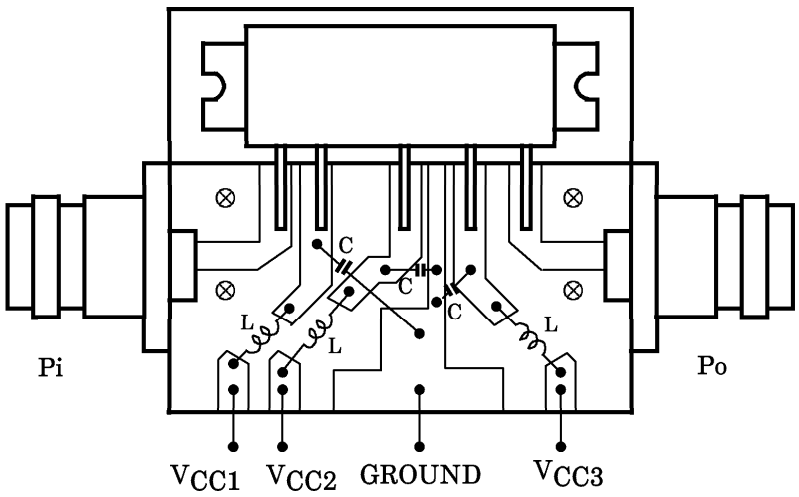
- This product has intersetting cap. Please pay attention for exceeding stress and foreign matter in your application. And not to take away the cap.
- Beryllia Ceramics is used in this product. The dust or vapor can be dangerous to humans. Do not break, cut, crush or dissolve chemically. Dispose of this product properly according to law. Do not intermingle with normal industrial or domestic waste.

961001EAA2

SCHEMATIC



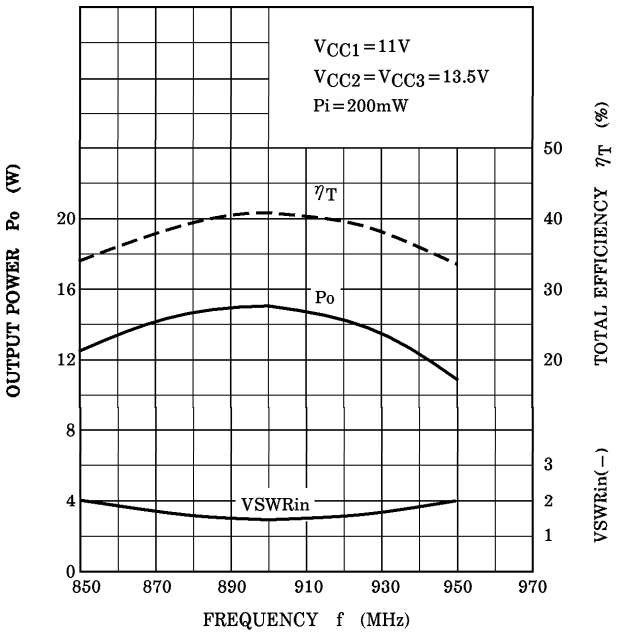
TEST FIXTURE



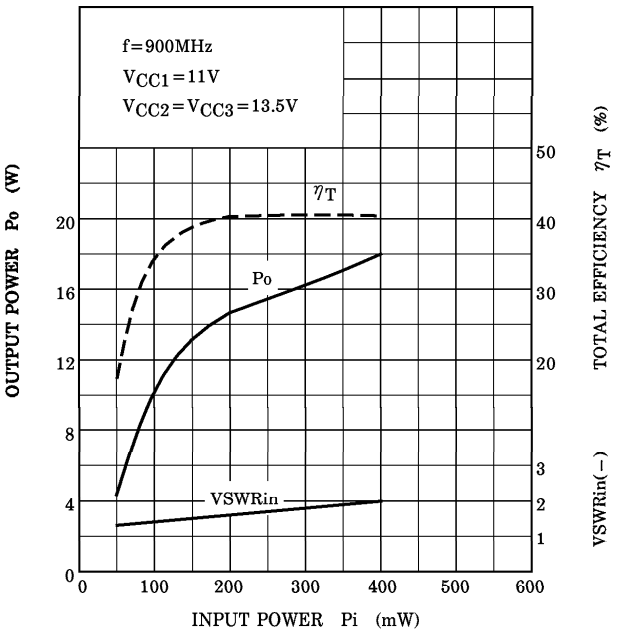
C : 1500pF, 10μF PARALLEL
L : ϕ0.8 ENAMEL WIRE 8T, 5ID

961001EAA2'

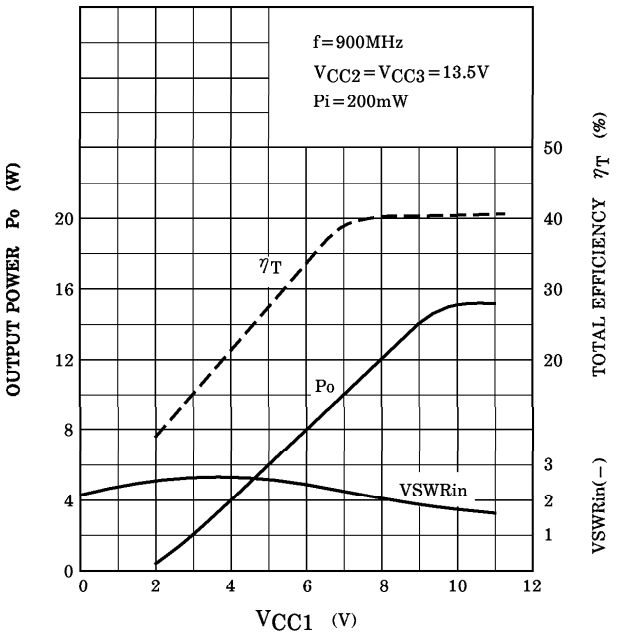
Po, η_T, VSWRin – f



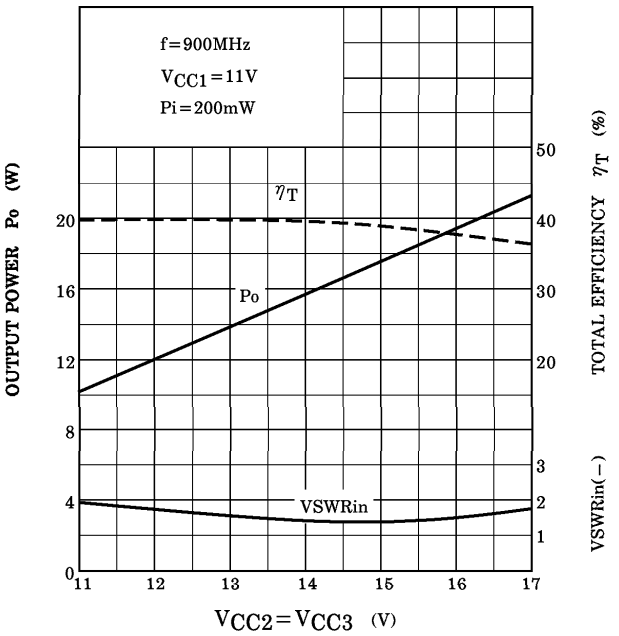
Po, η_T, VSWRin – Pi



Po, η_T, VSWRin – V_{CC1}



Po, η_T, VSWRin – V_{CC2}, V_{CC3}



CAUTION

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