WINSOURCE ELECTRONICS

THE DATASHEET OF

PH1090-75L

PH1090-75L

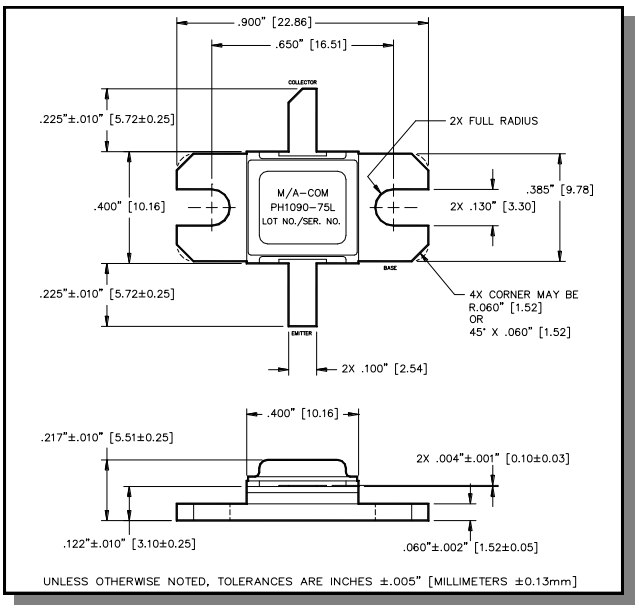
Avionics Pulsed Power Transistor
75W, 1030-1090 MHz, 250µs Pulse, 10% Duty

Rev. V1

Features

- NPN silicon microwave power transistors
- Common base configuration
- Broadband Class C operation
- High efficiency inter-digitized geometry
- Diffused emitter ballasting resistors
- Gold metallization system
- Internal input and output impedance matching
- Hermetic metal/ceramic package
- RoHS Compliant

Outline Drawing



Absolute Maximum Ratings at 25°C

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CES}	70	V
Emitter-Base Voltage	V_{EBO}	3.0	V
Collector Current (Peak)	I_C	6	A
Power Dissipation @ +25°C	P_{TOT}	117	W
Storage Temperature	T_{STG}	-65 to +200	°C
Junction Temperature	T_J	200	°C

Electrical Specifications: T_C = 25 ± 5°C (Room Ambient)

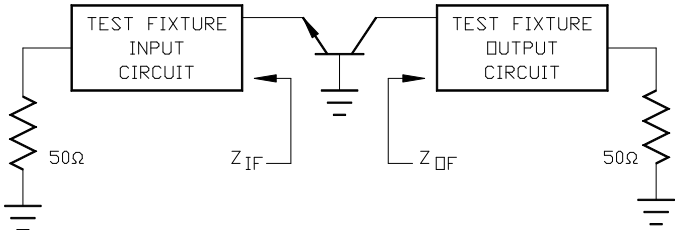
Parameter	Test Conditions	Frequency	Symbol	Min	Max	Units
Collector-Emitter Breakdown Voltage	I_C = 35mA		BV_{CES}	70	-	V
Collector-Emitter Leakage Current	V_{CE} = 40V		I_{CES}	-	3.5	mA
Thermal Resistance	Vcc = 45V, Pout = 75W	F = 1030, 1090 MHz	$R_{TH(JC)}$	-	1.5	°C/W
Input Power	Vcc = 45V, Pout = 75W	F = 1030, 1090 MHz	P_{in}	-	9.4	W
Power Gain	Vcc = 45V, Pout = 75W	F = 1030, 1090 MHz	G_P	9.0	-	dB
Collector Efficiency	Vcc = 45V, Pout = 75W	F = 1030, 1090 MHz	η_C	45	-	%
Input Return Loss	Vcc = 45V, Pout = 75W	F = 1030, 1090 MHz	RL	-	-8	dB
Load Mismatch Tolerance	Vcc = 45V, Pout = 75W	F = 1030, 1090 MHz	VSWR-T	-	3:1	-
Load Mismatch Stability	Vcc = 45V, Pout = 75W	F = 1030, 1090 MHz	VSWR-S	-	1.5:1	-

Typical RF Performance

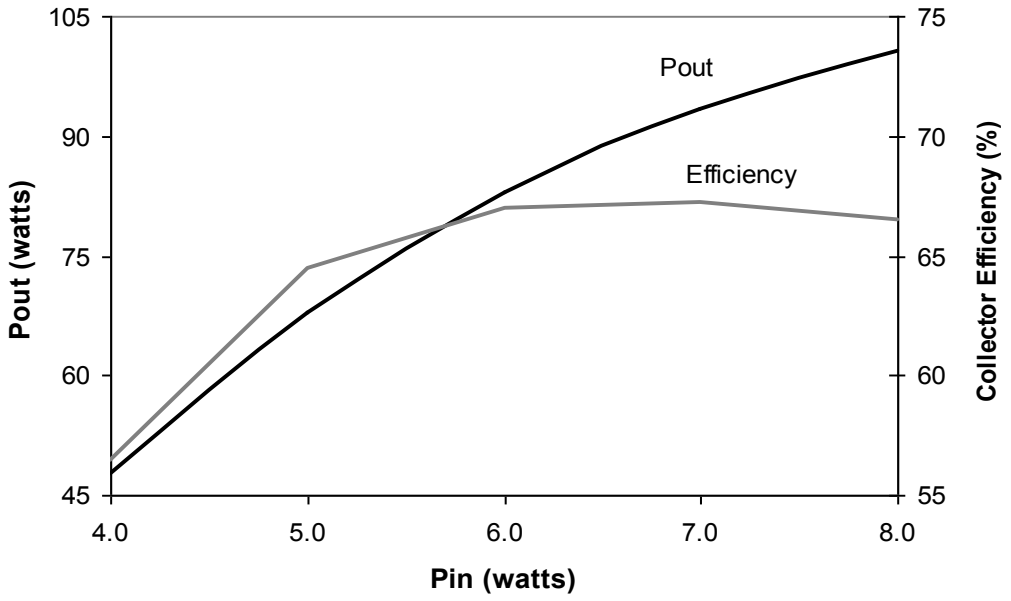
Freq. (MHz)	Pin (W)	Pout (W)	Gain (dB)	Ic (A)	Eff (%)	RL (dB)	VSWR-S (1.5:1)	VSWR-T (3:1)
1030	6.39	75	10.70	2.84	58.7	-21.2	S	P
1090	6.22	75	10.81	2.79	59.7	-13.7	S	P

RF Test Fixture Impedance

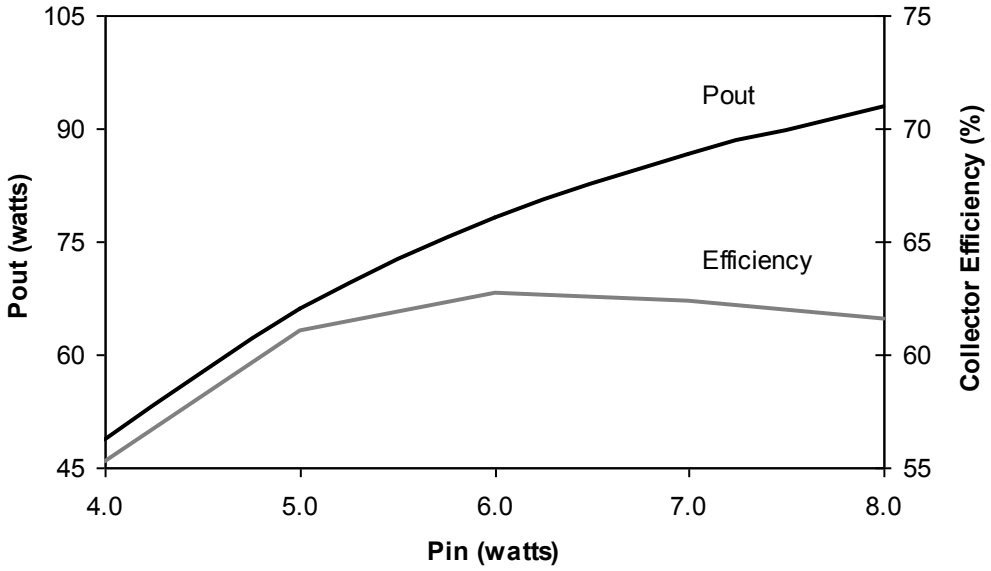
F (MHz)	Z_{IF} (Ω)	Z_{OF} (Ω)
1030	1.8 - j5.9	8.9 + j0.3
1090	1.4 - j5.3	9.3 - j0.5



RF Power Transfer Curve
1030 MHz, Output Power & Efficiency vs. Input Power



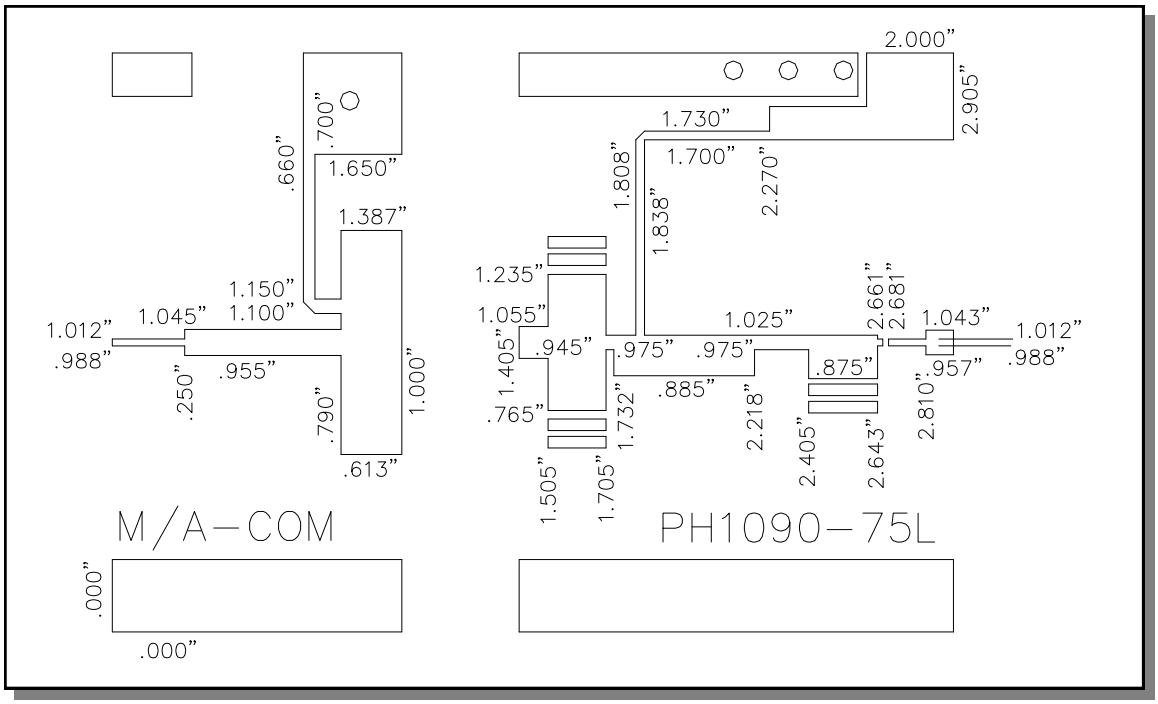
RF Power Transfer Curve
1090 MHz, Output Power & Efficiency vs. Input Power



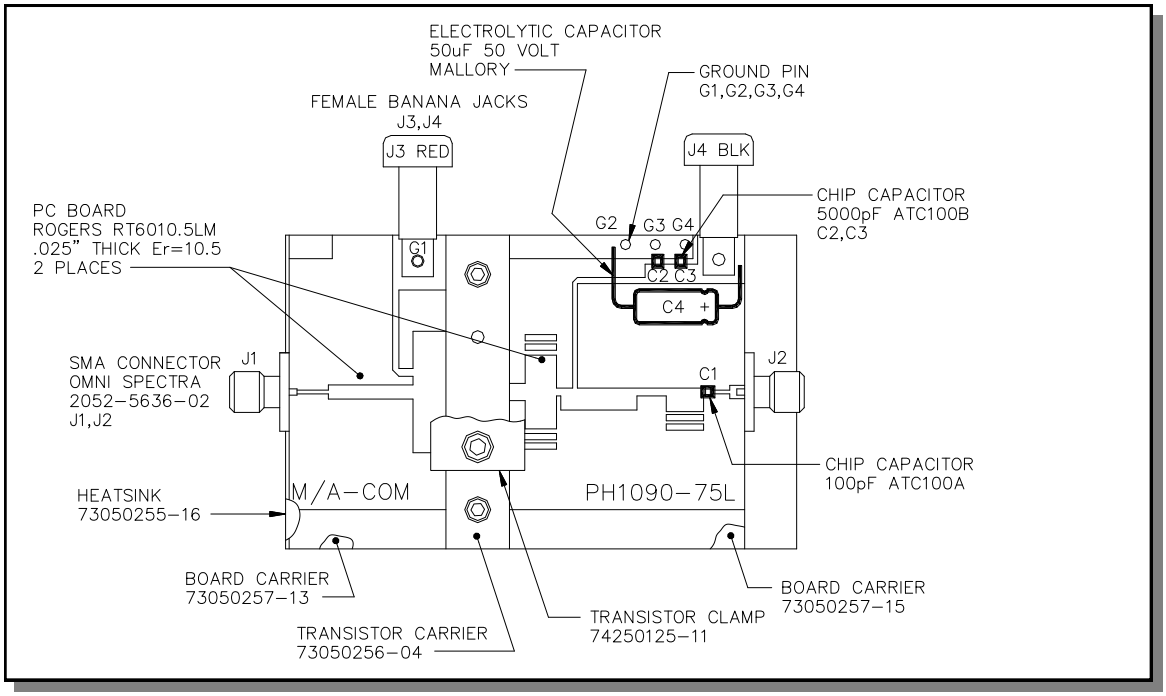
Avionics Pulsed Power Transistor
75W, 1030-1090 MHz, 250µs Pulse, 10% Duty

Rev. V1

Test Fixture Circuit Dimensions



Test Fixture Assembly



Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- View PH1090-75L on WIN SOURCE
- M/A-Com Technology Solutions Information

Optimize Your Supply Chain with WIN SOURCE Solutions

- Global Sourcing Solution
- Obsolete Management
- Cost Control Management
- Shortage Management
- Alternative Solution
- Excess Inventory Management