
PF1010A

MOS FET Power Amplifier Module for P/C LAN

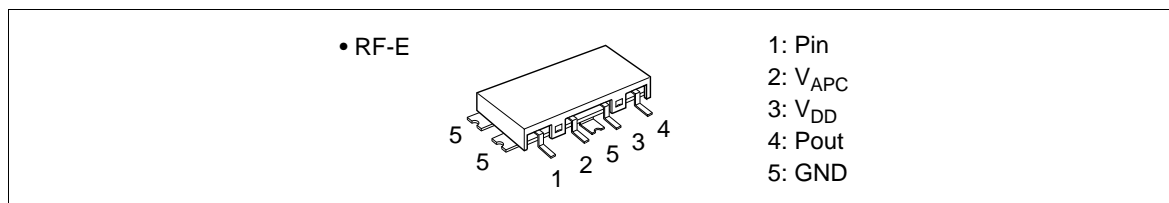
HITACHI

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

Features

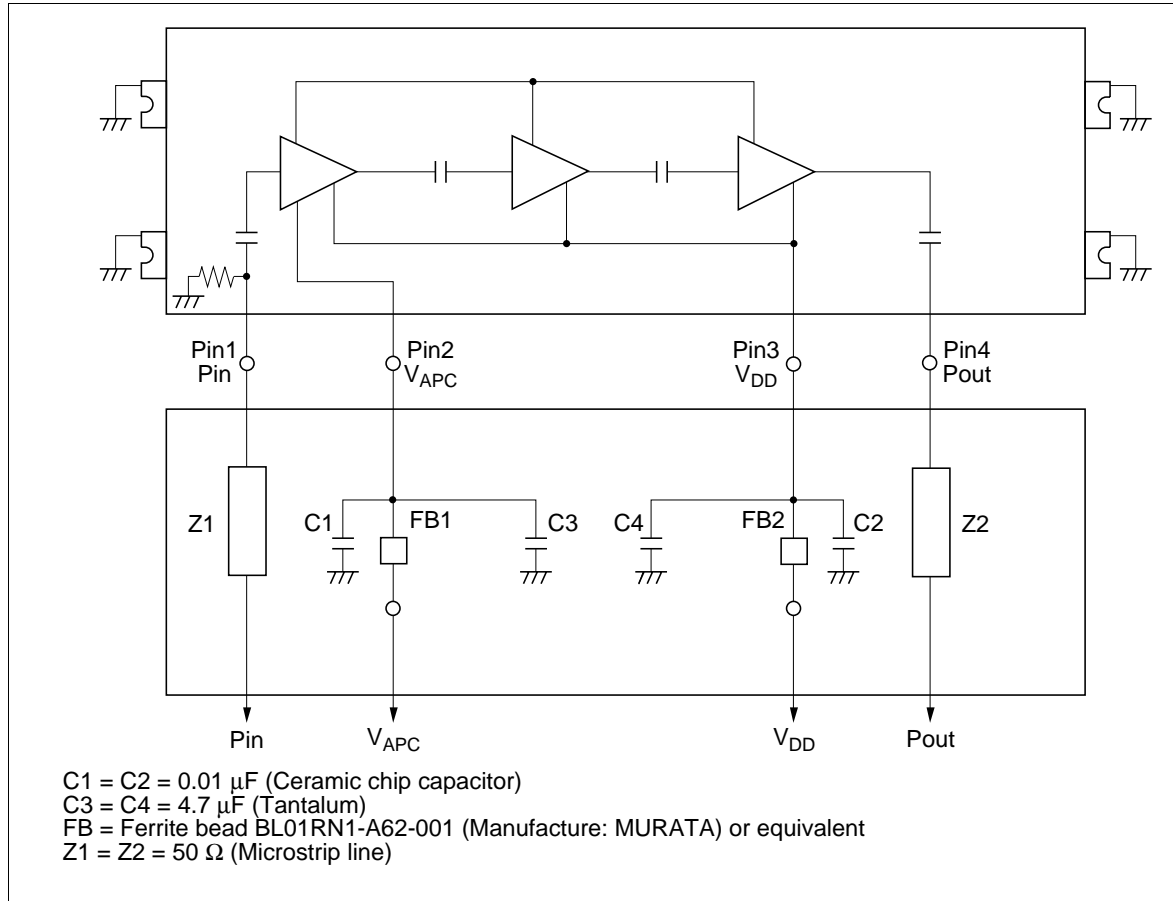
- Frequency range: 806 to 824 MHz
- Surface mounted small package: 1 cc, 3g with shielded cover
- Loe voltage operation: 6 V
- Low power control current: 300 μ A Typ

Pin Arrangement



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Internal Diagram and External Circuit



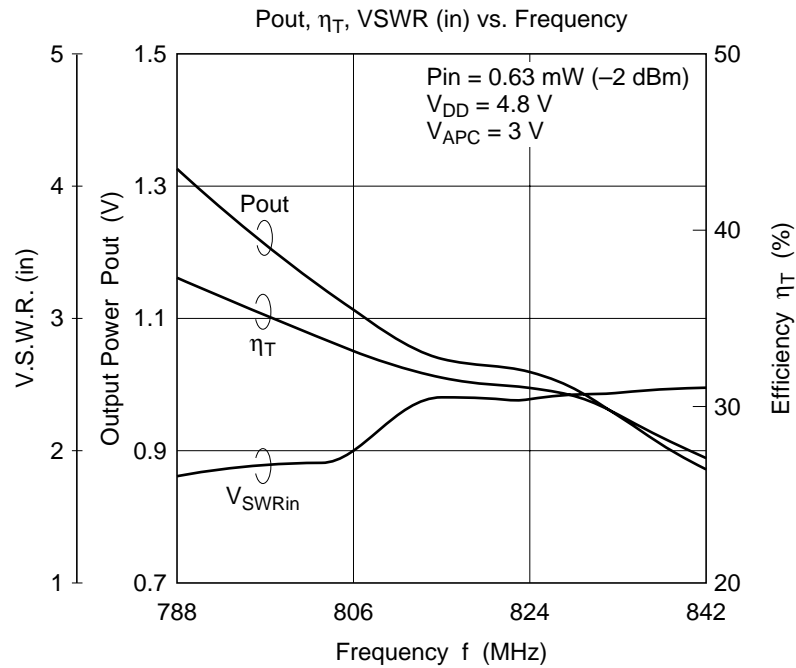
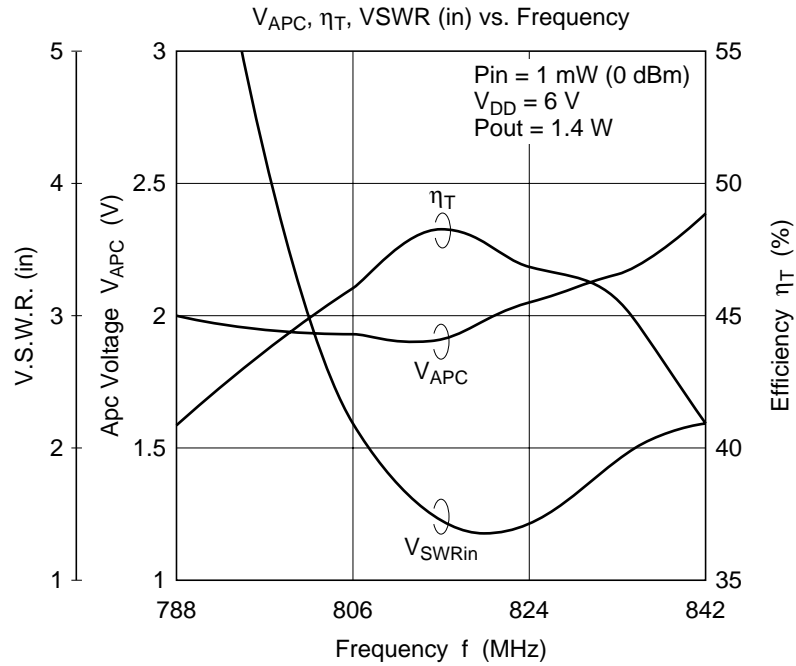
Absolute Maximum Ratings ($T_c = 25^\circ\text{C}$)

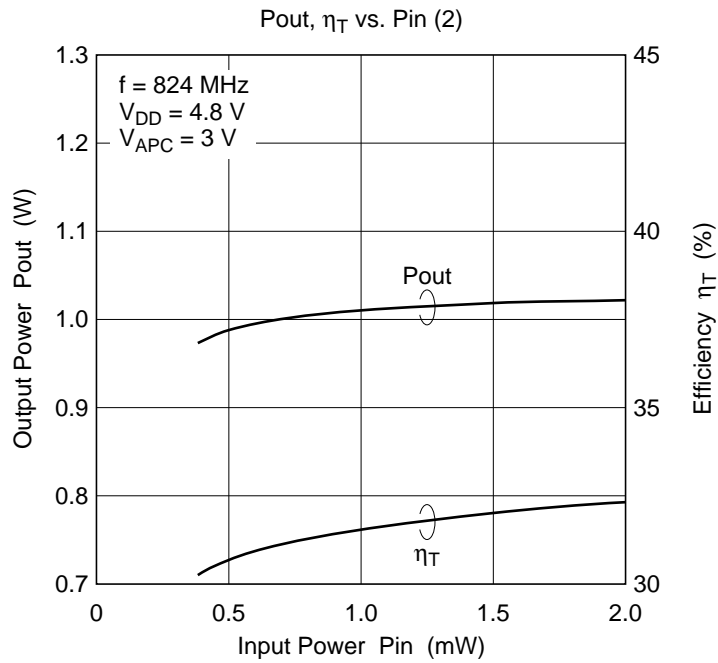
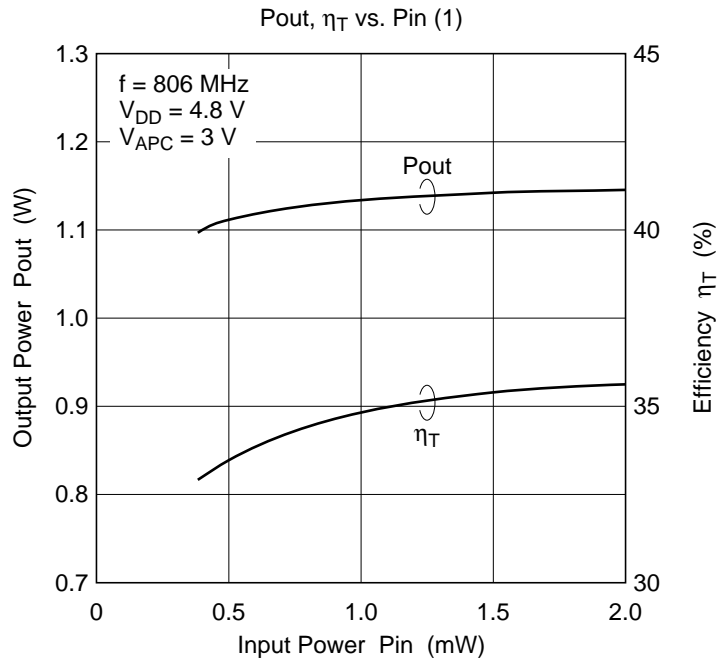
| Item | Symbol | Rating | Unit |
|----------------------------|------------------|-------------|------------------|
| Supply voltage | VDD | 12 | V |
| Supply current | IDD | 2 | A |
| APC voltage | VAPC | 3 | V |
| Input power | Pin | 20 | mW |
| Operating case temperature | T_c (op) | -30 to +100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

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

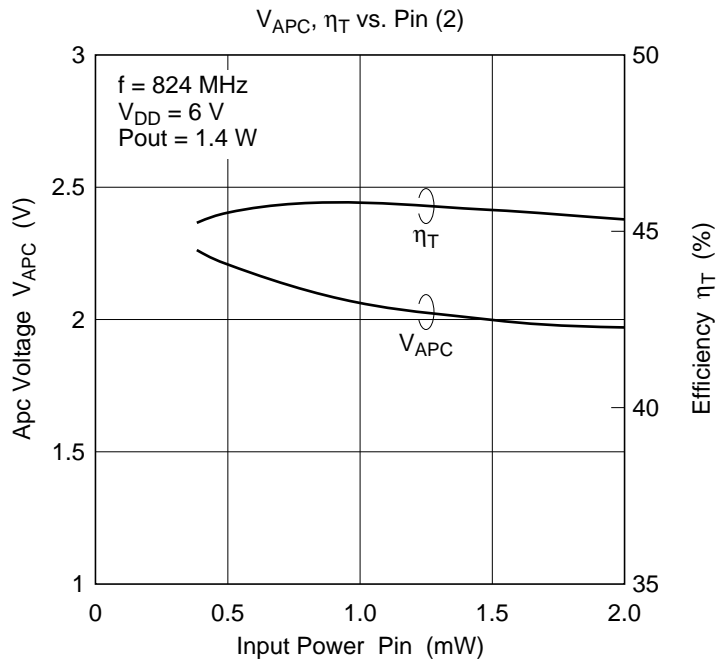
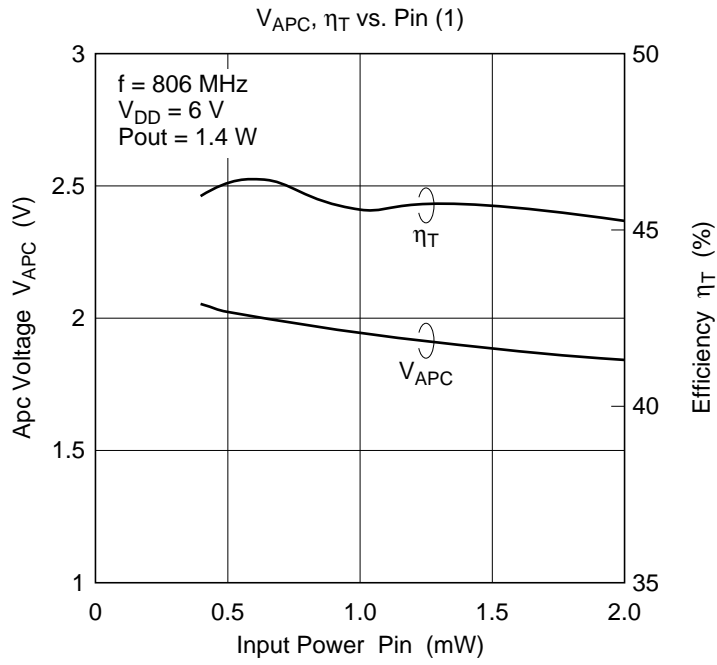
| Item | Symbol | Min | Max | Unit | Test Condition |
|-------------------------|---------------|-----------------------------|------------|---------------|---|
| Drain cutoff current | IDS | — | 100 | μA | VDD = 12 V, VAPC = 0 V, Rg = RL = 50 Ω |
| Total efficiency | η_T | 39 | — | % | f = 806, 824 MHz, Pin = 1 mW, |
| 2nd harmonic distortion | 2nd H.D. | — | -30 | dBc | VDD = 6 V, Rg = RL = 50 Ω , |
| 3rd harmonic distortion | 3rd H.D. | — | -30 | dBc | Pout = 1.4 W (at APC controlled), |
| Input VSWR | VSWR (in) | — | 3 | — | |
| Output power | Pout | 0.6 | — | W | f = 806, 824 MHz, Pin = 2 dBm, VDD = 4.8 V, VAPC = 4 V, Rg = RL = 50 Ω |
| Isolation | — | — | -35 | dBm | f = 806, 824 MHz, Pin = 1 mW, VDD = 6 V, VAPC = 0.5 V, Rg = RL = 50 Ω |
| Stability | — | No parasitic oscillation | — | — | f = 806 to 824 MHz, Pin = 1 mW, VDD = 4.8 to 7.2 V, Pout \leq 1.4 W, Rg = 50 Ω , Load VSWR = 3:1 All phase angles |

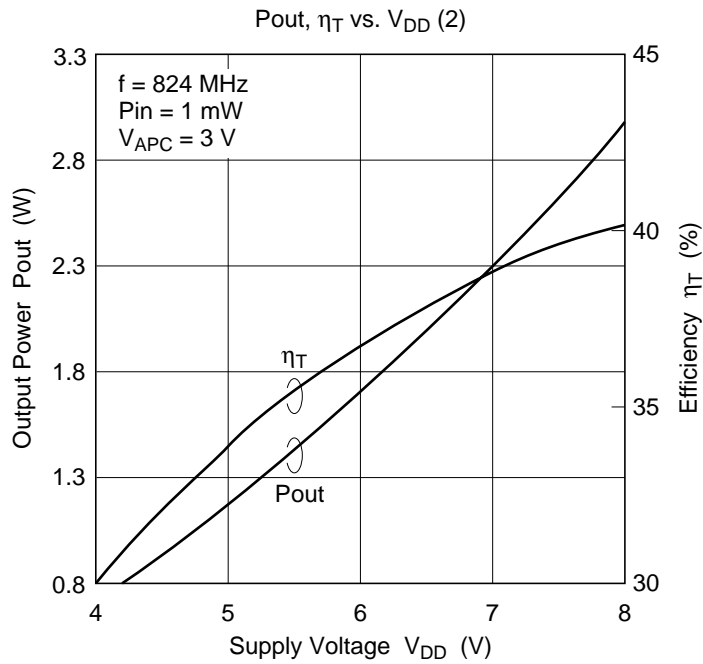
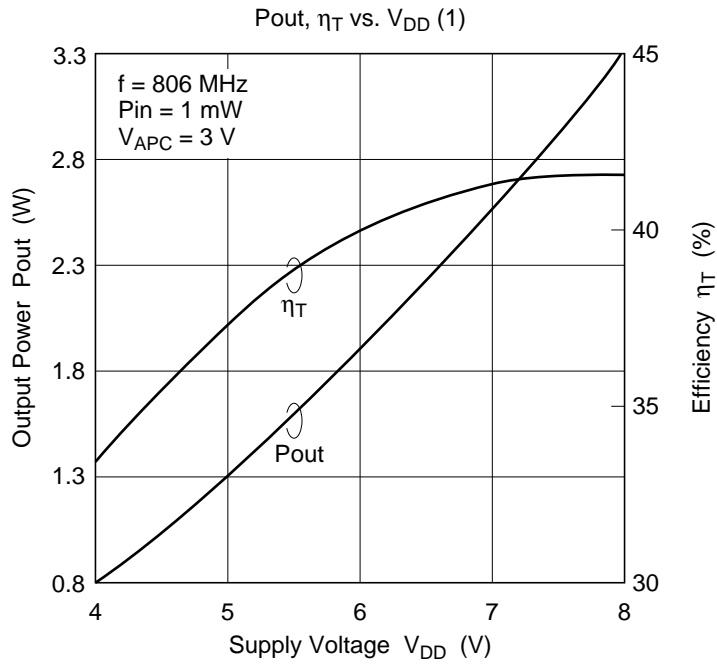
Characteristics Curve



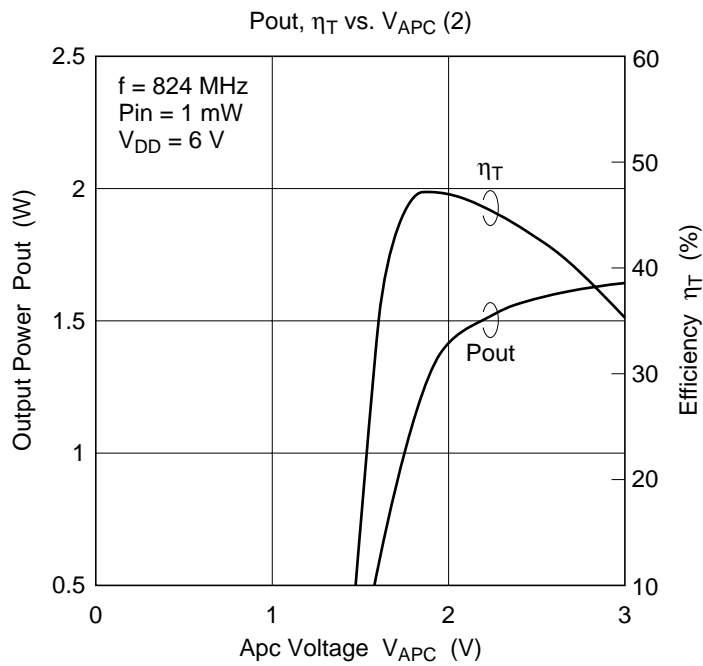
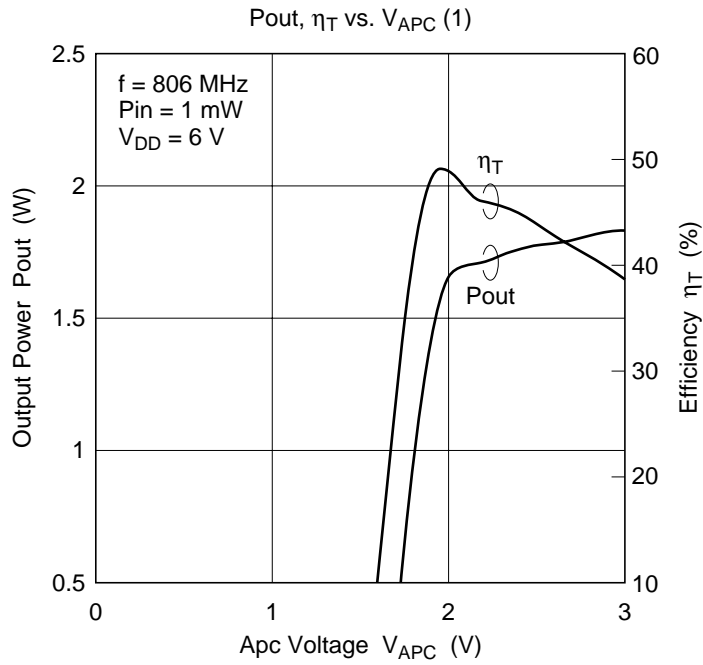


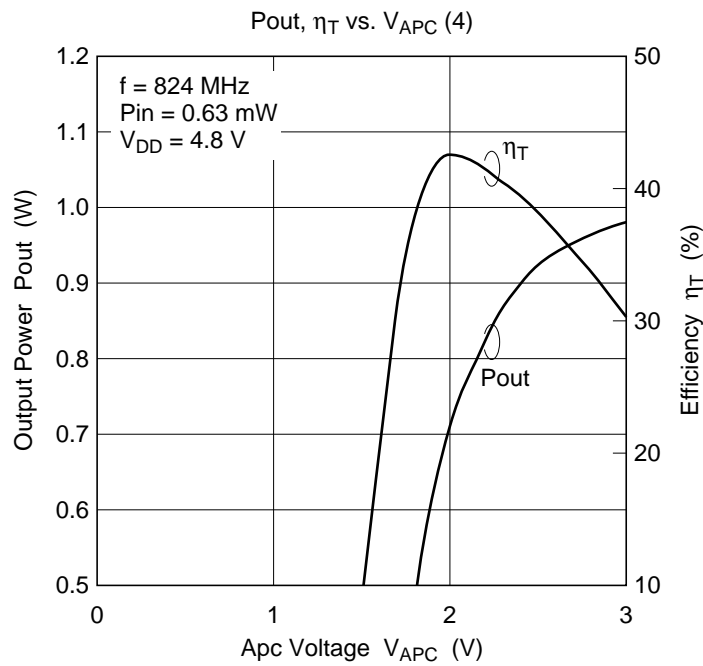
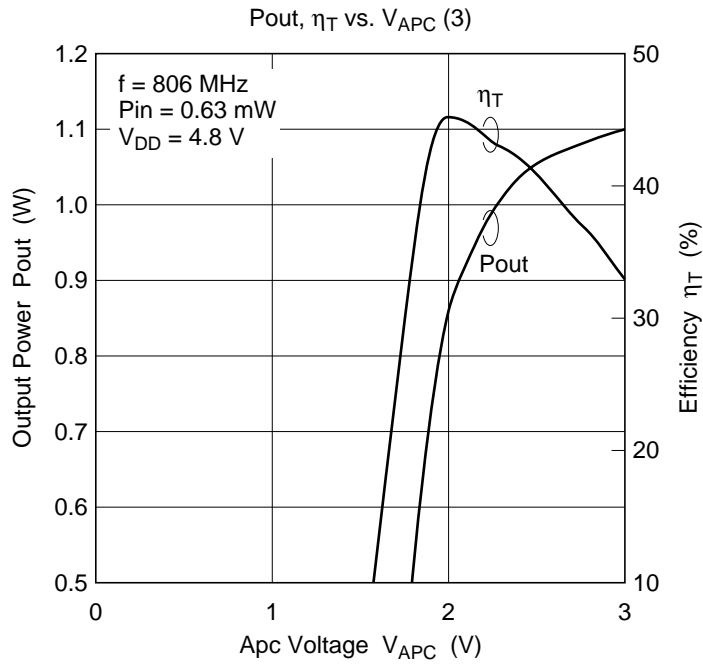
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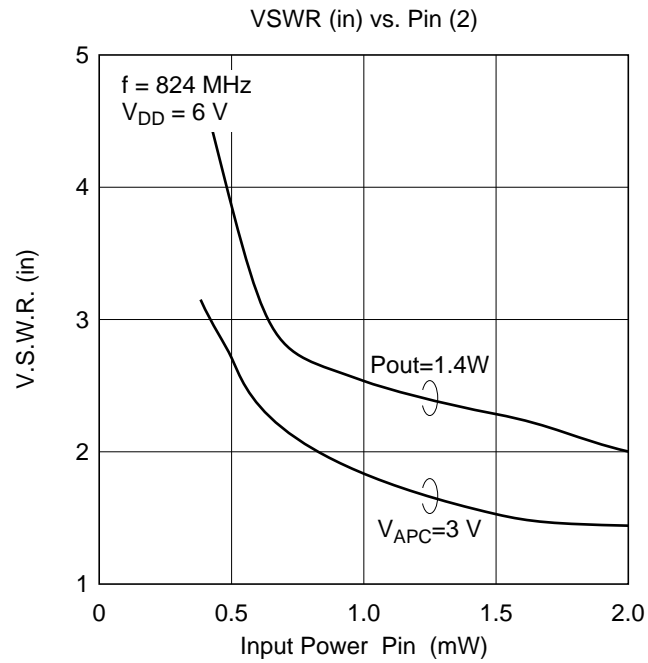
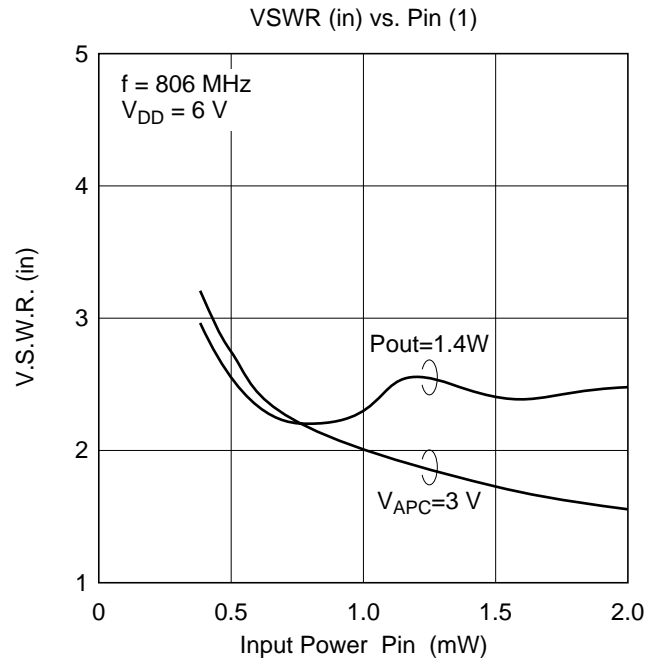


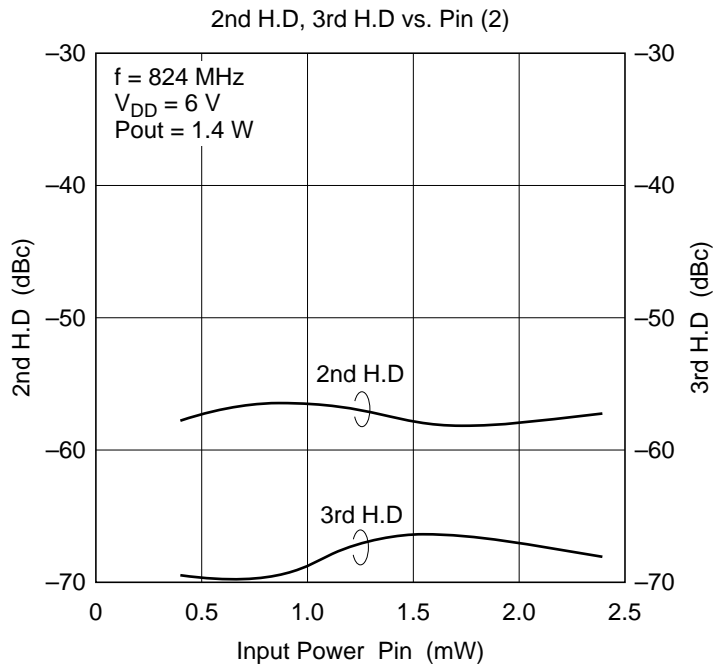
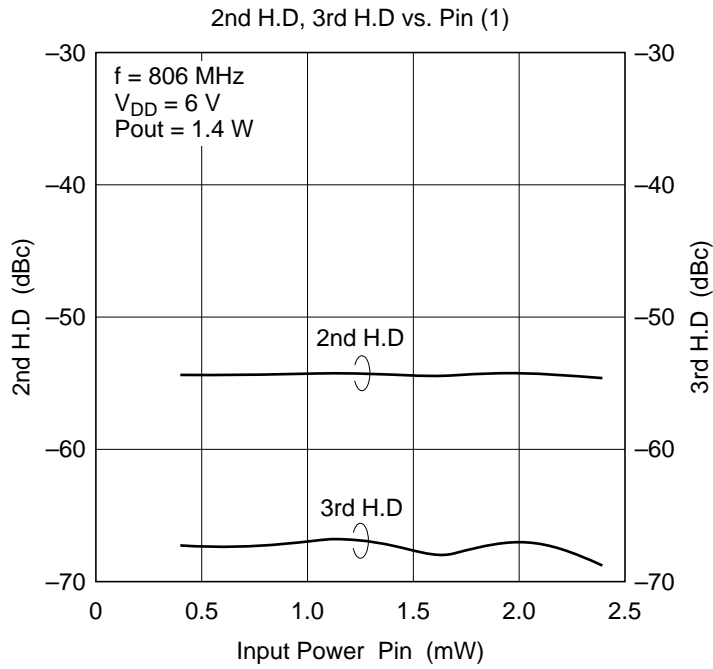
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Package Dimensions

Unit: mm

