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PHA2729-240M



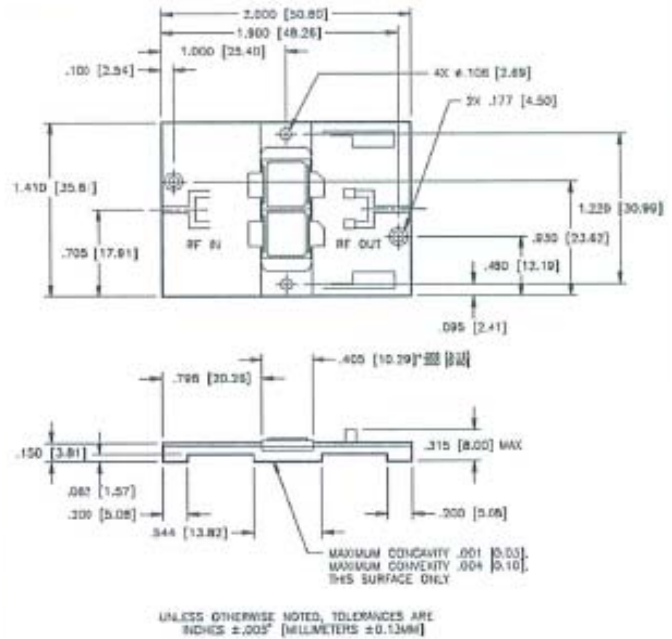
Radar Pulsed Power Module, 240W
2700MHz to 2900MHz, 100µS Pulse, 10% Duty

Released—11-04-2002

Features

- In-phase combined pulsed power transistors
- Input and output matched to 50 Ohms
- Soft substrate circuit board
- Nickel plated copper flange
- Easily combined for high power transmitters
- MTTF>1x10⁶ hrs at T_{flange}=45°C

Product Image



ABSOLUTE MAXIMUM RATINGS AT 25°C

| Parameter | Symbol | Rating | Units |
|-------------------------|------------------|-------------|-------|
| Supply Voltage | V _{CC} | 40 | V |
| Input Power | P _{in} | 55 | Wpk |
| Output Power | P _{out} | 325 | Wpk |
| Thermal Resistance | θ _{JC} | 0.35 | °C/W |
| Total Power Dissipation | P _D | 500 | W |
| Operating Case Temp. | T _C | -30 to +100 | °C |
| Storage Temp. | T _{STG} | -40 to +125 | °C |

ELECTRICAL CHARACTERISTICS AT 25°C

| Parameter | Symbol | Min | Max | Units | Test Conditions |
|-----------------------------------|-----------------|-----|-------|---------|--|
| Input Power | P _{IN} | - | 44 | Wpk | V _{CC} = 36V, P _{out} =240Wpk, F=2.7, 2.8, 2.9GHz |
| Collector Current | I _c | - | 16.97 | A | V _{CC} = 36V, P _{out} =240Wpk, F =2.7, 2.8, 2.9GHz |
| Input Return Loss | RL | 10 | - | dB | V _{CC} = 36V, P _{out} = 240Wpk, F =2.7, 2.8, 2.9GHz |
| Pulse Amplitude Droop | Droop | - | 0.7 | dB | V _{CC} = 36V, P _{out} = 240Wpk, F =2.7, 2.8, 2.9GHz |
| 2nd Harmonic | 2fc | - | -20 | dB | V _{CC} = 36V, P _{out} = 240Wpk, F =2.7, 2.8, 2.9GHz |
| Insertion Phase Deviation | Δφ | -20 | +20 | Degrees | V _{CC} = 36V, P _{out} = 240Wpk, F =2.7, 2.8, 2.9GHz |
| Load Mismatch Stability | VSWR-S | - | 1.5:1 | - | V _{CC} = 36V, P _{out} = 240Wpk, F =2.7, 2.8, 2.9GHz |
| Overdrive/Load Mismatch Tolerance | OD/ VSWR-T | - | 2:1 | - | V _{CC} = 36V, Pin=(Pin@P _{out} =240Wpk)+0.6dB, F =2.7, 2.8, 2.9GHz |

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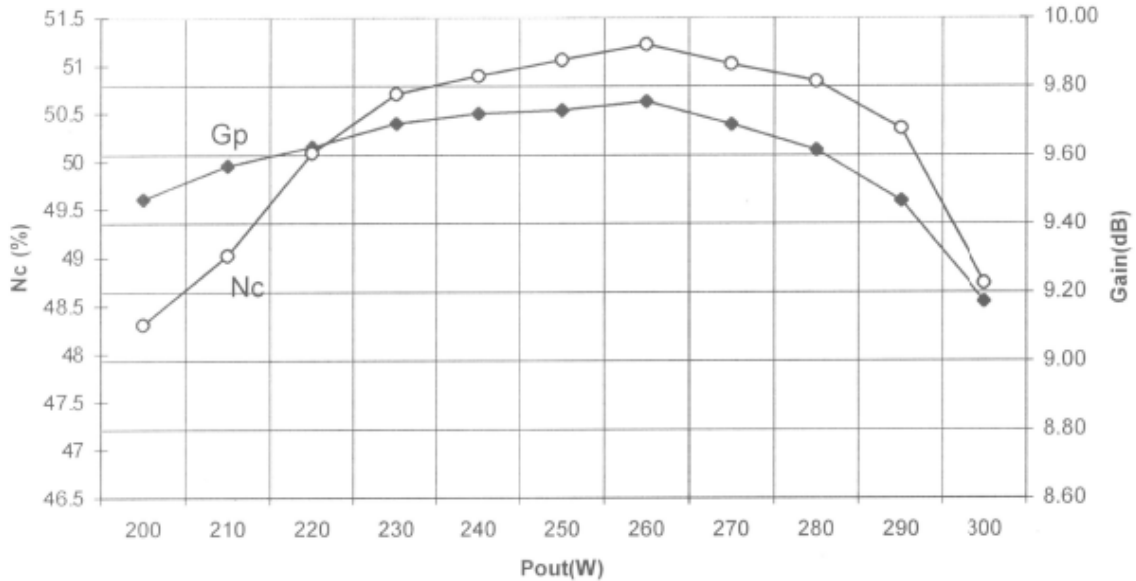


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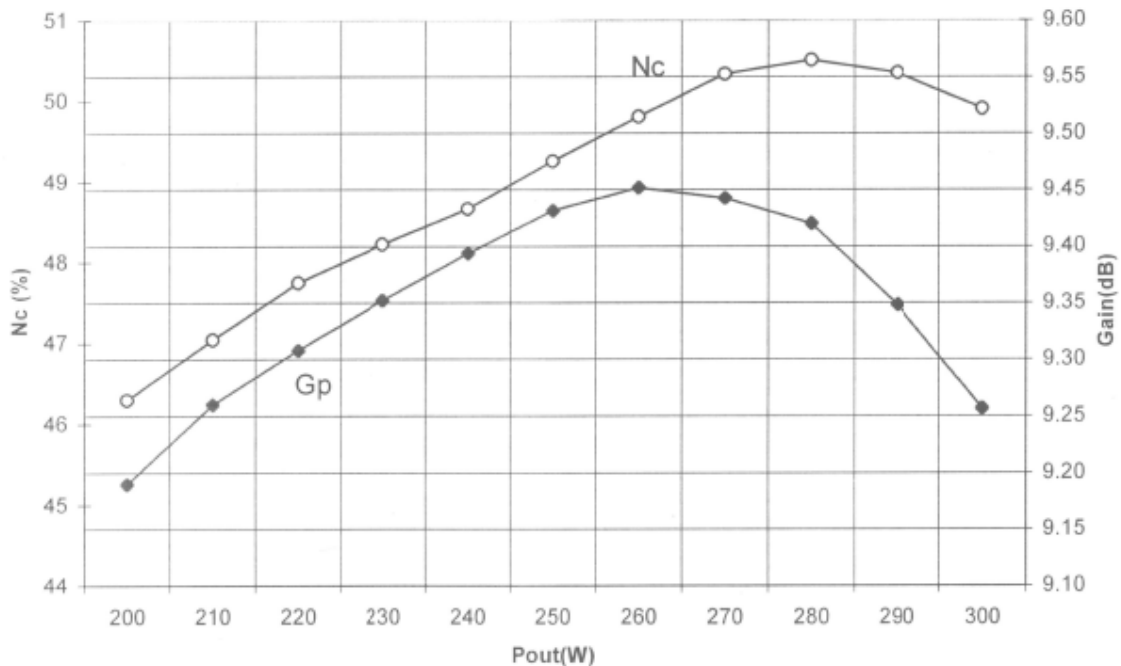
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Typical Performance Curves

Collector Efficiency and Power Gain vs. Power Output
Vcc=36VDC, Pulse Width=100µS, Duty=10%, 2.7GHz



Collector Efficiency and Power Gain vs. Power Output
Vcc=36VDC, Pulse Width=100µS, Duty=10%, 2.8GHz



ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

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