
PF1010A

MOS FET Power Amplifier Module for P/C LAN

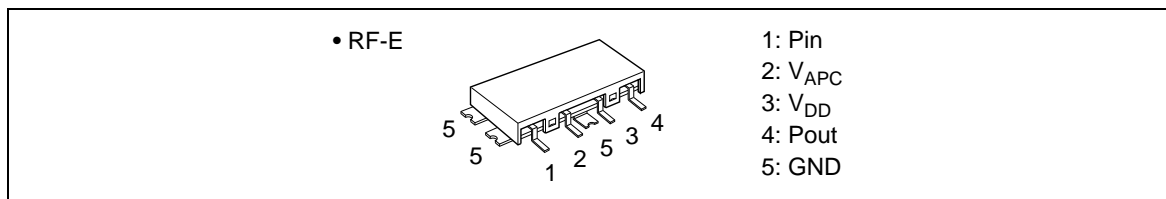
HITACHI

ADE-208-106A (Z)
2nd. Edition
July 1996

Features

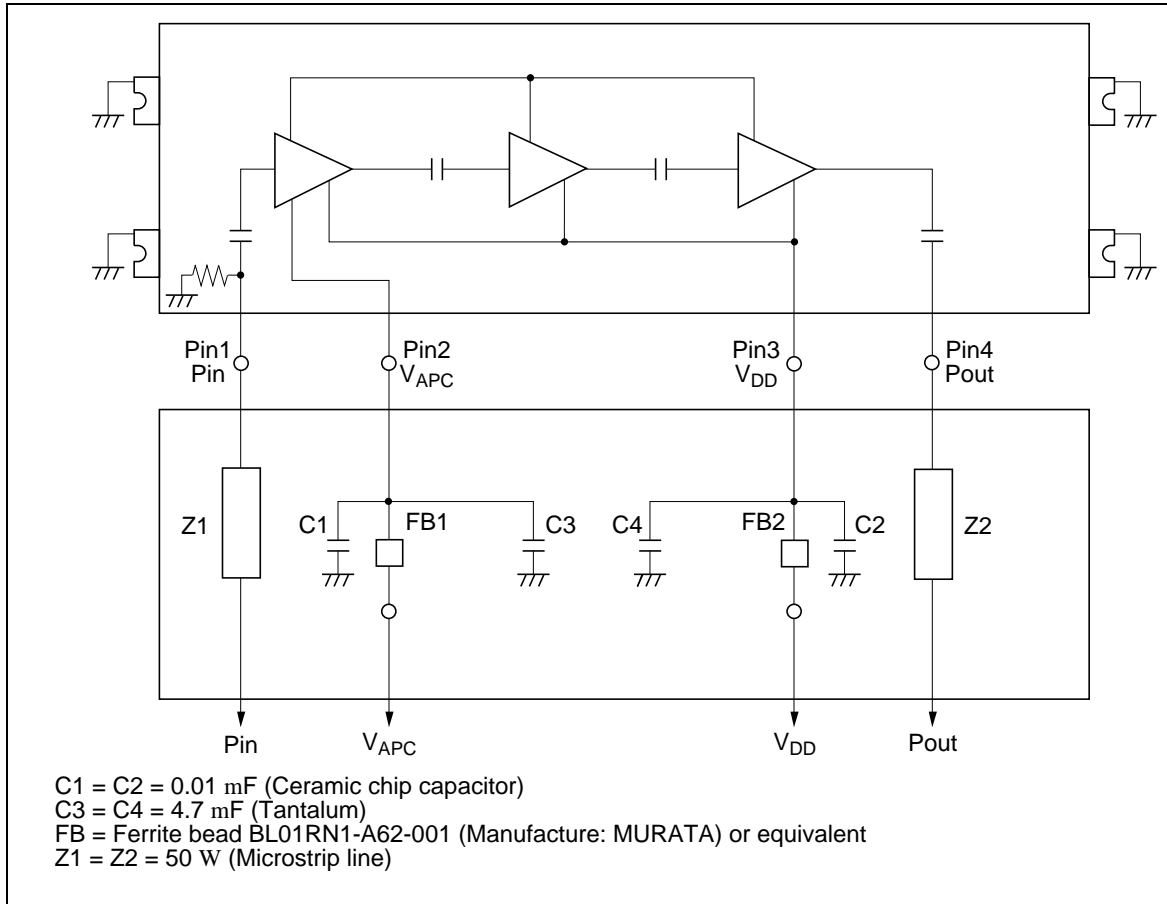
- Frequency range: 806 to 824 MHz
- Surface mounted small package: 1 cc, 3g with shielded cover
- Low voltage operation: 6 V
- Low power control current: 300 μ A Typ

Pin Arrangement



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Internal Diagram and External Circuit



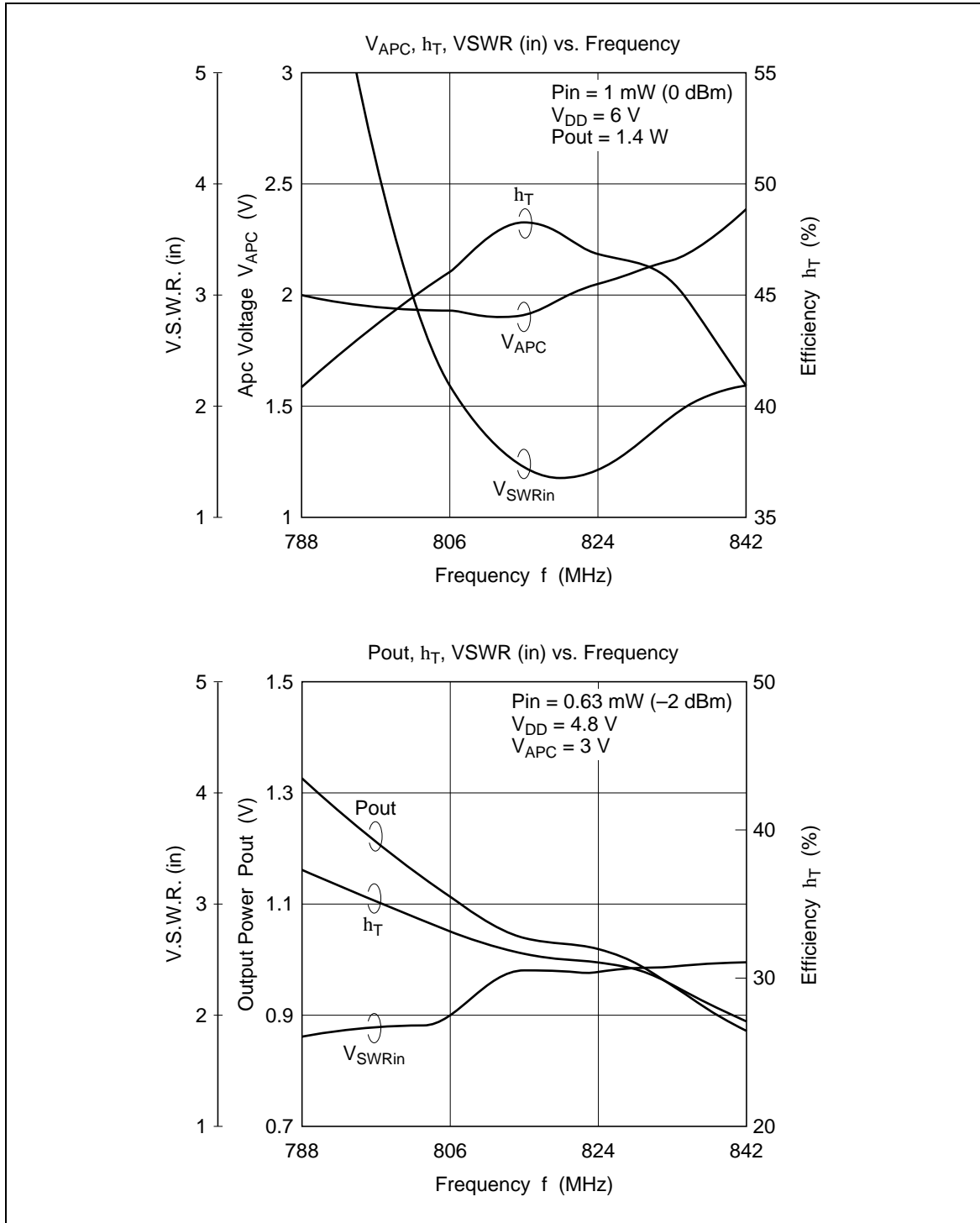
Absolute Maximum Ratings ($T_c = 25^\circ\text{C}$)

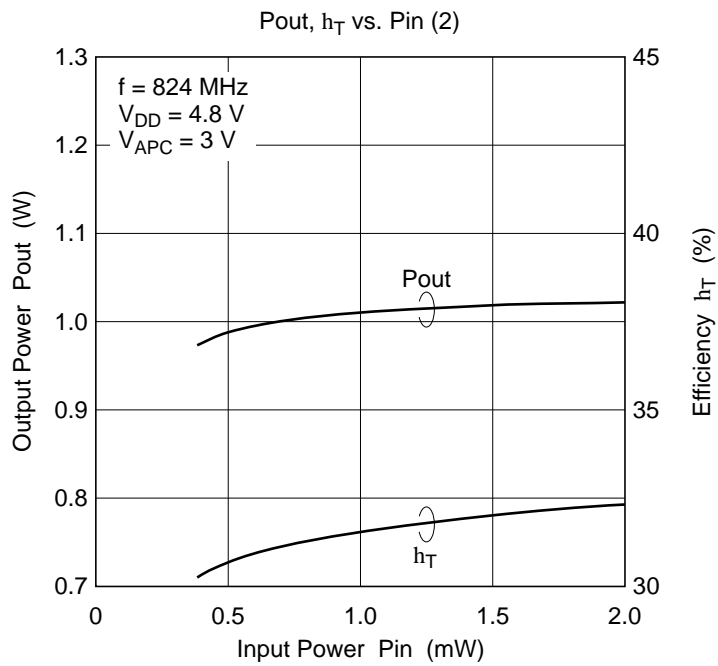
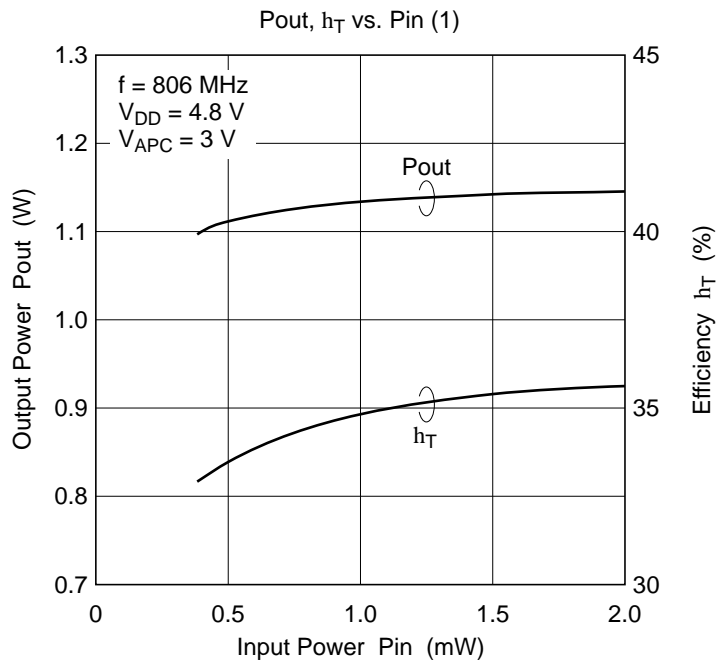
Item	Symbol	Rating	Unit
Supply voltage	V_{DD}	12	V
Supply current	I_{DD}	2	A
APC voltage	V_{APC}	3	V
Input power	Pin	20	mW
Operating case temperature	T_c (op)	-30 to +100	$^\circ\text{C}$
Storage temperature	T_{stg}	-30 to +100	$^\circ\text{C}$

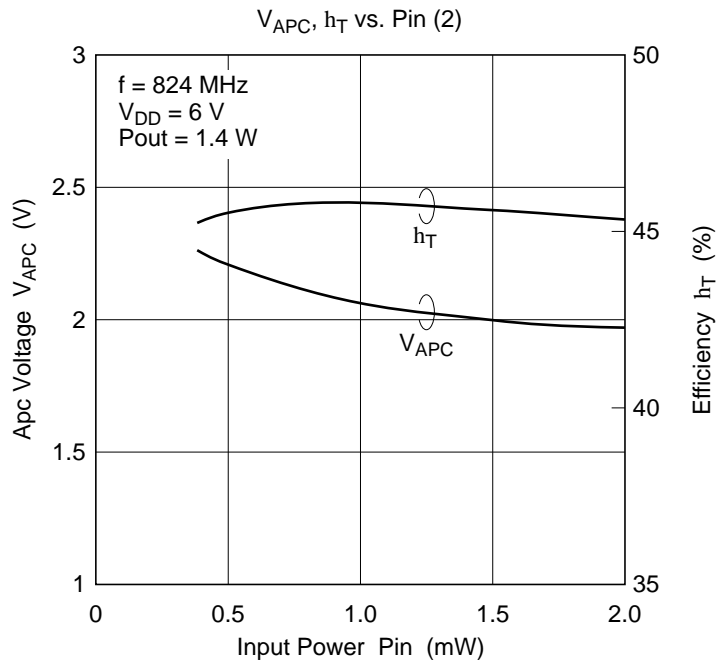
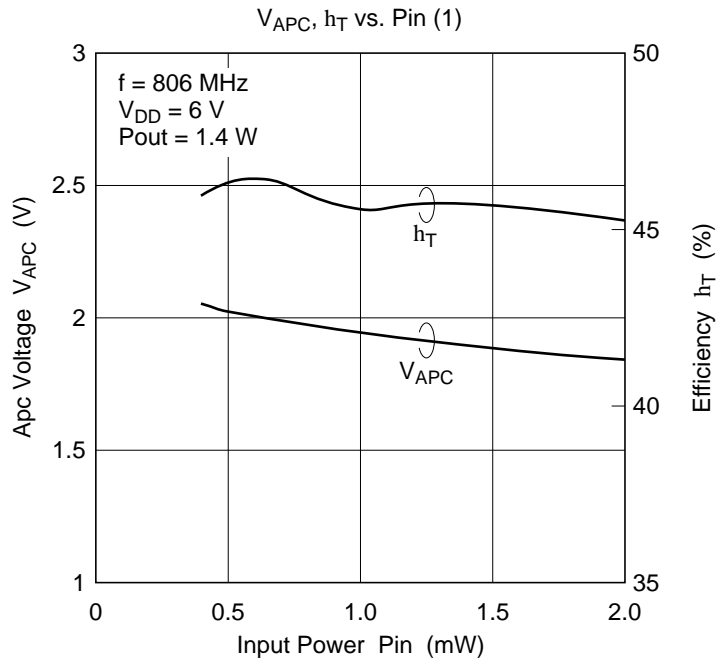
Electrical Characteristics (T_c = 25°C)

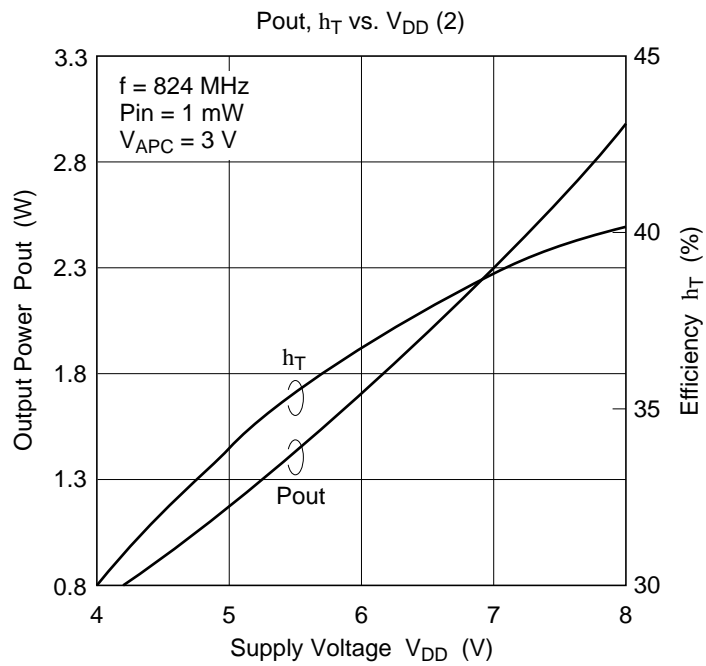
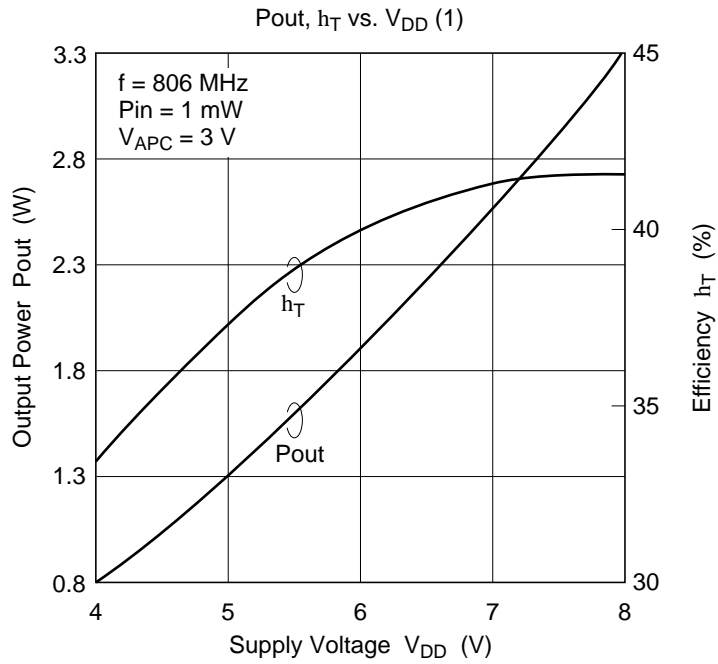
Item	Symbol	Min	Max	Unit	Test Condition
Drain cutoff current	I _{DS}	—	100	μA	V _{DD} = 12 V, V _{APC} = 0 V, R _g = R _L = 50 Ω
Total efficiency	η _T	39	—	%	f = 806, 824 MHz, Pin = 1 mW,
2nd harmonic distortion	2nd H.D.	—	-30	dBc	V _{DD} = 6 V, R _g = R _L = 50 Ω,
3rd harmonic distortion	3rd H.D.	—	-30	dBc	P _{out} = 1.4 W (at APC controlled),
Input VSWR	VSWR (in)	—	3	—	
Output power	P _{out}	0.6	—	W	f = 806, 824 MHz, Pin = 2 dBm, V _{DD} = 4.8 V, V _{APC} = 4 V, R _g = R _L = 50 Ω
Isolation	—	—	-35	dBm	f = 806, 824 MHz, Pin = 1 mW, V _{DD} = 6 V, V _{APC} = 0.5 V, R _g = R _L = 50 Ω
Stability	—	No parasitic oscillation		—	f = 806 to 824 MHz, Pin = 1 mW, V _{DD} = 4.8 to 7.2 V, P _{out} ≤ 1.4 W, R _g = 50 Ω, Load VSWR = 3:1 All phase angles

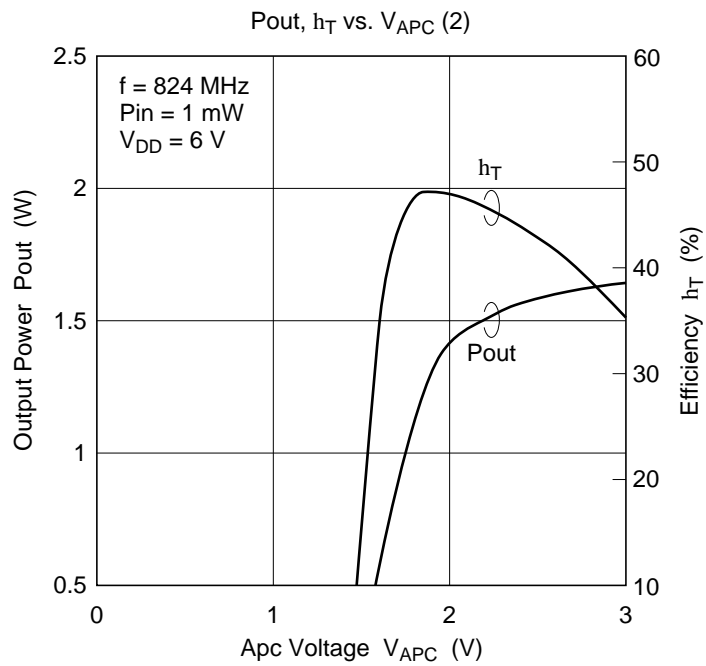
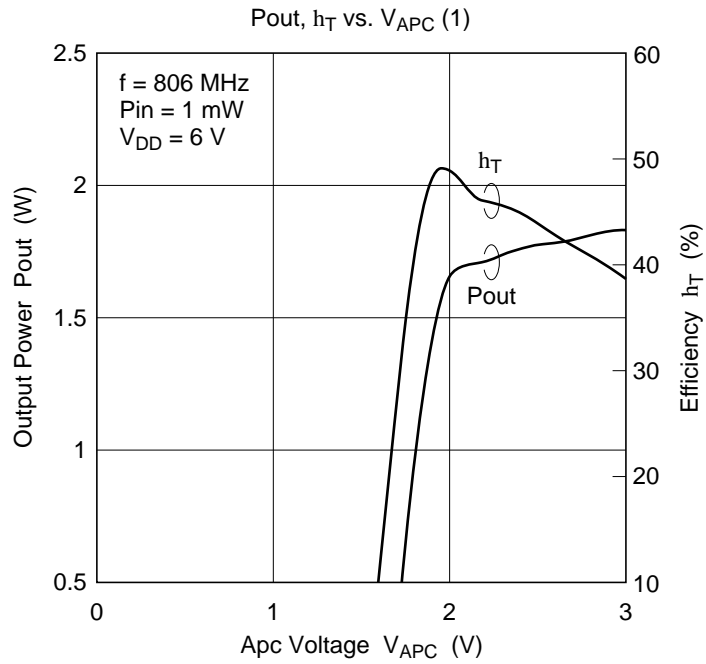
Characteristics Curve

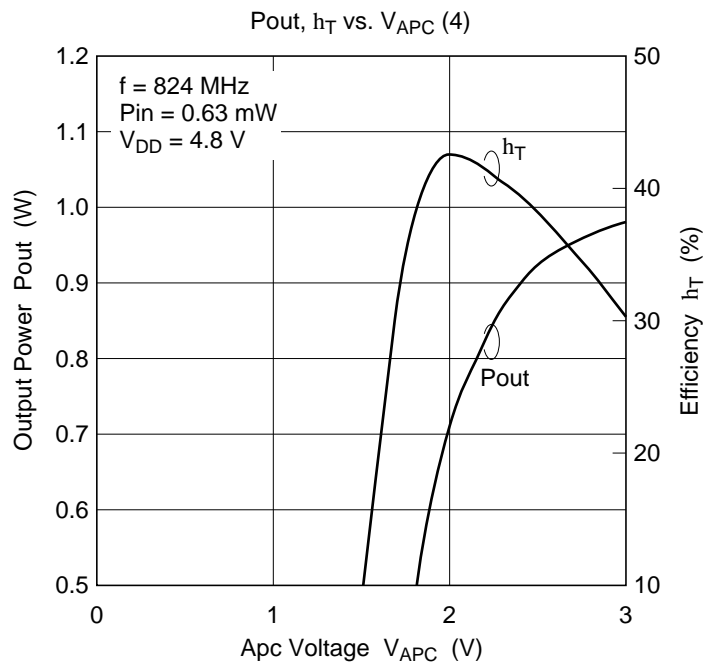
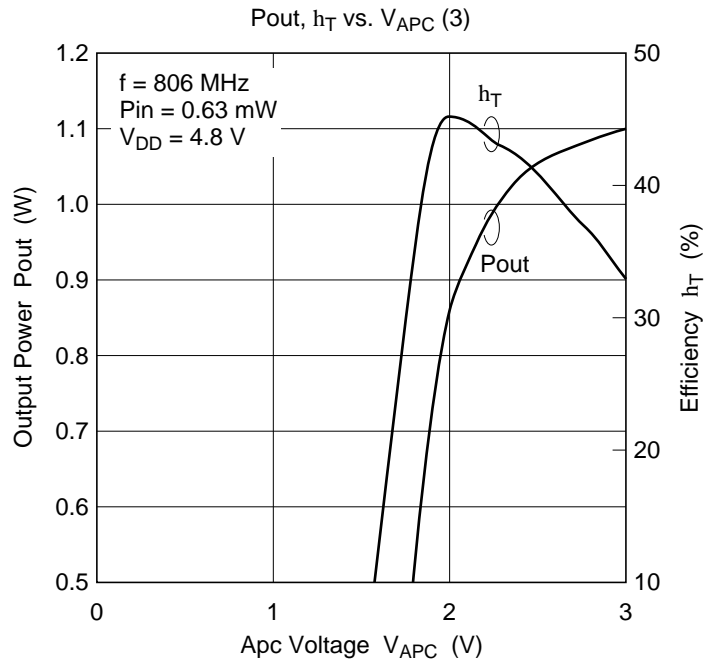


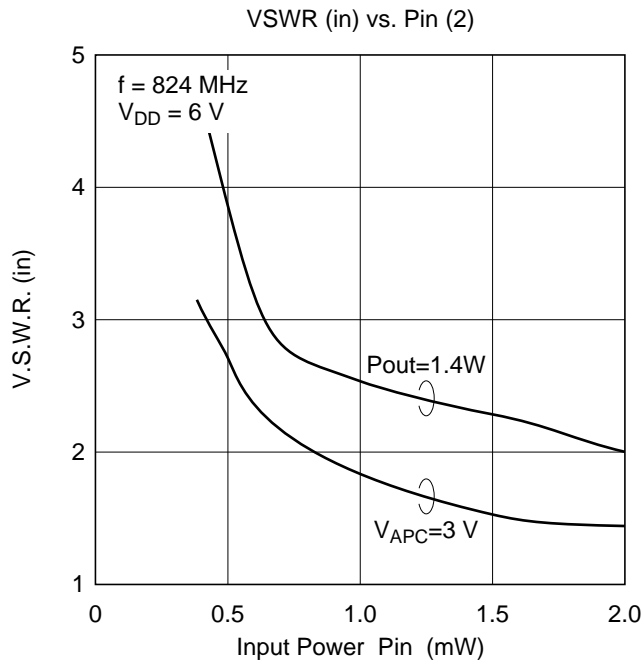
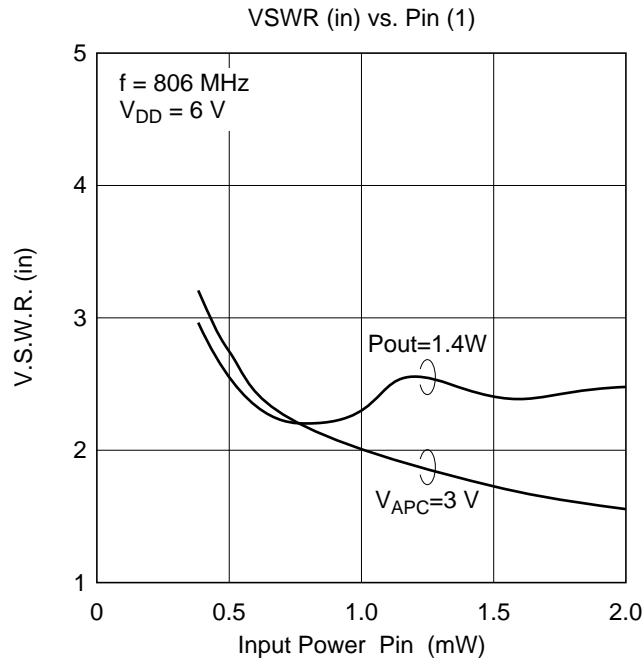


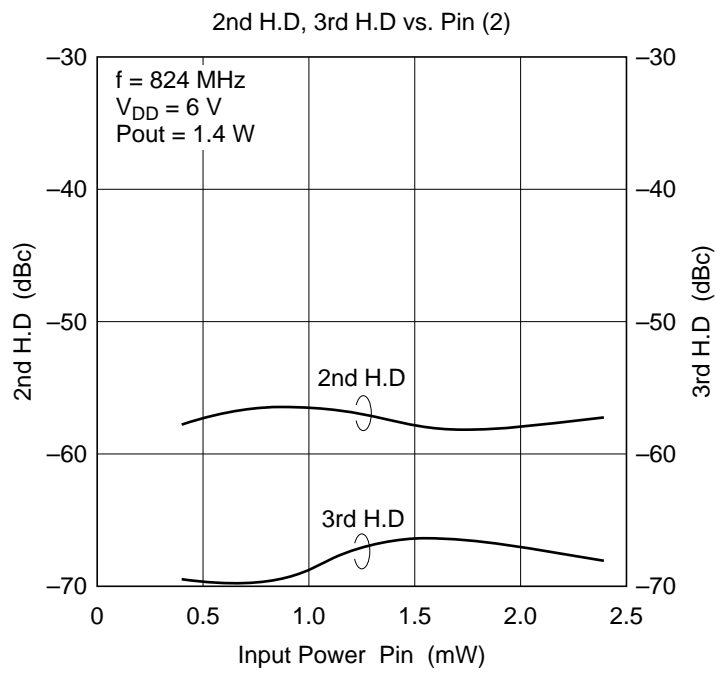
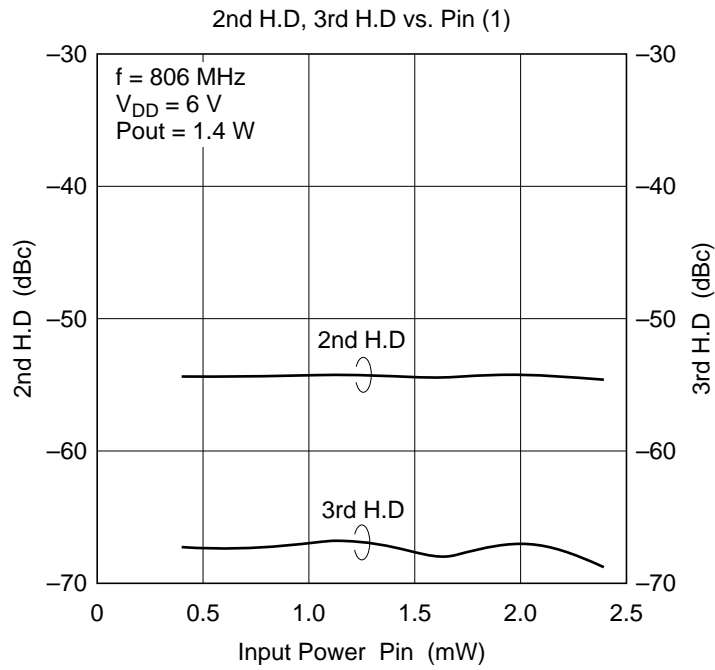








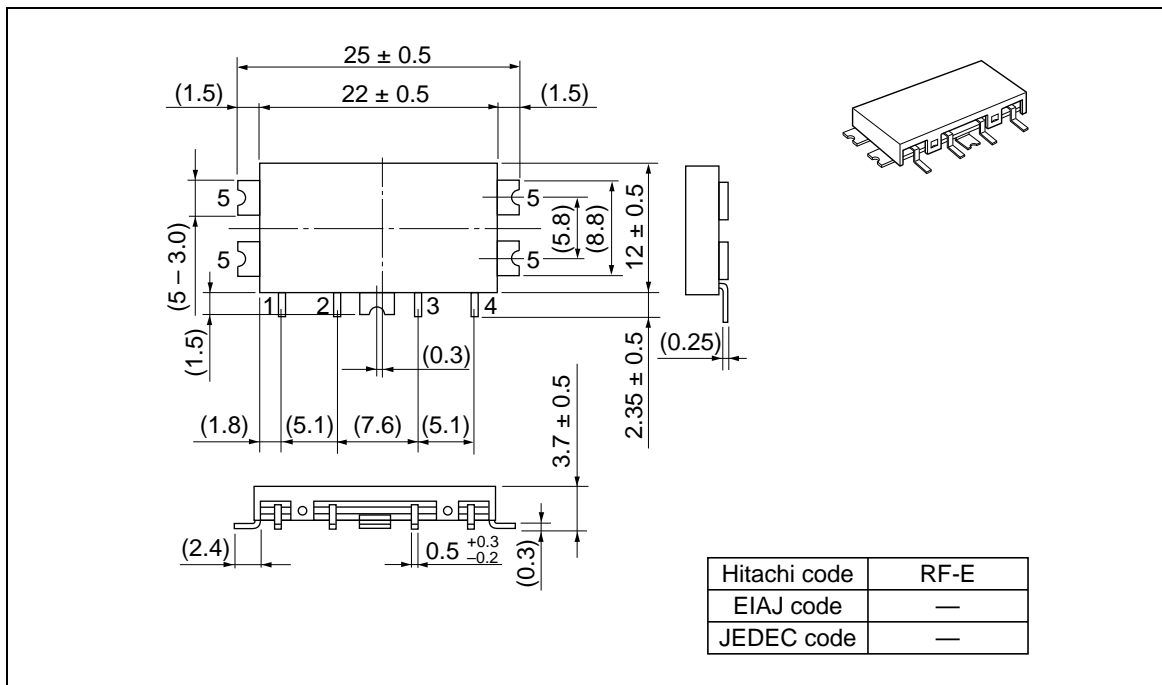




PF1010A

Package Dimensions

Unit: mm



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