MAPR-002729-170M00



Radar Pulsed Power Transistor 170W, 2.7-2.9 GHz, 100µs Pulse, 10% Duty

M/A-COM Products Released, 29 Jun 07

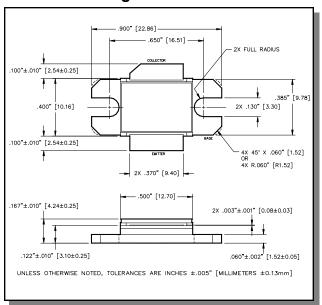
Features

- 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)	I _C	27	Α
Power Dissipation @ +25°C	P _{TOT}	500	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 = 250mA		BV _{CES}	65	-	V
Collector-Emitter Leakage Current	V _{CE} = 40V		I _{CES}	-	10	mA
Thermal Resistance	Vcc = 36V, Pin = 24W	F = 2.7, 2.8, 2.9 GHz	R _{TH(JC)}	-	0.35	°C/W
Output Power	Vcc = 36V, Pin = 24W	F = 2.7, 2.8, 2.9 GHz	P _{OUT}	170	-	W
Power Gain	Vcc = 36V, Pin = 24W	F = 2.7, 2.8, 2.9 GHz	G_{P}	8.5	-	dB
Collector Efficiency	Vcc = 36V, Pin = 24W	F = 2.7, 2.8, 2.9 GHz	ης	40	-	%
Input Return Loss	Vcc = 36V, Pin = 24W	F = 2.7, 2.8, 2.9 GHz	RL	-	-10	dB
Load Mismatch Tolerance	Vcc = 36V, Pin = 24W	F = 2.7, 2.8, 2.9 GHz	VSWR-T	-	2:1	-
Load Mismatch Stability	Vcc = 36V, Pin = 24W	F = 2.7, 2.8, 2.9 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.macomtech.com for additional data sheets and product information.

MAPR-002729-170M00

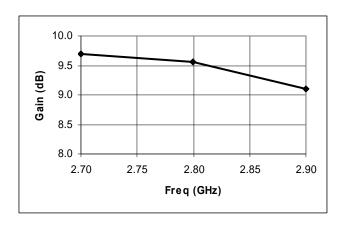


Radar Pulsed Power Transistor 170W, 2.7-2.9 GHz, 100µs Pulse, 10% Duty M/A-COM Products Released, 29 Jun 07

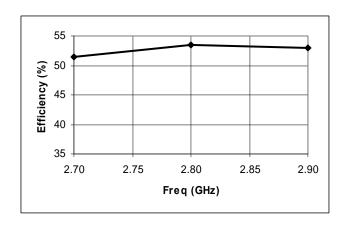
Typical RF Performance

Freq. (GHz)	Pin (W)	Pout (W)	Gain (dB)	Ic (A)	Eff (%)	RL (dB)	VSWR-S (1.5:1)	VSWR-T (2:1)
2.7	24	224	9.69	12.1	51.4	-15.6	S	Р
2.8	24	217	9.56	11.3	53.4	-14.7	S	Р
2.9	24	196	9.11	10.3	53.0	-10.6	S	Р

Gain vs. Frequency

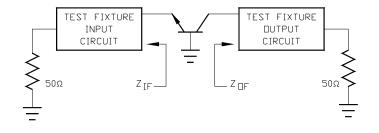


Collector Efficiency vs. Frequency



RF Test Fixture Impedance

F (GHz)	Z _{IF} (Ω)	Z _{OF} (Ω)
2.7	5.1 - j5.1	1.8 - j2.1
2.8	5.2 - j4.7	1.8 - j1.8
2.9	5.3 - j4.3	1.8 - j1.4



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.

• Europe Tel: 44.1908.574.200 / Fax: 44.1908.574.300

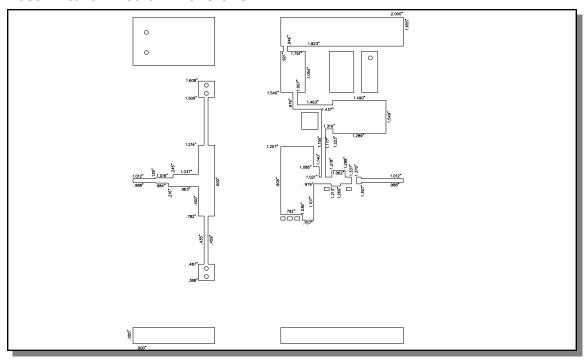
Asia/Pacific Tel: 81.44.844.8296 / Fax: 81.44.844.8298
 Visit www.macomtech.com for additional data sheets and product information.

MAPR-002729-170M00

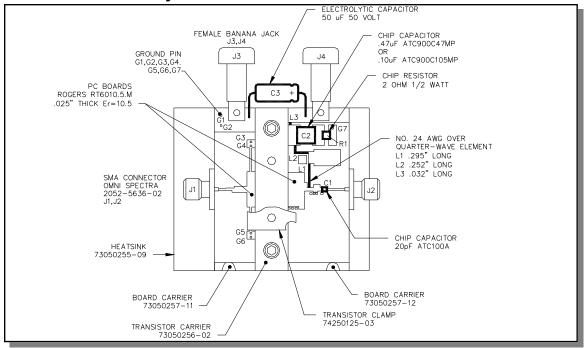


Radar Pulsed Power Transistor 170W, 2.7-2.9 GHz, 100µs Pulse, 10% Duty M/A-COM Products Released, 29 Jun 07

Test Fixture Circuit Dimensions



Test Fixture Assembly



[•] 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.

AMEYA360 Components Supply Platform

Authorized Distribution Brand:

























Website:

Welcome to visit www.ameya360.com

Contact Us:

Address:

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd Minhang District, Shanghai , China

> Sales:

Direct +86 (21) 6401-6692

Email amall@ameya360.com

QQ 800077892

Skype ameyasales1 ameyasales2

Customer Service :

Email service@ameya360.com

Partnership :

Tel +86 (21) 64016692-8333

Email mkt@ameya360.com