

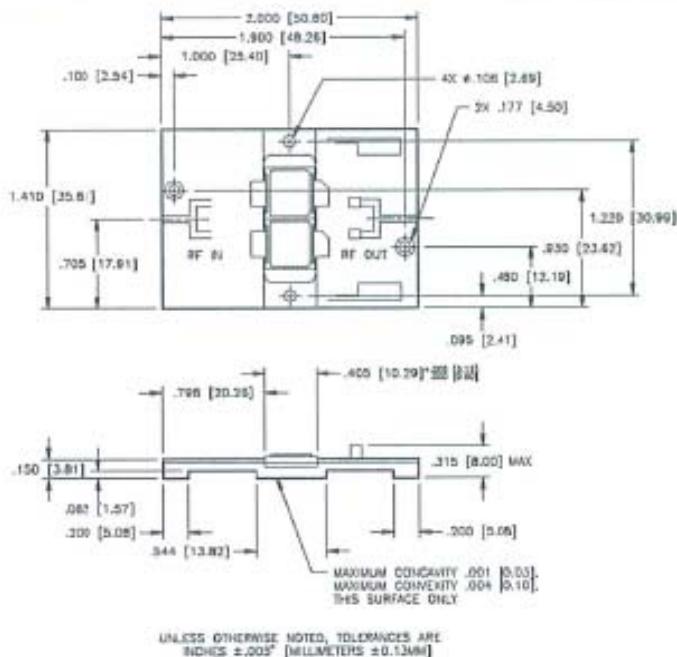
Radar Pulsed Power Module, 240W 2700MHz to 2900MHz, 100µS Pulse, 10% Duty

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 Tflange=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	W _{pk}
Output Power	P _{OUT}	325	W _{pk}
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	W _{pk}	V _{CC} = 36V, P _{OUT} = 240W _{pk} , F = 2.7, 2.8, 2.9GHz
Collector Current	I _C	-	16.97	A	V _{CC} = 36V, P _{OUT} = 240W _{pk} , F = 2.7, 2.8, 2.9GHz
Input Return Loss	R _L	10	-	dB	V _{CC} = 36V, P _{OUT} = 240W _{pk} , F = 2.7, 2.8, 2.9GHz
Pulse Amplitude Droop	Droop	-	0.7	dB	V _{CC} = 36V, P _{OUT} = 240W _{pk} , F = 2.7, 2.8, 2.9GHz
2nd Harmonic	2f _C	-	-20	dB	V _{CC} = 36V, P _{OUT} = 240W _{pk} , F = 2.7, 2.8, 2.9GHz
Insertion Phase Deviation	Δφ	-20	+20	Degrees	V _{CC} = 36V, P _{OUT} = 240W _{pk} , F = 2.7, 2.8, 2.9GHz
Load Mismatch Stability	VSWR-S	-	1.5:1	-	V _{CC} = 36V, P _{OUT} = 240W _{pk} , F = 2.7, 2.8, 2.9GHz
Overdrive/Load Mismatch Tolerance	OD/VSWR-T	-	2:1	-	V _{CC} = 36V, P _{IN} = (P _{IN} @P _{OUT} = 240W _{pk}) + 0.6dB, F = 2.7, 2.8, 2.9GHz

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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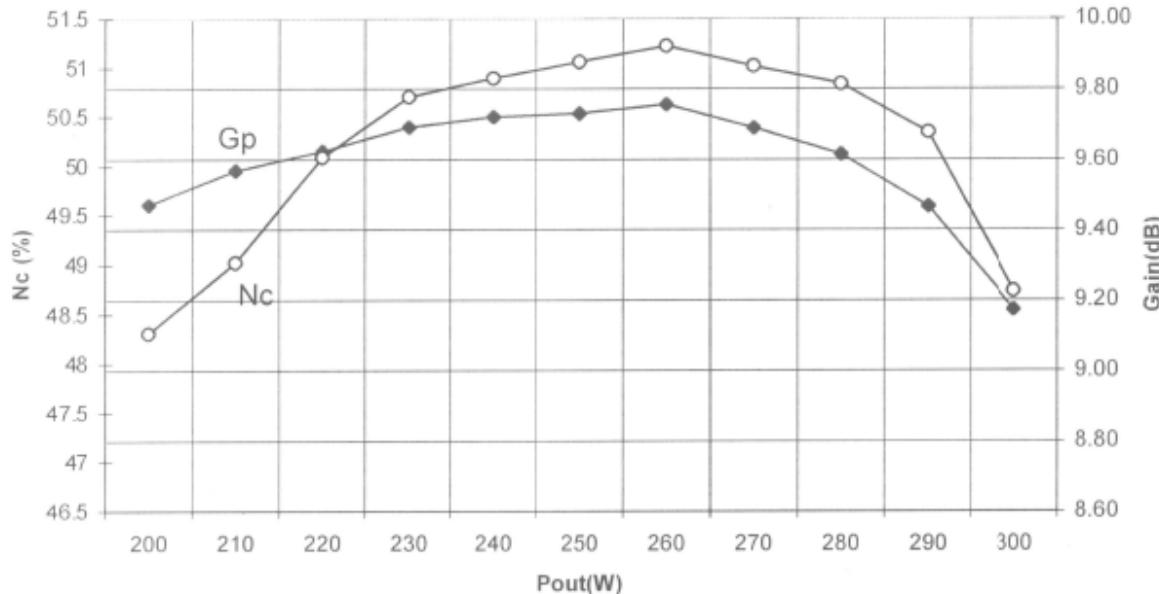
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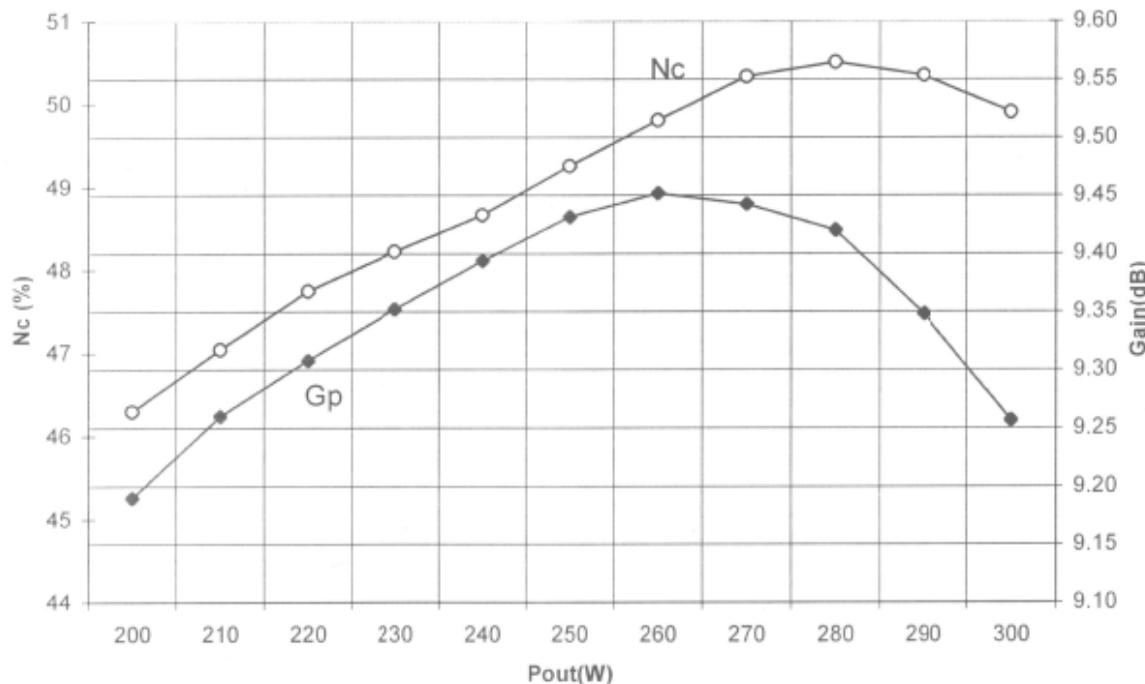
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Typical Performance Curves

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



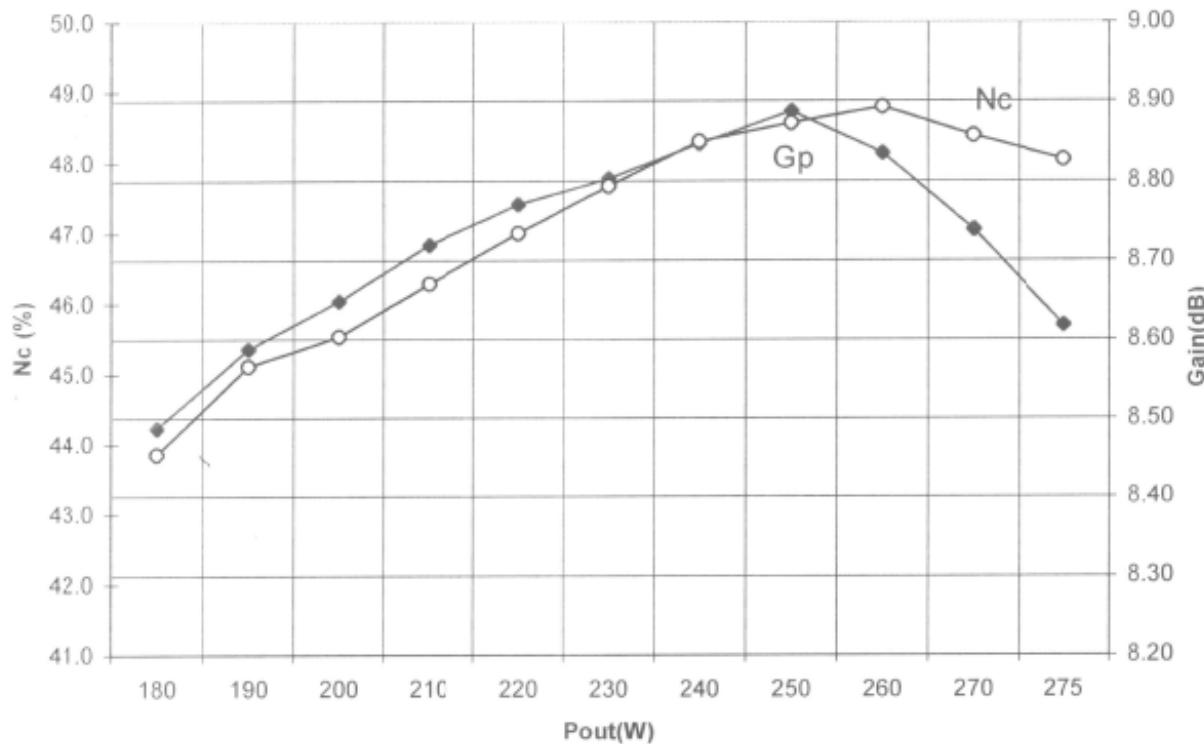
Collector Efficiency and Power Gain vs. Power Output
Vcc=36VDC, Pulse Width=100µS, Duty=10%, 2.8GHz



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 2700MHz to 2900MHz, 100μS Pulse, 10% Duty

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Collector Efficiency and Power Gain vs. Power Output
 Vcc=36VDC, Pulse Width=100μS, Duty=10%, 2.9GHz



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