

Radar Pulsed Power Transistor 90W, 3.1-3.5 GHz, 2µs Pulse, 10% Duty

M/A-COM Products Released, 10 Aug 07

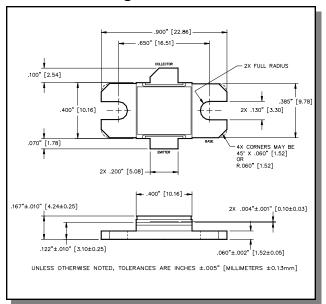
Features

- 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

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)	Ic	10.7	Α
Power Dissipation @ +25°C	P _{TOT}	580	W
Storage Temperature	T _{STG}	-65 to +200	°C
Junction Temperature	T_J	200	°C

Outline Drawing



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

Parameter	Test Conditions	Frequency	Symbol	Min	Max	Units
Collector-Emitter Breakdown Voltage	I _C = 40mA		BV_CES	65	-	V
Collector-Emitter Leakage Current	V _{CE} = 40V		I _{CES}	-	7.5	mA
Thermal Resistance	Vcc = 36V, Pout = 90W	F = 3.1, 3.3, 3.5 GHz	R _{TH(JC)}	-	0.3	°C/W
Output Power	Vcc = 36V, Pout = 90W	F = 3.1, 3.3, 3.5 GHz	P _{IN}	-	16	W
Power Gain	Vcc = 36V, Pout = 90W	F = 3.1, 3.3, 3.5 GHz	G _P	7.5	-	dB
Collector Efficiency	Vcc = 36V, Pout = 90W	F = 3.1, 3.3, 3.5 GHz	ης	35	-	%
Input Return Loss	Vcc = 36V, Pout = 90W	F = 3.1, 3.3, 3.5 GHz	RL	-	-6	dB
Load Mismatch Tolerance	Vcc = 36V, Pout = 90W	F = 3.1, 3.3, 3.5 GHz	VSWR-T	-	2:1	-

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.

• North America Tel: 800.366.2266 / Fax: 978.366.2266

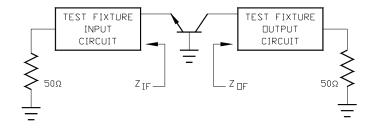


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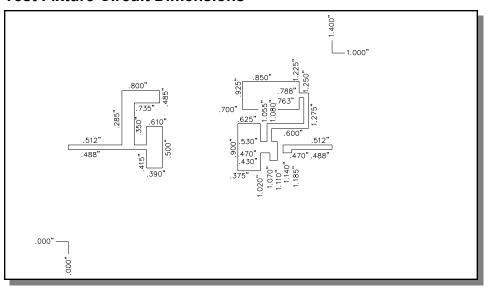
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RF Test Fixture Impedance

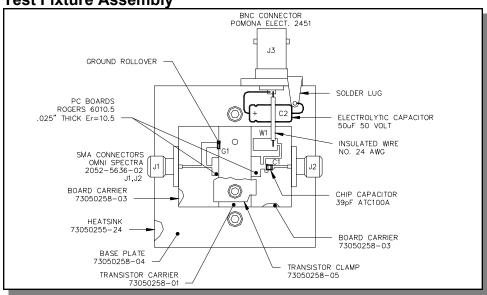
F (GHz)	Z _{IF} (Ω)	Z _{OF} (Ω)
3.1	8.9 - j11.2	5.2 - j11.0
3.3	8.7 - j8.6	4.2 - j8.8
3.5	8.6 - j6.0	4.7 - j7.0



Test Fixture Circuit Dimensions



Test Fixture Assembly



2

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