

M/A-COM Products

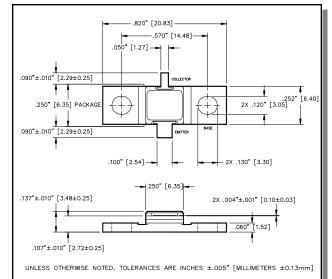
Released, 10 Jul 07

Radar Pulsed Power Transistor 9W, 3.1-3.4 GHz, 300µs Pulse, 10% Duty

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}	60	V
Emitter-Base Voltage	V _{EBO}	3.0	V
Collector Current (Peak)	Ι _C	1.1	А
Power Dissipation @ +25°C	P _{TOT}	65	W
Storage Temperature	T _{STG}	-65 to +200	°C
Junction Temperature	TJ	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 = 12.5mA		BV _{CES}	60	-	V
Collector-Emitter Leakage Current	$V_{CE} = 36V$		I _{CES}	-	1.25	mA
Thermal Resistance	Vcc = 36V, Pout = 9W	F = 3.1, 3.25, 3.4 GHz	R _{TH(JC)}	-	2.7	°C/W
Input Power	Vcc = 36V, Pout = 9W	F = 3.1, 3.25, 3.4 GHz	P _{IN}	-	1.43	W
Power Gain	Vcc = 36V, Pout = 9W	F = 3.1, 3.25, 3.4 GHz	G _P	8.0	-	dB
Collector Efficiency	Vcc = 36V, Pout = 9W	F = 3.1, 3.25, 3.4 GHz	η _c	35	-	%
Input Return Loss	Vcc = 36V, Pout = 9W	F = 3.1, 3.25, 3.4 GHz	RL	-	-6	dB
Load Mismatch Tolerance	Vcc = 36V, Pout = 9W	F = 3.25 GHz	VSWR-T	-	2:1	-

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 for additional data sheets and product information.

est data may be available. st data may be available. 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.

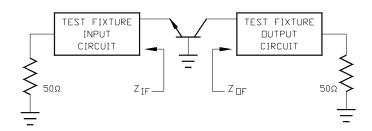


Radar Pulsed Power Transistor 9W, 3.1-3.4 GHz, 300µs Pulse, 10% Duty

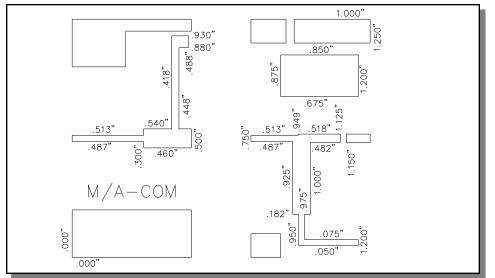
M/A-COM Products Released, 10 Jul 07

RF Test Fixture Impedance

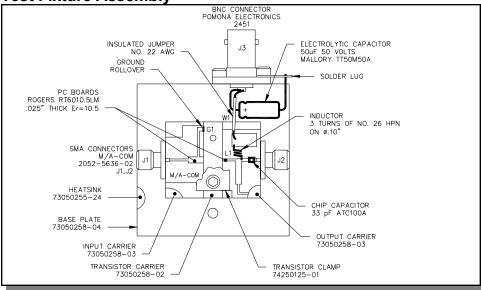
F (GHz)	Z _{IF} (Ω)	Z _{OF} (Ω)
3.10	17.5 - j8.5	90 + j37
3.25	15.0 - j8.2	58 + j7.0
3.40	13.0 - j8.0	30 + j14.5



Test Fixture Circuit Dimensions



Test Fixture Assembly



2

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 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.