

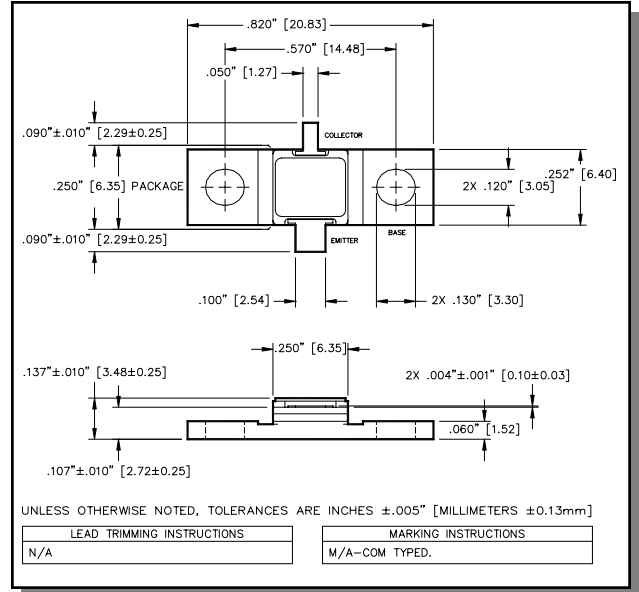
**Radar Pulsed Power Transistor**  
**6W, 1.2-1.4 GHz, 100µs Pulse, 10% Duty**

**M/A-COM Products**  
**Released, 30 May 07**

## 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	$V_{CES}$	65	V
Emitter-Base Voltage	$V_{EBO}$	3.0	V
Collector Current (Peak)	$I_C$	1.5	A
Power Dissipation @ +25°C	$P_{TOT}$	30	W
Storage Temperature	$T_{STG}$	-65 to +200	°C
Junction Temperature	$T_J$	200	°C

## Electrical Specifications: $T_C = 25 \pm 5^\circ\text{C}$ (Room Ambient)

Parameter	Test Conditions	Frequency	Symbol	Min	Max	Units
Collector-Emitter Breakdown Voltage	$I_C = 12\text{mA}$		$BV_{CES}$	65	-	V
Collector-Emitter Leakage Current	$V_{CE} = 40\text{V}$		$I_{CES}$	-	1.5	mA
Thermal Resistance	$V_{CC} = 28\text{V}$ , $P_{in} = 1.2\text{W}$	F = 1.2, 1.3, 1.4 GHz	$R_{TH(JC)}$	-	5.8	°C/W
Output Power	$V_{CC} = 28\text{V}$ , $P_{in} = 1.2\text{W}$	F = 1.2, 1.3, 1.4 GHz	$P_{OUT}$	6.0	-	W
Power Gain	$V_{CC} = 28\text{V}$ , $P_{in} = 1.2\text{W}$	F = 1.2, 1.3, 1.4 GHz	$G_P$	7.0	-	dB
Collector Efficiency	$V_{CC} = 28\text{V}$ , $P_{in} = 1.2\text{W}$	F = 1.2, 1.3, 1.4 GHz	$\eta_C$	45	-	%
Input Return Loss	$V_{CC} = 28\text{V}$ , $P_{in} = 1.2\text{W}$	F = 1.2, 1.3, 1.4 GHz	RL	-	-6	dB
Load Mismatch Tolerance	$V_{CC} = 28\text{V}$ , $P_{in} = 1.2\text{W}$	F = 1.2, 1.3, 1.4 GHz	VSWR-T	-	3:1	-
Load Mismatch Stability	$V_{CC} = 28\text{V}$ , $P_{in} = 1.2\text{W}$	F = 1.2, 1.3, 1.4 GHz	VSWR-S	-	1.5:1	-

1

**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.  
**PRELIMINARY:** Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

• **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.macomtech.com](http://www.macomtech.com) for additional data sheets and product information.

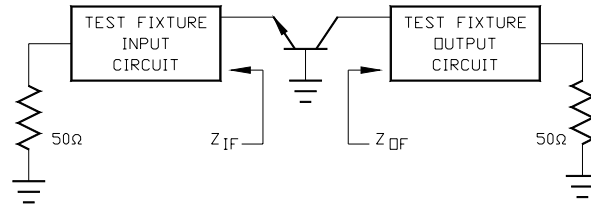
M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.

**Radar Pulsed Power Transistor**  
**6W, 1.2-1.4 GHz, 100µs Pulse, 10% Duty**

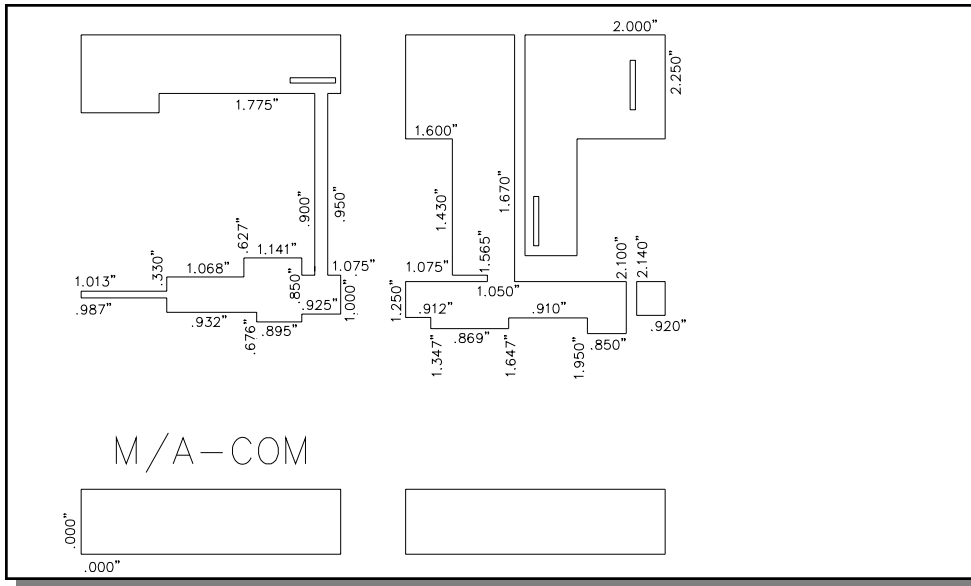
**M/A-COM Products**  
**Released, 30 May 07**

## RF Test Fixture Impedance

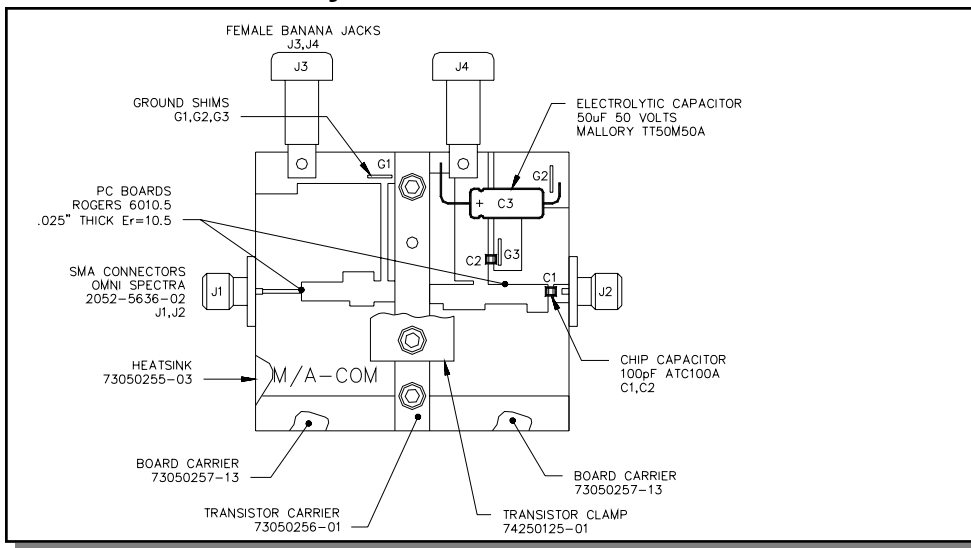
F (GHz)	Z <sub>IF</sub> (Ω)	Z <sub>OF</sub> (Ω)
1.2	TBD	TBD
1.3	TBD	TBD
1.4	TBD	TBD



## Test Fixture Circuit Dimensions



## Test Fixture Assembly



**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.  
**PRELIMINARY:** Data Sheets contain information regarding a product M/A-COM Technology Solutions is under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

- **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.macomtech.com](http://www.macomtech.com) for additional data sheets and product information.

M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.