

## TOSHIBA RF POWER AMPLIFIER MODULE

**S-AU27AL,S-AU27AM,S-AU27AH**

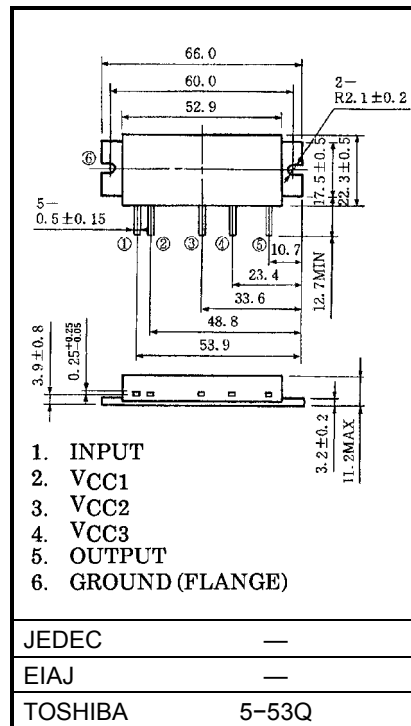
## 25W FM RF POWER AMPLIFIER MODULE

Unit in mm

- S-AU27AL :  $f = 400 \sim 430 \text{MHz}$
- S-AU27AM :  $f = 450 \sim 490 \text{MHz}$
- S-AU27AH :  $f = 490 \sim 512 \text{MHz}$

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

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
Total current	$I_T$	10	A
Input Power	$P_i$	600	mW
Output Power	$P_o$	40	W
Operating Case Temperature Range	$T_{c \text{ (opr)}}$	$-30 \sim 100$	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{stg}}$	$-40 \sim 110$	$^\circ\text{C}$



Weight: 35g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Frequency Range	$f_{\text{range}}$	—	400	—	512	MHz
Output Power	$P_o$	$V_{CC1} = V_{CC2} = V_{CC3} = 12.5\text{V}$ $P_i = 200\text{mW}$ $Z_G = Z_L = 50\Omega$	32	—	—	W
Power Gain	$G_p$		22.0	—	—	dB
Total Efficiency	$\eta_T$		35	—	—	%
Input VSWR	VSWR <sub>in</sub>		—	1.5	2.5	—
Harmonics	HRM		—	-30	-25	dB
Load Mismatch	—	$P_o = 35\text{W}$ ( $V_{CC1} = \text{adjust}$ ) $V_{CC2} = V_{CC3} = 15\text{V}$ $P_i = 200\text{mW}$ VSWR load 20: 1 all phase	No Degradation			—
Stability	—	$V_{CC2} = V_{CC3} = 12.5\text{V}$ $V_{CC1} = 3 \sim 12.5\text{V}$ $P_i = 200\text{mW}$ VSWR load 3: 1 all phase	All spurious output than 60dB below desired signal			—

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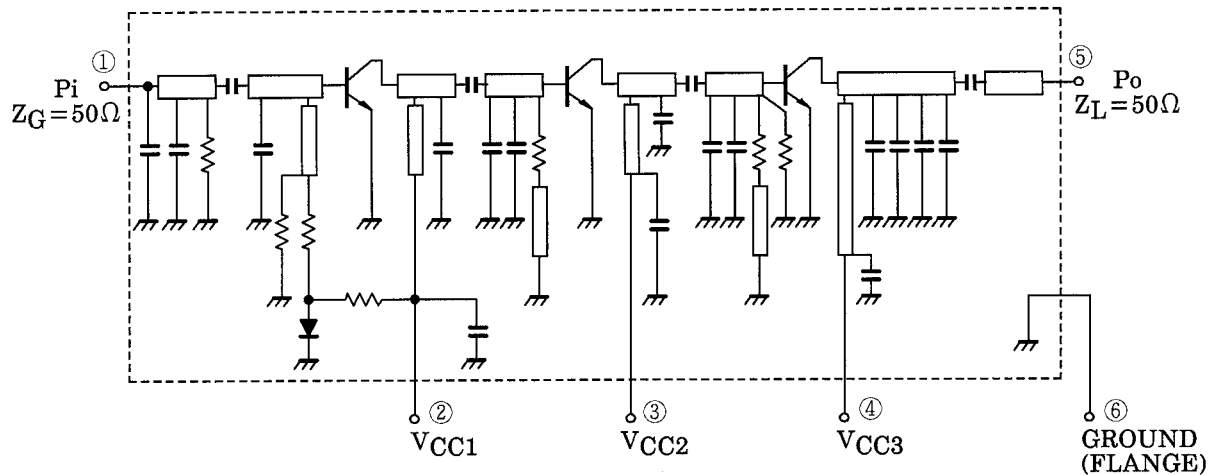
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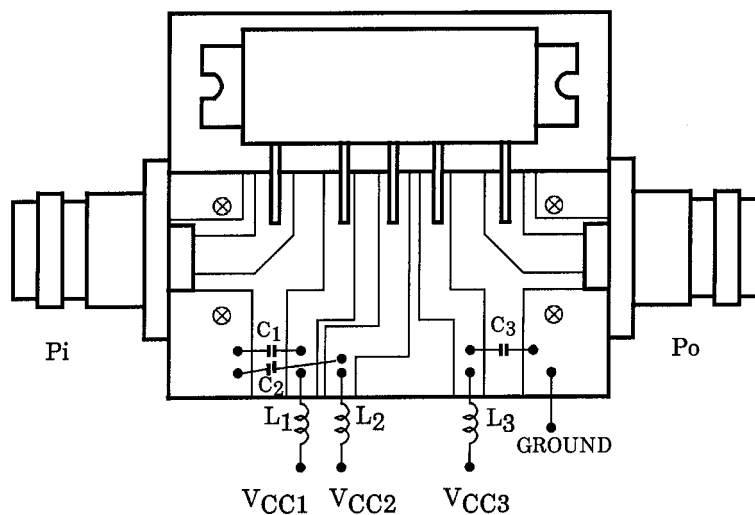
## CAUTION

- 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.

## SCHEMATIC



## TEST FIXTURE

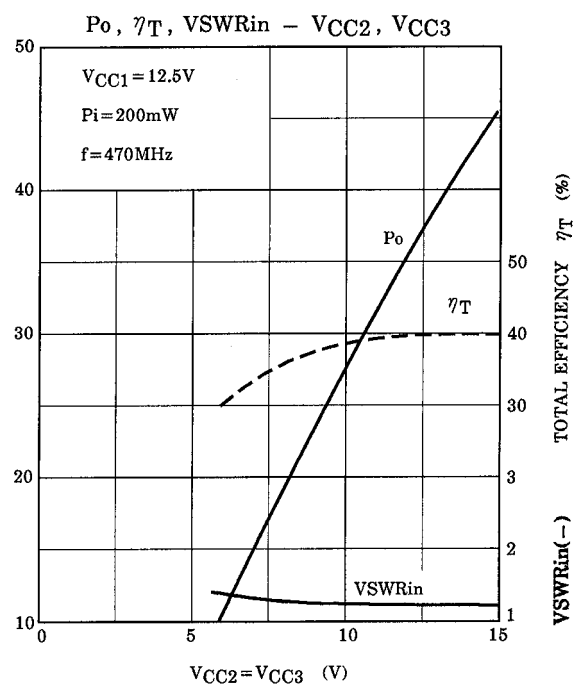
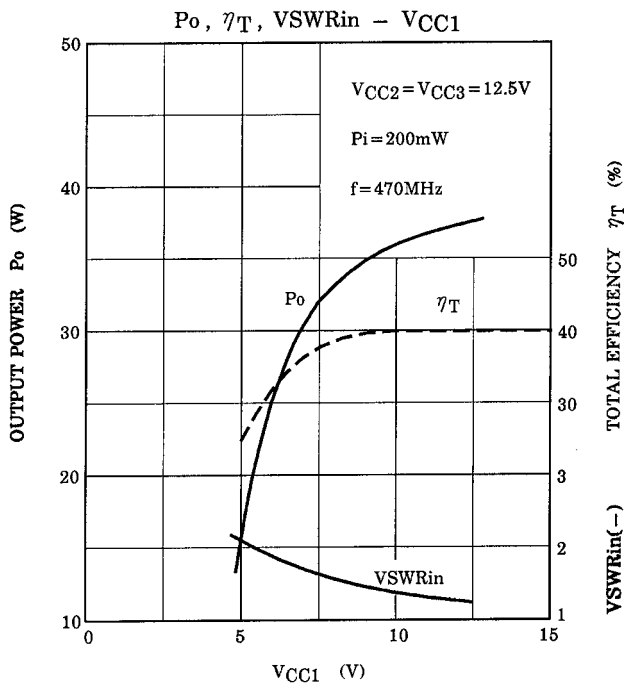
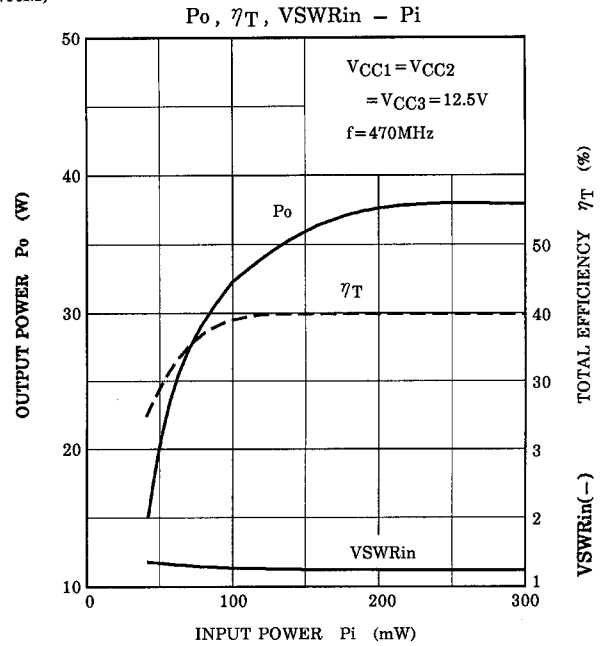
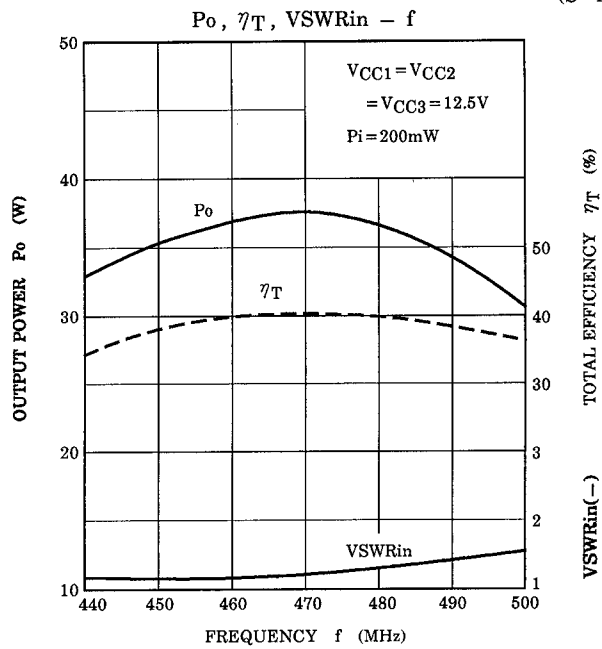


C : 15000pF, 10 $\mu$ F PARALLEL  
L :  $\phi$ 0.8 ENAMEL WIRE 8T, 5ID

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TYPICAL PERFORMANCE CURVE  
(S-AU27AM)



## CAUTION

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