PH1214-0.85L

Tyco Electronics

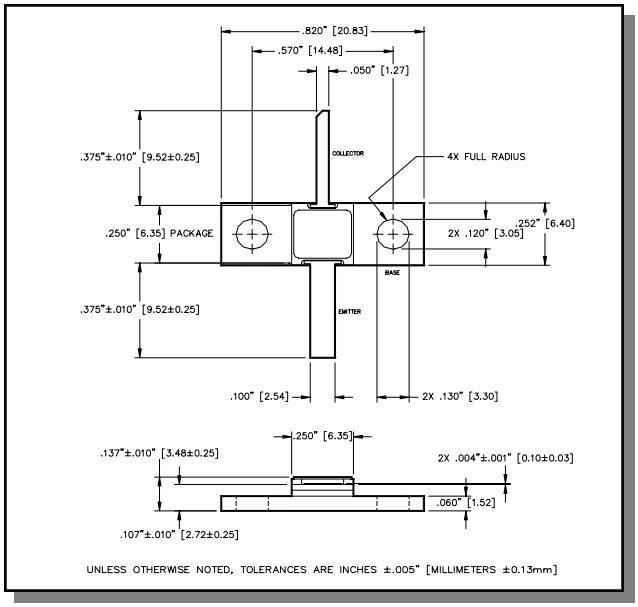
Radar Pulsed Power Transistor
0.85W, 1.2-1.4 GHz, 2ms Pulse, 20% Duty

M/A-COM Products
Released, 30 May 07

Features

- NPN silicon microwave power transistors
- Common emitter configuration
- Broadband Class A 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}	27	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	3.5	V
Collector Current (Peak)	I_C	0.71	A
Power Dissipation @ +25°C	P_{TOT}	9.2	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 = 4mA		BV_{CES}	27	-	V
Collector-Emitter Breakdown Voltage	I_C = 10mA		BV_{CEO}	20	-	V
Collector-Emitter Leakage Current	V_{CE} = 15V		I_{CES}	-	1.0	mA
Thermal Resistance	Vcc = 11.5V, Pin = 0.1W	F = 1.2, 1.3, 1.4 GHz	$R_{TH(JC)}$	-	19.0	°C/W
Output Power	Vcc = 11.5V, Pin = 0.1W	F = 1.2, 1.3, 1.4 GHz	P_{OUT}	0.85	-	W
Power Gain	Vcc = 11.5V, Pin = 0.1W	F = 1.2, 1.3, 1.4 GHz	G_P	9.3	-	dB
Collector Efficiency	Vcc = 11.5V, Pin = 0.1W	F = 1.2, 1.3, 1.4 GHz	η_C	30	-	%
Input Return Loss	Vcc = 11.5V, Pin = 0.1W	F = 1.2, 1.3, 1.4 GHz	RL	-	-9	dB
Load Mismatch Tolerance	Vcc = 11.5V, Pin = 0.1W	F = 1.2, 1.3, 1.4 GHz	VSWR-T	-	2:1	-
Load Mismatch Stability	Vcc = 11.5V, Pin = 0.1W	F = 1.2, 1.3, 1.4 GHz	VSWR-S	-	1.5:1	-

- **North America** Tel: 800.366.2266 / Fax: 978.366.2266
- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

Visit www.macom.com for additional data sheets and product information.

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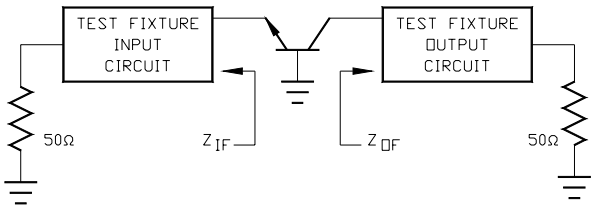
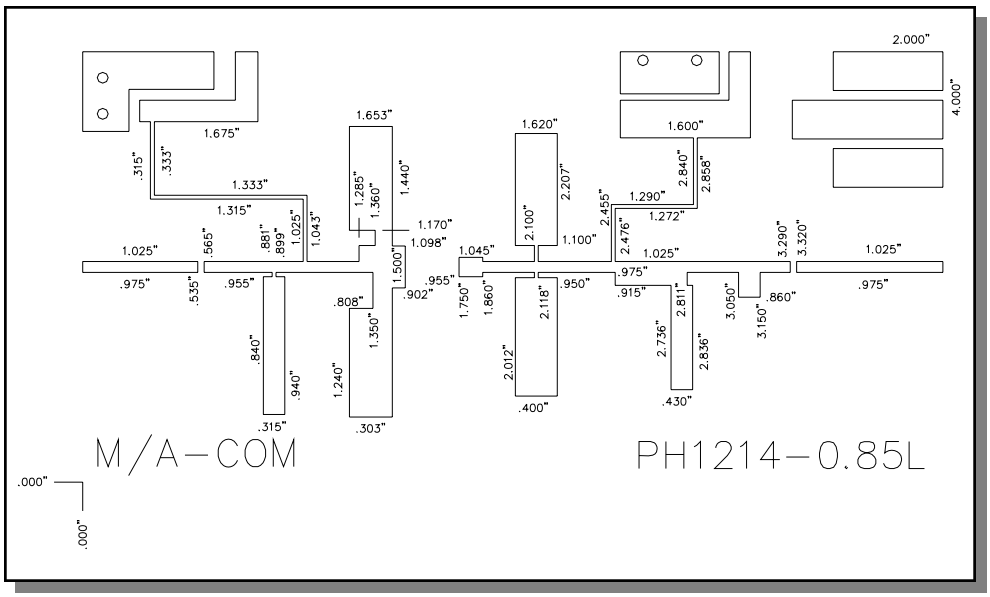
RF Test Fixture Impedance

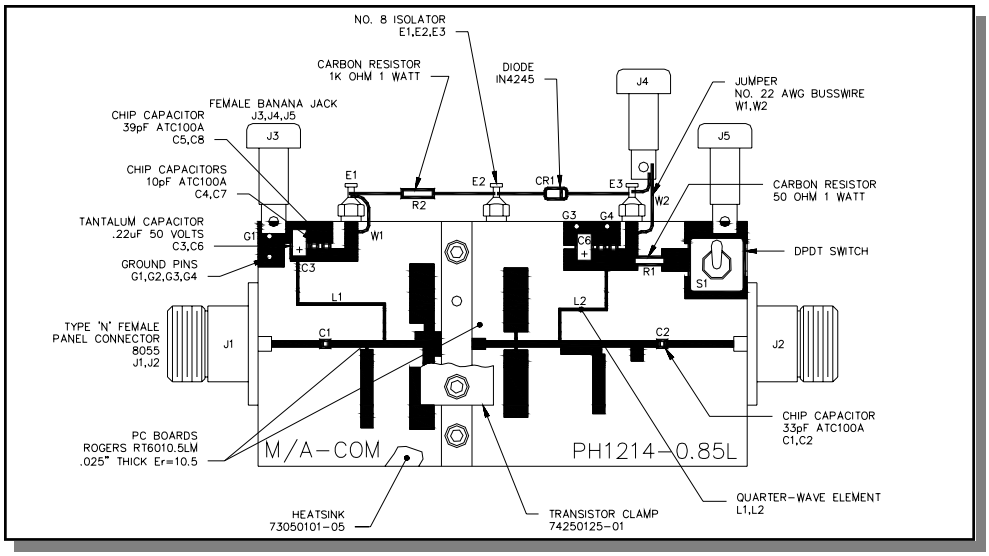
F (GHz)	Z_{IF} (Ω)	Z_{OF} (Ω)
1.2	5.9 - j4.5	7.4 + j6.3
1.3	6.4 - j4.0	7.5 + j7.7
1.4	7.1 - j4.4	7.4 + j8.9



Test Fixture Circuit Dimensions



Test Fixture Assembly



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