
PF1010A

MOS FET Power Amplifier Module for P/C LAN

HITACHI

ADE-208-106A (Z)

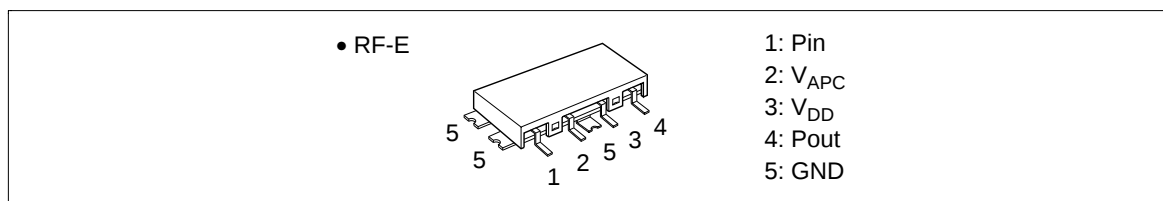
2nd Edition

July 1996

Features

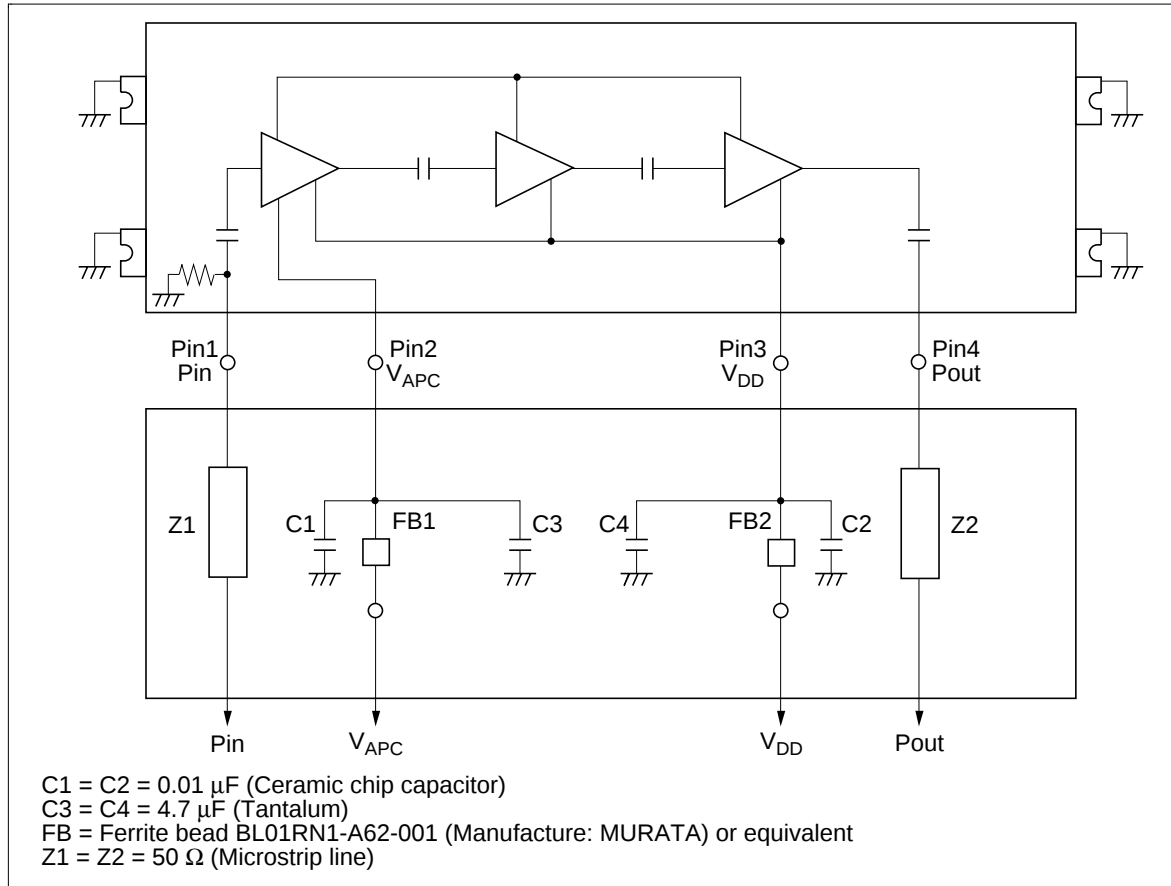
- Frequency range: 806 to 824 MHz
- Surface mounted small package: 1 cc, 3g with shielded cover
- Loe voltage operation: 6 V
- Low power control current: 300 μ A Typ

Pin Arrangement



PF1010A

Internal Diagram and External Circuit



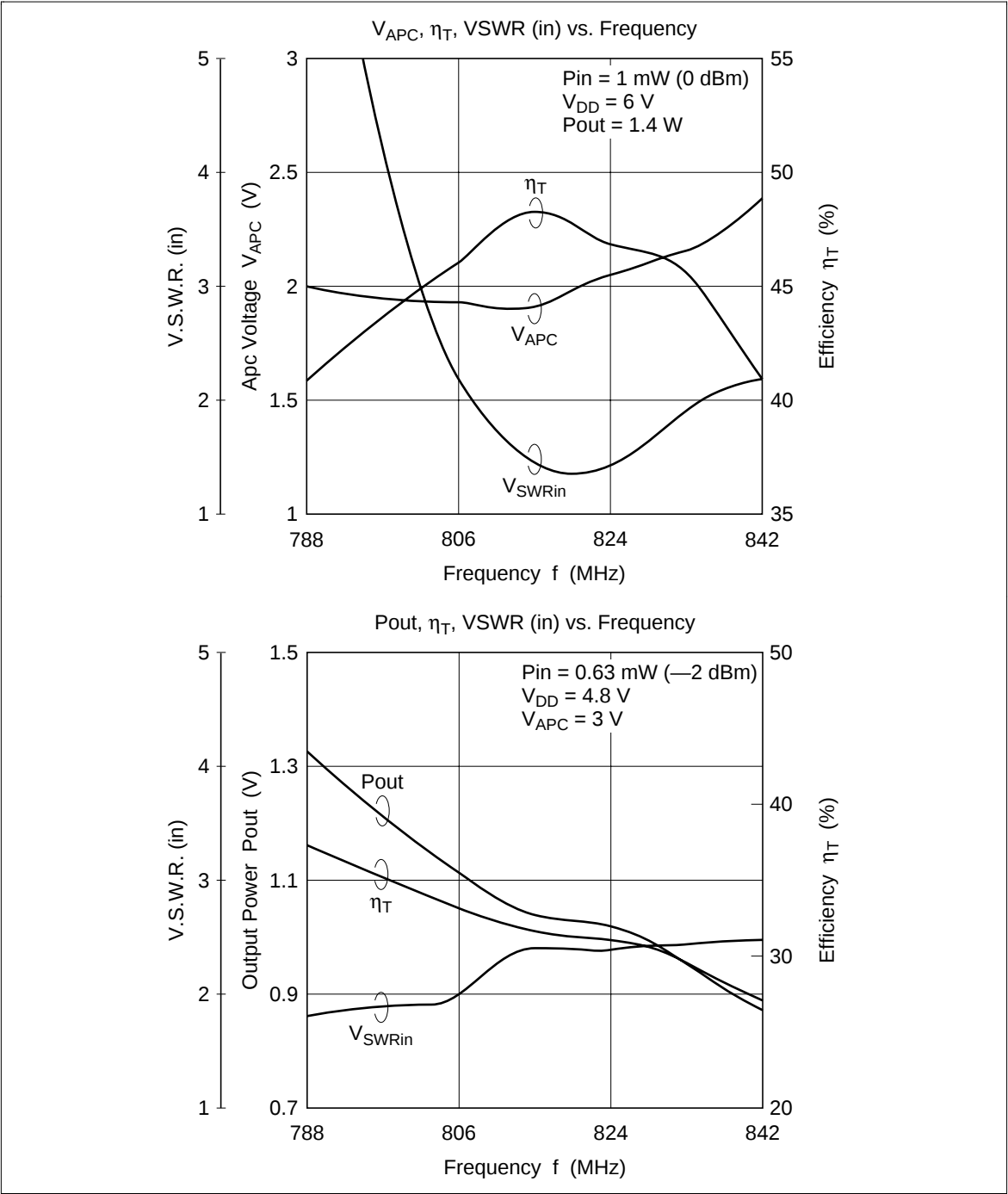
Absolute Maximum Ratings (T_c = 25°C)

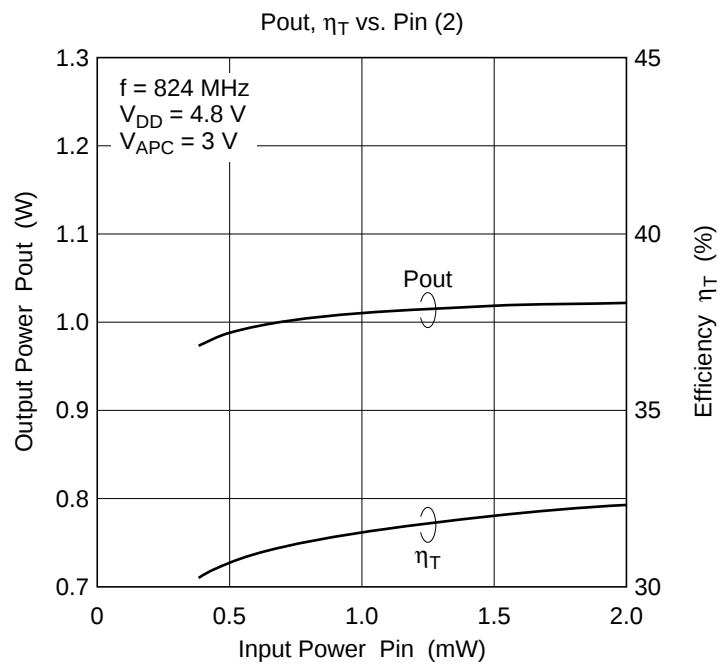
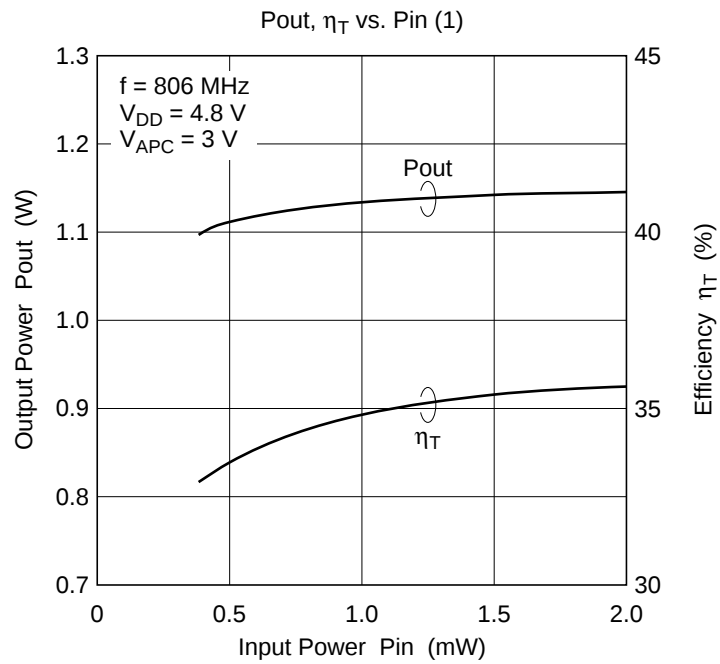
Item	Symbol	Rating	Unit
Supply voltage	V _{DD}	12	V
Supply current	I _{DD}	2	A
APC voltage	V _{APC}	3	V
Input power	Pin	20	mW
Operating case temperature	T _c (op)	-30 to +100	°C
Storage temperature	T _{stg}	-30 to +100	°C

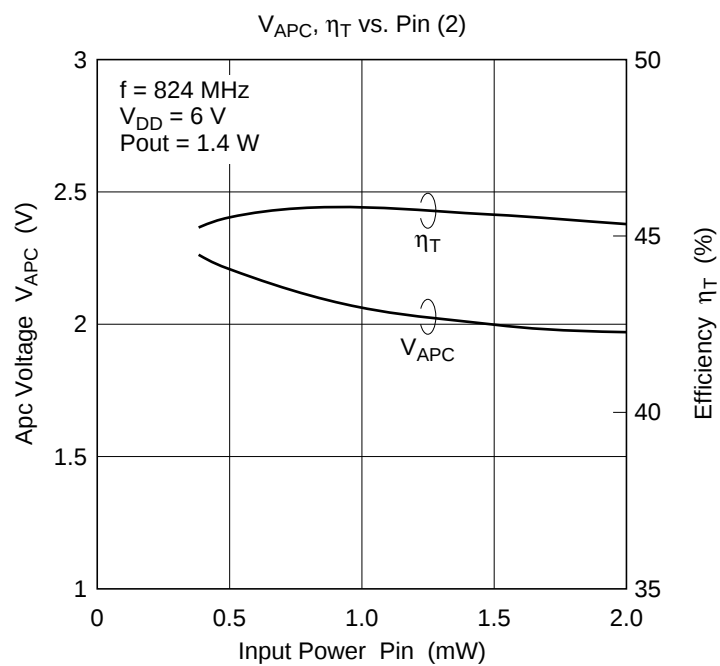
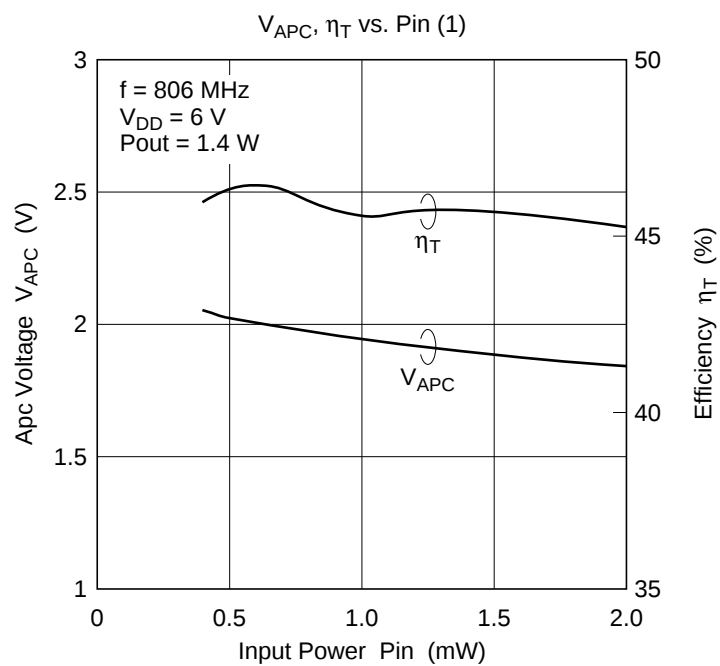
Electrical Characteristics ($T_c = 25^\circ\text{C}$)

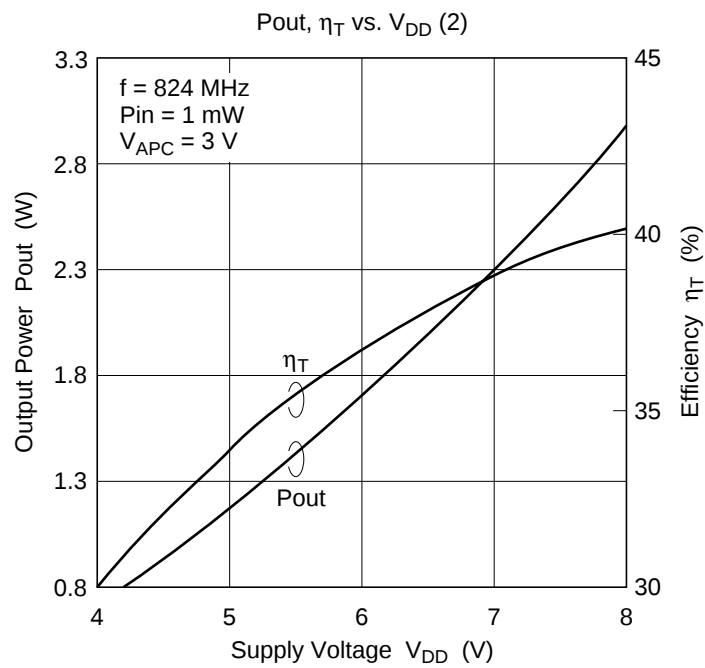
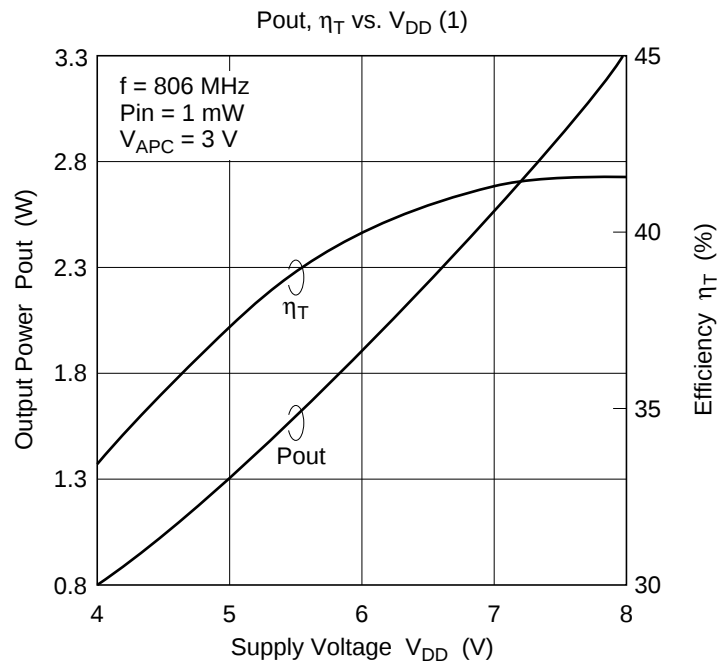
Item	Symbol	Min	Max	Unit	Test Condition
Drain cutoff current	I_{DS}	—	100	μA	$V_{DD} = 12\text{ V}$, $V_{APC} = 0\text{ V}$, $R_g = R_L = 50\ \Omega$
Total efficiency	η_T	39	—	%	$f = 806, 824\text{ MHz}$, $P_{in} = 1\text{ mW}$,
2nd harmonic distortion	2nd H.D.	—	-30	dBc	$V_{DD} = 6\text{ V}$, $R_g = R_L = 50\ \Omega$,
3rd harmonic distortion	3rd H.D.	—	-30	dBc	$P_{out} = 1.4\text{ W}$ (at APC controlled),
Input VSWR	VSWR (in)	—	3	—	
Output power	P_{out}	0.6	—	W	$f = 806, 824\text{ MHz}$, $P_{in} = 2\text{ dBm}$, $V_{DD} = 4.8\text{ V}$, $V_{APC} = 4\text{ V}$, $R_g = R_L = 50\ \Omega$
Isolation	—	—	-35	dBm	$f = 806, 824\text{ MHz}$, $P_{in} = 1\text{ mW}$, $V_{DD} = 6\text{ V}$, $V_{APC} = 0.5\text{ V}$, $R_g = R_L = 50\ \Omega$
Stability	—	No parasitic oscillation		—	$f = 806\text{ to }824\text{ MHz}$, $P_{in} = 1\text{ mW}$, $V_{DD} = 4.8\text{ to }7.2\text{ V}$, $P_{out} \leq 1.4\text{ W}$, $R_g = 50\ \Omega$, Load VSWR = 3:1 All phase angles

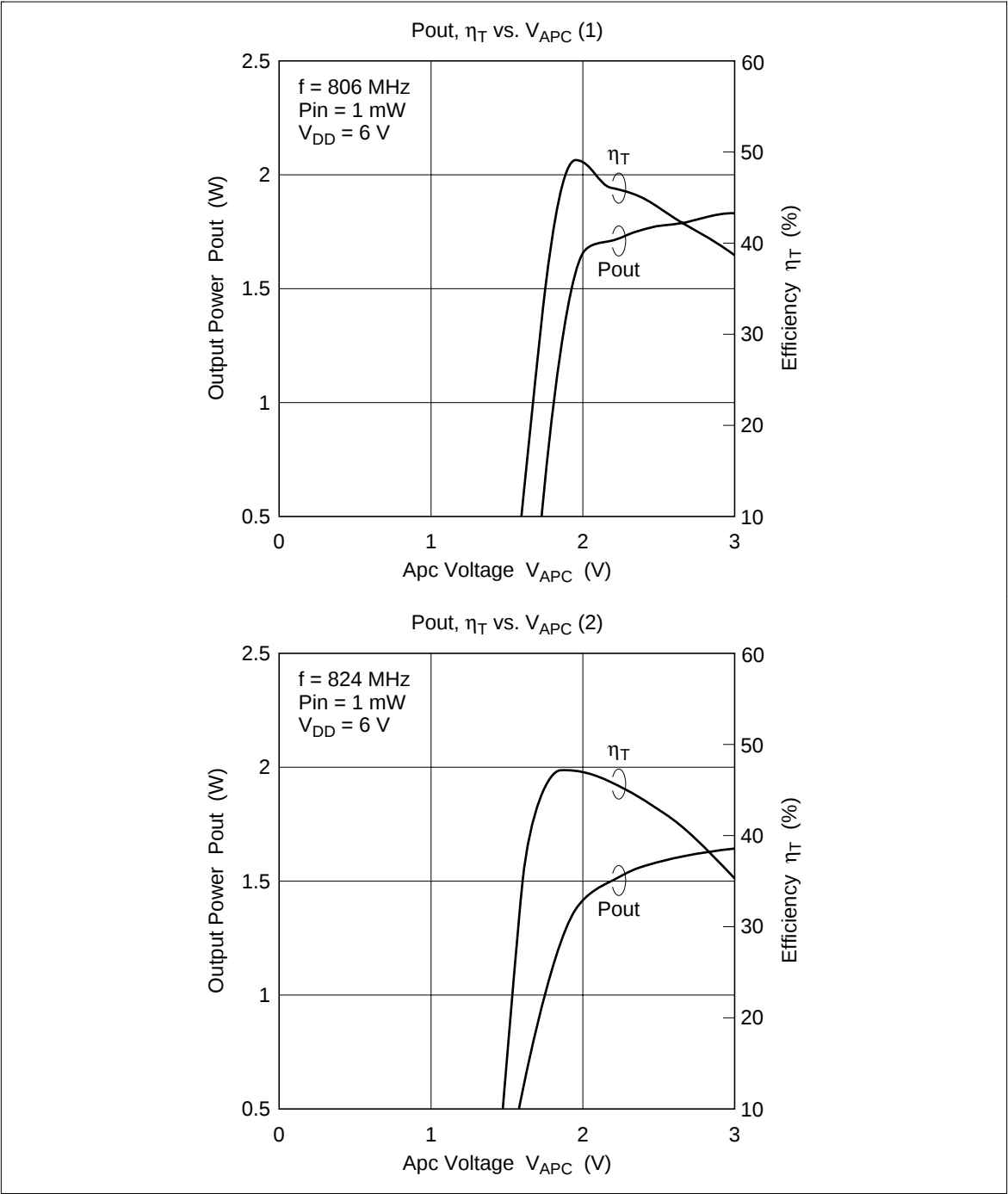
Characteristic Curves

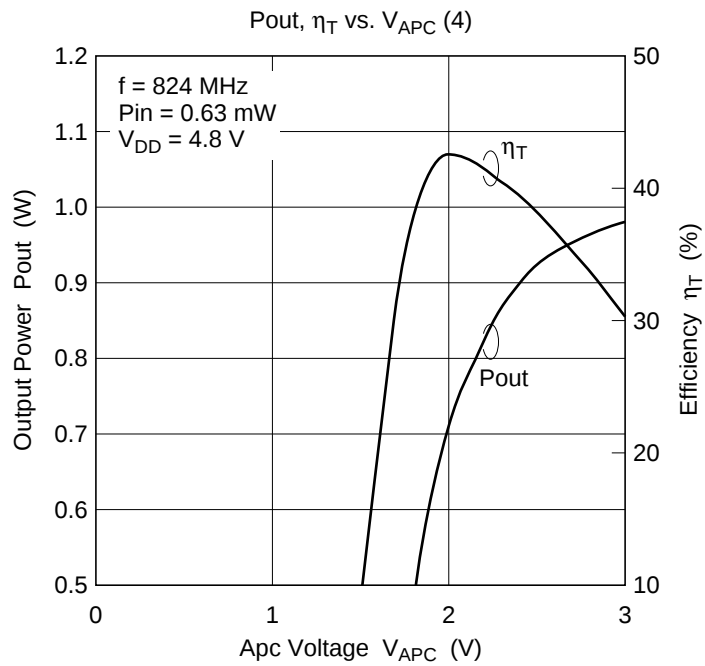
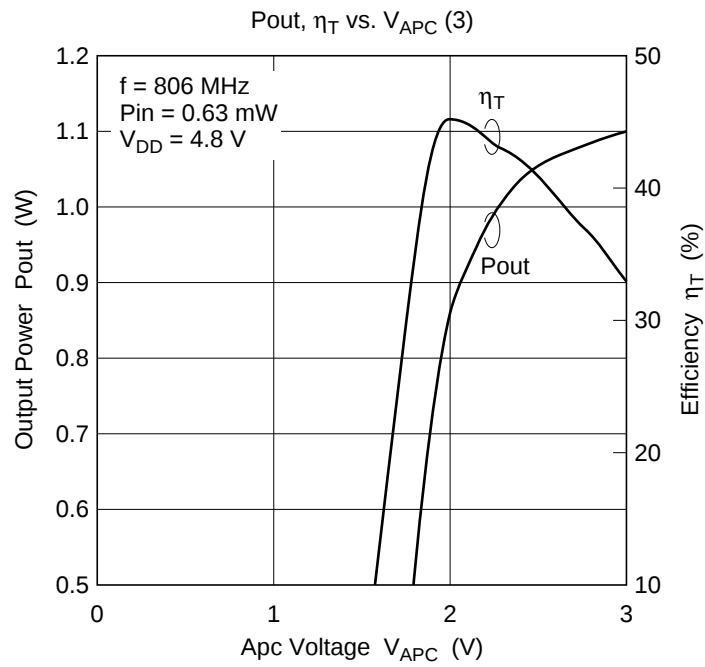


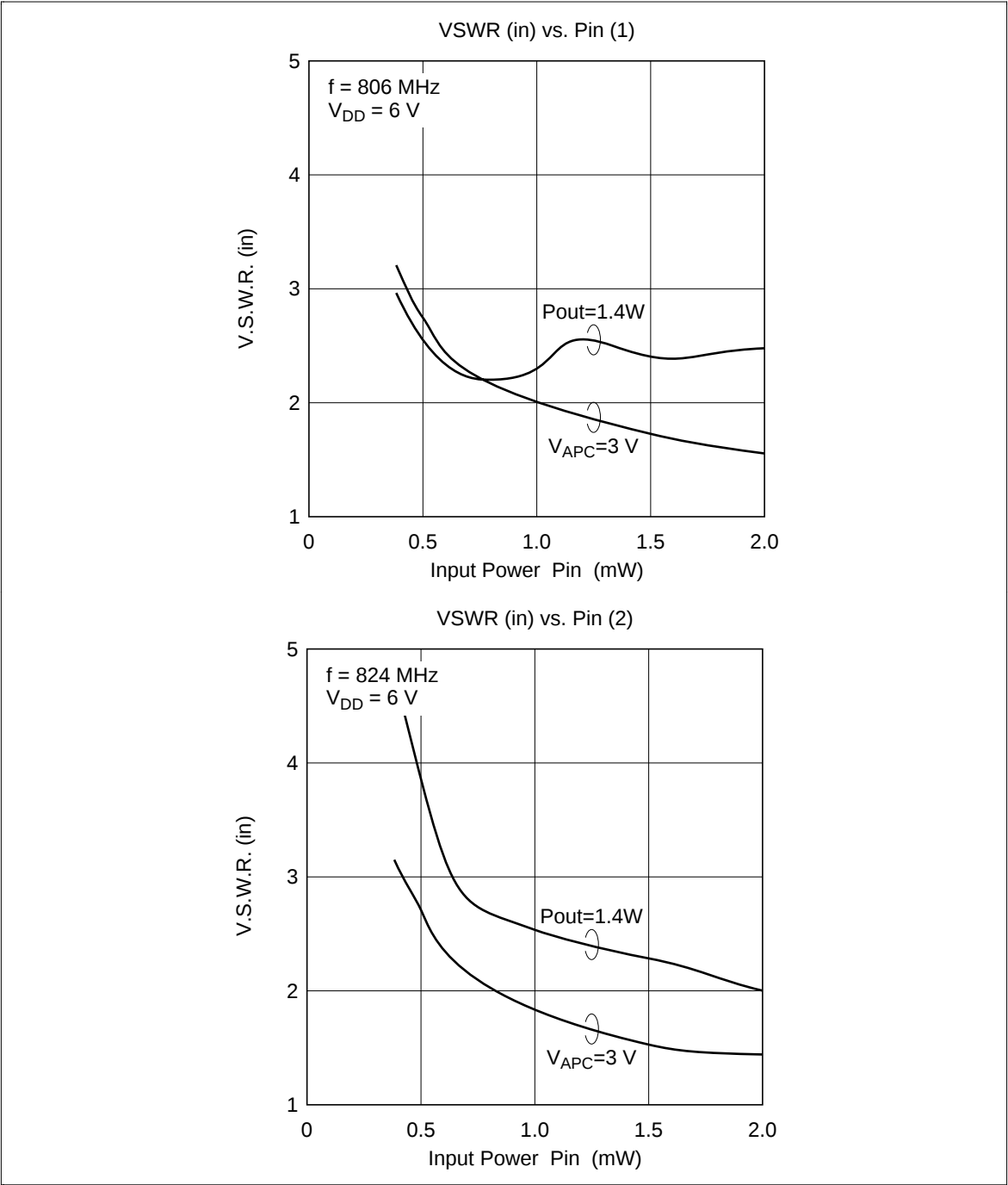


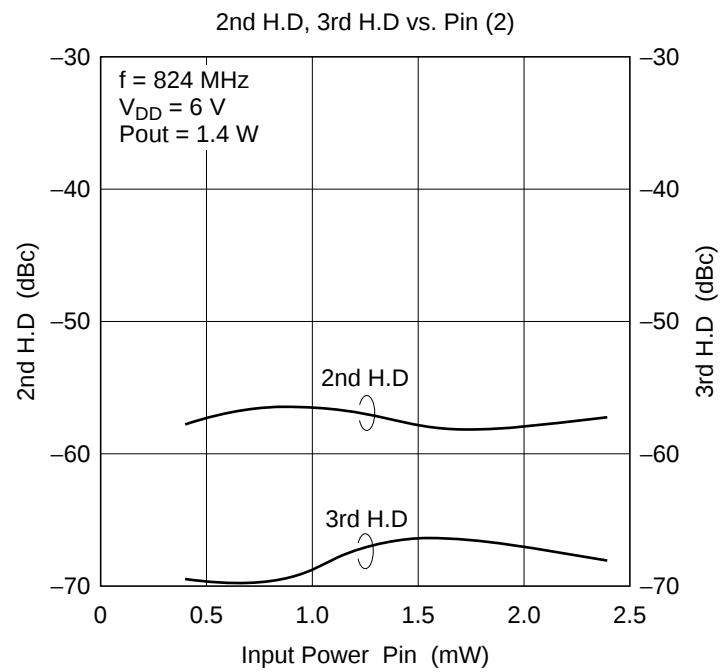
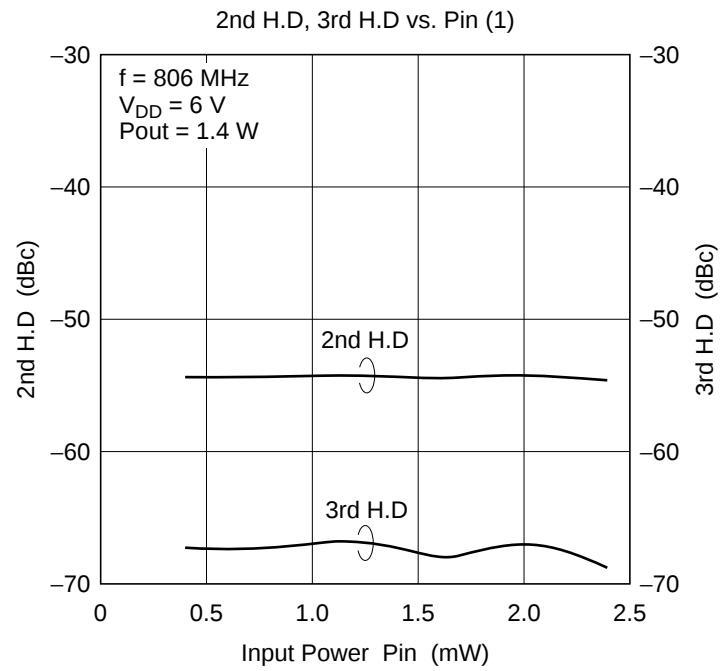








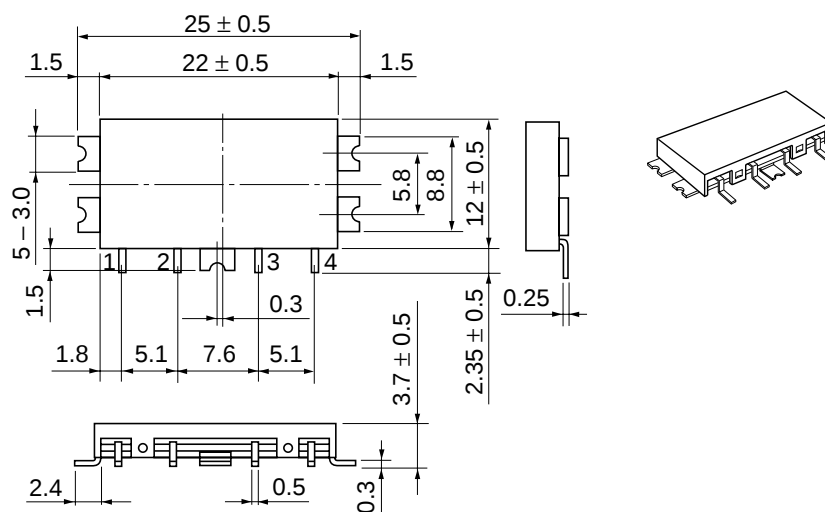




PF1010A

Package Dimensions

Unit: mm



Hitachi Code	RF-E
JEDEC	—
EIAJ	—
Weight (reference value)	3 g

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HITACHI

Hitachi, Ltd.

Semiconductor & IC Div.

Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100, Japan

Tel: Tokyo (03) 3270-2111

Fax: (03) 3270-5109

For further information write to:

Hitachi America, Ltd.

Semiconductor & IC Div.

2000 Sierra Point Parkway

Brisbane, CA. 94005-1835

U S A

Tel: 415-589-8300

Fax: 415-583-4207

Hitachi Europe GmbH

Electronic Components Group

Continental Europe

Dornacher StraÙe 3

D-85622 Feldkirchen

M nchen

Tel: 089-9 91 80-0

Fax: 089-9 29 30 00

Hitachi Europe Ltd.

Electronic Components Div.

Northern Europe Headquarters

Whitebrook Park

Lower Cookham Road

Maidenhead

Berkshire SL6 8YA

United Kingdom

Tel: 0628-585000

Fax: 0628-778322

Hitachi Asia Pte. Ltd.

16 Collyer Quay #20-00

Hitachi Tower

Singapore 0104

Tel: 535-2100

Fax: 535-1533

Hitachi Asia (Hong Kong) Ltd.

Unit 706, North Tower,

World Finance Centre,

Harbour City, Canton Road

Tsim Sha Tsui, Kowloon

Hong Kong

Tel: 27359218

Fax: 27306071

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