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# PF0075A

MOS FET Power Amplifier Module for AMPS Handy Phone

# HITACHI

ADE-208-341C (Z)  
Product preview 4th. Edition  
July 1996

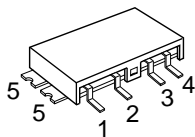
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## Features

- 2 stage amplifier
- High efficiency: 55% Typ at 1.2 W
- Low power control current: 500  $\mu$ A
- Reflowable surface mounted small package: 0.6 cc

## Pin Arrangement

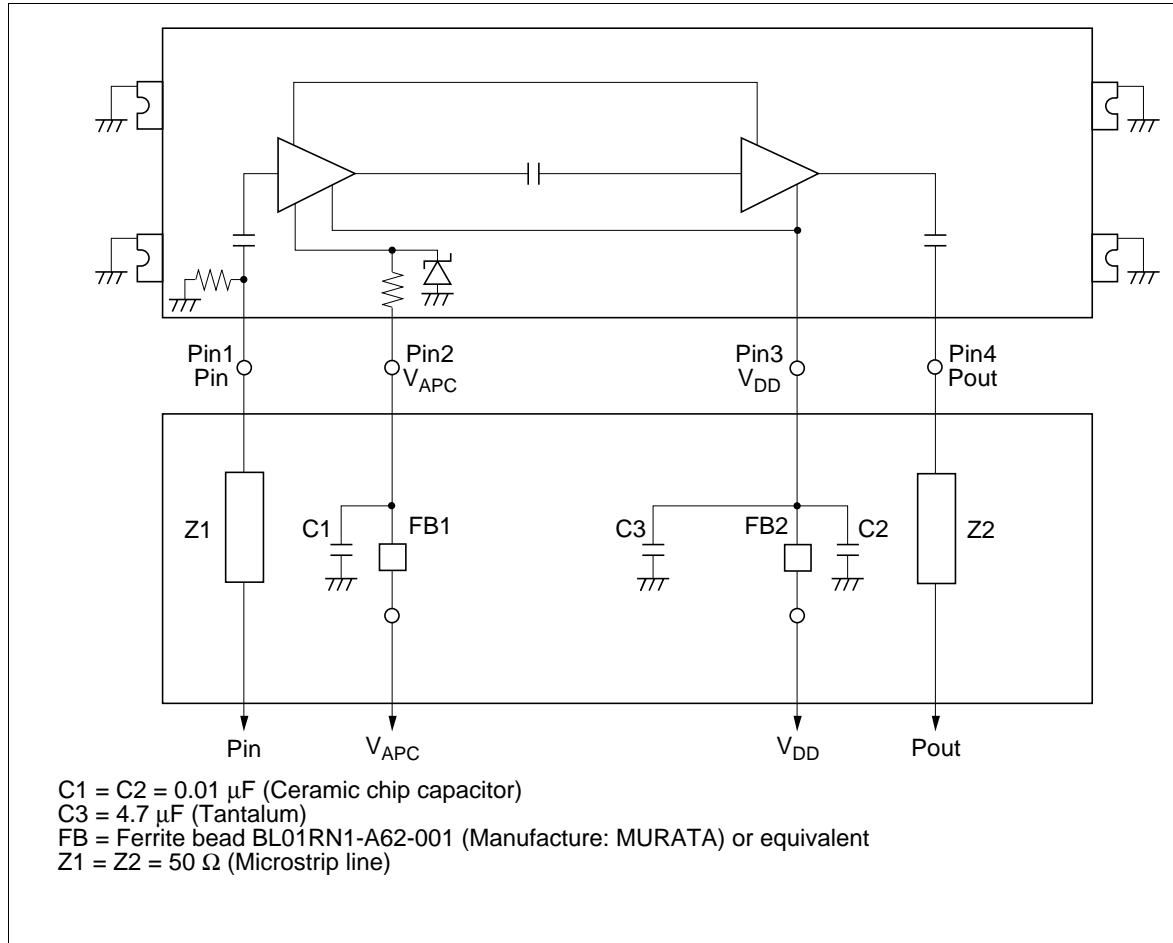
• RF-H1



1: Pin  
2:  $V_{APC}$   
3:  $V_{DD}$   
4: Pout  
5: GND

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## Internal Diagram and External Circuit



### Absolute Maximum Ratings (T<sub>c</sub> = 25°C)

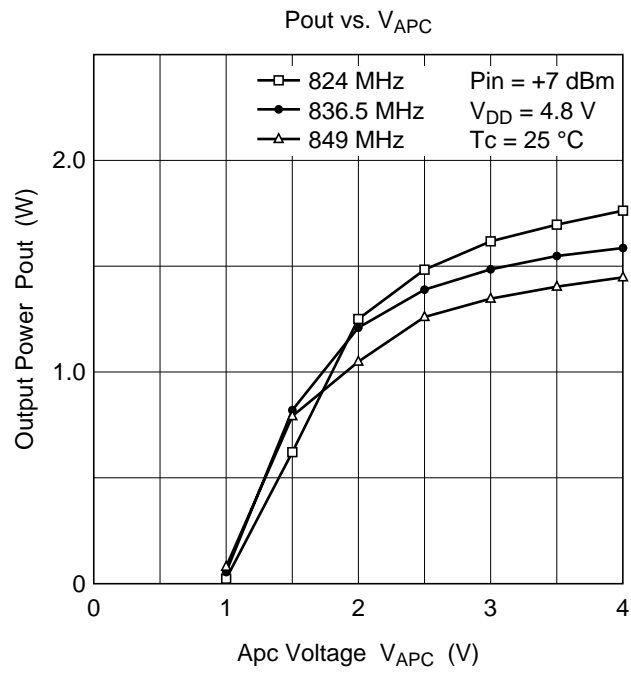
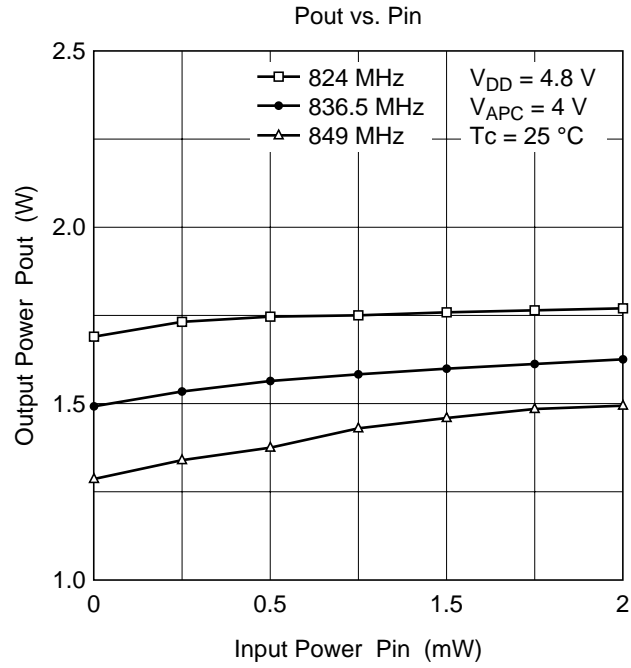
Item	Symbol	Rating	Unit
Supply voltage	VDD	10	V
Supply current	IDD	1.5	A
VAPC voltage	VAPC	7	V
Input power	Pin	40	mW
Operating case temperature	T <sub>c</sub> (op)	-30 to +100	°C
Storage temperature	T <sub>stg</sub>	-30 to +100	°C

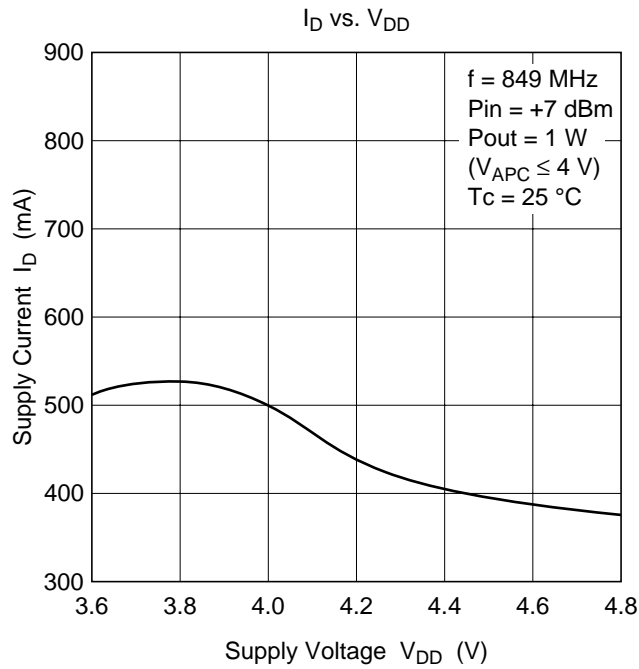
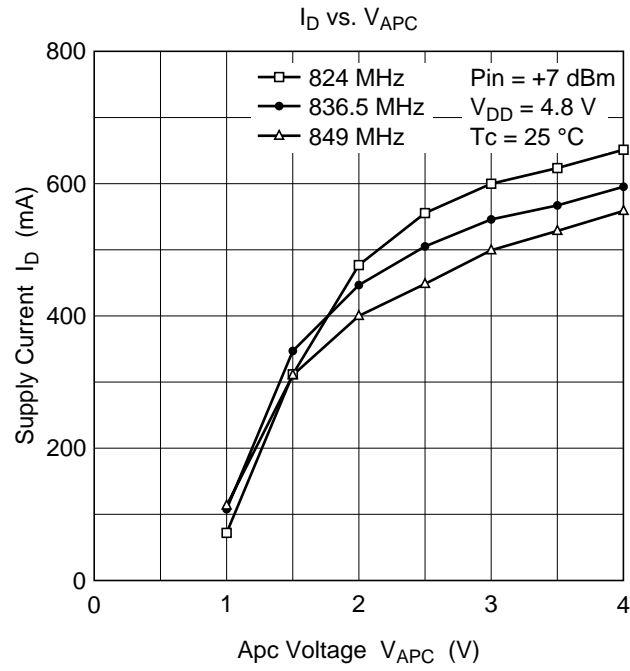
**Electrical Characteristics (T<sub>c</sub> = 25°C)**

<b>Item</b>	<b>Symbol</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>	<b>Unit</b>	<b>Test Condition</b>
Drain cutoff current	IDS	—	—	100	μA	VDD = 10 V, VAPC = 0 V, Rg = RI = 50 Ω
Total efficiency	η <sub>T</sub>	50	55	—	%	f = 824, 849 MHz, Pin = +7 dBm,
2nd harmonic distortion	2nd H.D.	—	-40	-30	dBc	VDD = 4.8 V, Rg = RI = 50 Ω
3rd harmonic distortion	3rd H.D.	—	-40	-30	dBc	Pout = 1.2 W (at APC controlled)
Input VSWR	VSWR (in)	—	2	3	—	
Output power	Pout	1.25	1.4	—	W	f = 824, 849 MHz, Pin = +7 dBm, VDD = 4.8 V, VAPC = 4 V, Rg = RI = 50 Ω
Isolation	—	—	-10	+6	dBm	f = 824, 849 MHz, Pin = +7 dBm, VDD = 4.8 V, VAPC = 0.5 V, Rg = RI = 50 Ω
Stability	—	No parasitic oscillation			—	f = 824 to 849 MHz, Pin = +7 dBm, VDD = 4.3V to 6 V, Pout ≤ 1.3 W, Rg = 50 Ω, Load VSWR = 3:1 All phases

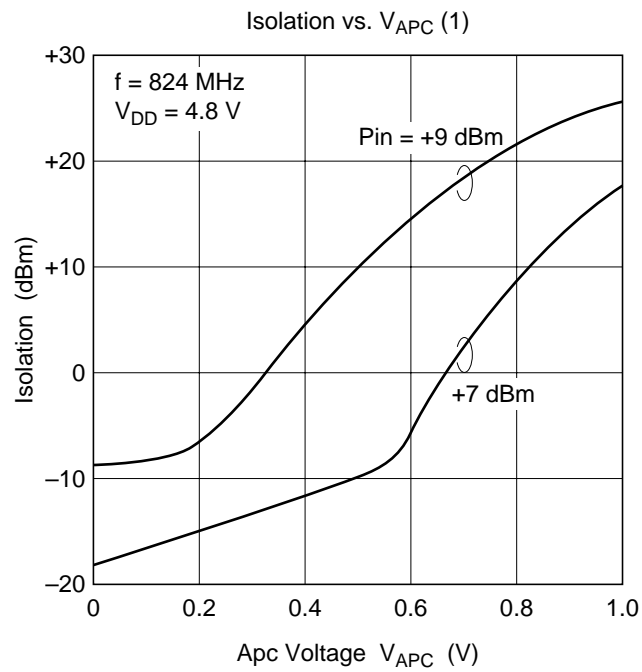
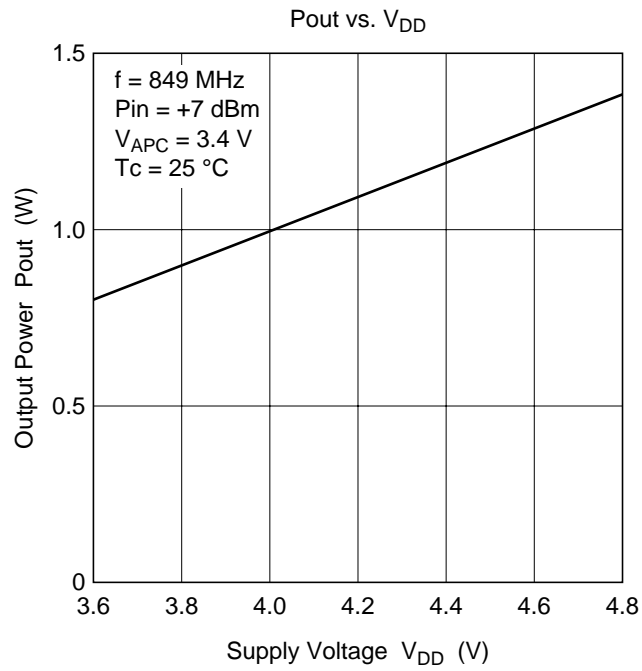
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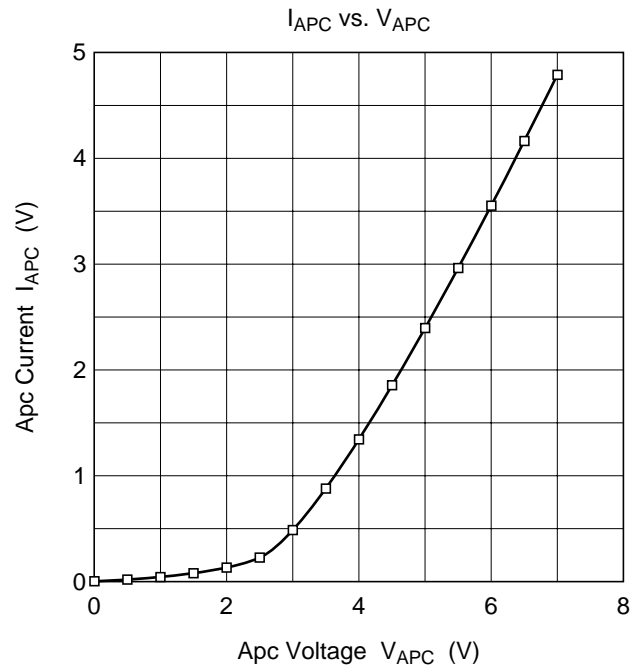
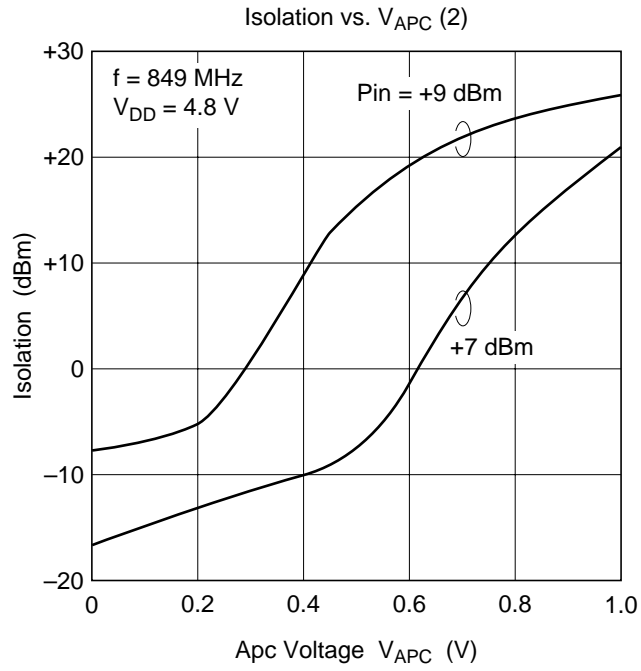
Characteristics Curve





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## Package Dimensions

Unit: mm

