

TOSHIBA RF POWER AMPLIFIER MODULE

S-AU86

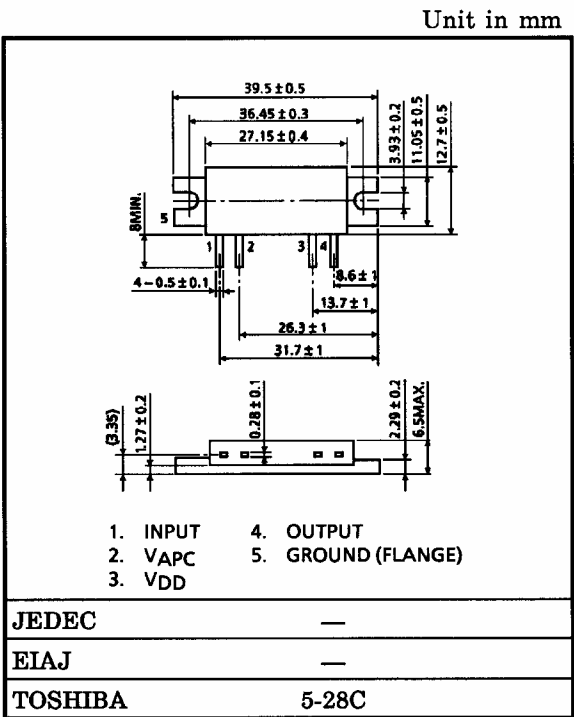
○RF POWER AMPLIFIER MODULE for 800MHz Digital MCA

MAXIMUM RATINGS (Tc = 25°C, ZG = ZL = 50Ω)

CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	V _{DD}	17	V
DC Supply Voltage	V _{GG}	9	V
Input Power	P _i	320	mW
Operating Case Temperature Range	T _{c (opr)}	-30~100	°C
Storage Temperature Range	T _{stg}	-40~110	°C

Caution: This maximum rating given in a sheet guarantees each item independently. When two items or more of maximum rated items joins a device at once. It becomes the outside of a guarantee.
Please design in circuit to make it always operate within this regulation also on the worst condition.

PACKAGE OUTLINE



Weight : 18g

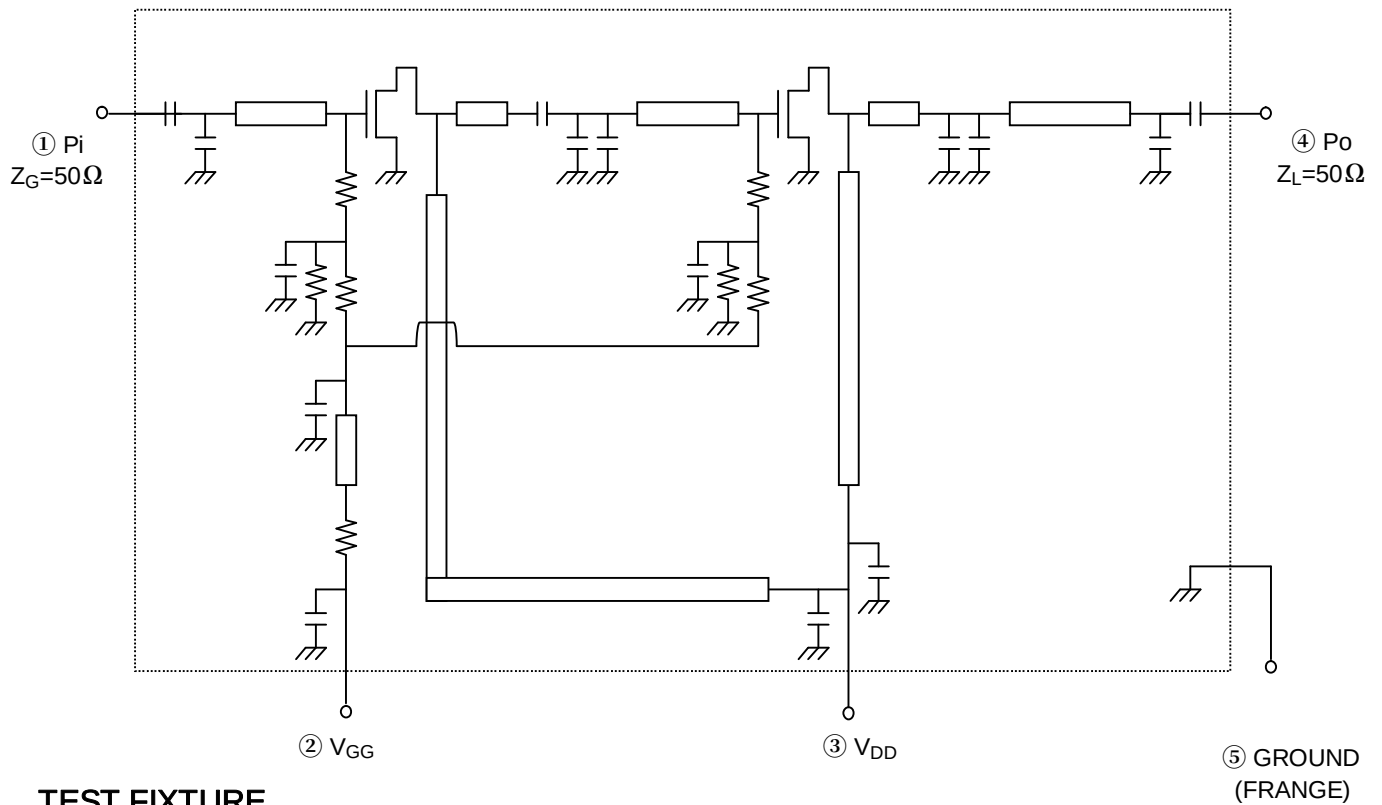
ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$, $Z_G = 50\Omega$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Frequency Range	f_{range}	—	889	—	915	MHz
Output Power	P_o	$V_{DD} = 12.0\text{V}$, $I_{DD} = 1.7\text{A}$ ($V_{GG} = \text{adjust}$) $P_o = 20\text{dBmW}$, $Z_L = 50\Omega$	40	—	—	dBmW
Input Power	P_i	$V_{DD} = 12.0\text{V}$, $I_{DD} = 1.7\text{A}$ ($V_{GG} = \text{adjust}$) $P_o = 35\text{dBmW}$, $Z_L = 50\Omega$	—	—	8	dBmW
Gate Bias Voltage	V_{GG}	$V_{DD} = 12.0\text{V}$, $I_{DD} = 1.7\text{A}$ ($V_{GG} = \text{adjust}$) $P_o = 35\text{dBmW}$ ($P_i = \text{adjust}$), $Z_L = 50\Omega$	—	—	9	V
Gate Bias Current	I_{GGBias}	$V_{DD} = 12.0\text{V}$, $I_{DD} = 1.7\text{A}$ ($V_{GG} = \text{adjust}$) $P_o = 35\text{dBmW}$ ($P_i = \text{adjust}$), $Z_L = 50\Omega$ After that P_i OFF	—	—	10	mA
Adjacent-Channel Power Ratio	ACP	$V_{DD} = 12.0\text{V}$, $I_{DD} = 1.7\text{A}$ ($V_{GG} = \text{adjust}$) $P_o = 35\text{dBmW}$ ($P_i = \text{adjust}$), $Z_L = 50\Omega$ Modulated Wave : π $\pi/4$ -DQPSK ($\alpha=0.5$, 32kbps) Band Width : 16kHz Frequency Offset : 25kHz	—	—	-39	dB
Second Harmonic	2nd HRM	$V_{DD} = 12.0\text{V}$, $I_{DD} = 1.7\text{A}$ ($V_{GG} = \text{adjust}$) $P_o = 35\text{dBmW}$ ($P_i = \text{adjust}$), $Z_L = 50\Omega$	—	—	-30	dB
Third Harmonic	3rd HRM		—	—	-30	dB
Harmonic	HRM		—	—	-35	dB
Relative Phase Variation	—	$V_{DD} = 12.0\text{V}$, $I_{DD} = 1.7\text{A}$ ($V_{GG} = \text{adjust}$) $Z_L = 50\Omega$, 0° ($@P_o = 35\text{dBmW}$) $P_o = 5$ to 40dBmW	—	—	± 5	$^\circ$
Load Mismatch	—	$V_{DD} = 12.0\text{V}$, $I_{DD} = 1.7\text{A}$ ($V_{GG} = \text{adjust}$) $P_i = 40\text{dBmW}$ ($P_i = \text{adjust}$), $@Z_L = 50\Omega$ VSWR LOAD 20: 1 ALL PHASE	No Degradation			—
Stability	—	$V_{DD} = 10.0$ to 16.0V , $V_{GG} = 1.0$ to 9.0V $P_i = -40$ to 25dBmW VSWR LOAD 6: 1 ALL PHASE	All spurious output than 60dB below desired signal			—

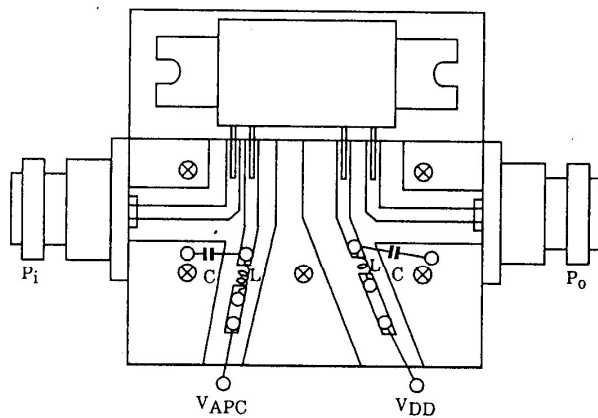
Caution

- 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 break, cut, crush or dissolve chemically. Dispose of this product properly according to law. 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 0.8 ENAMEL WIRE, 5T, 3ID

RESTRICTIONS ON PRODUCT USE

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