LF2802A



RF Power MOSFET Transistor 2W. 500-1000MHz. 28V

M/A-COM Products Released; RoHS Compliant

Features

- N-Channel enhancement mode device
- DMOS structure
- Lower capacitances for broadband operation
- Common source configuration
- Lower noise floor
- **Applications**

Broadband linear operation 500 MHz to 1400 MHz

ABSOLUTE MAXIMUM RATINGS AT 25° C

Parameter	Symbol	Rating	Units
Drain-Source Voltage	V_{DS}	65	V
Gate-Source Voltage	V_{GS}	20	V
Drain-Source Current	I _{DS}	0.7	Α
Power Dissipation	P_D	8	W
Junction Temperature	T_J	200	°C
Storage Temperature	T _{STG}	-55 to +150	°C
Thermal Resistance	θ_{JC}	21.8	°C/W

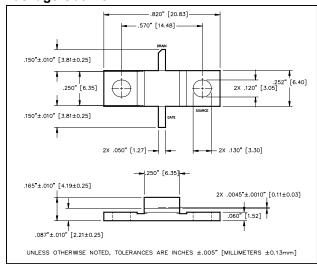
TYPICAL DEVICE IMPEDANCE

F (MHz)	Z _{IN} (Ω)	$Z_{LOAD}(\Omega)$		
500	10.0 - j41.5	40.0 +j53.0		
1000	4.2 - j12.0	11.85 + j33.0		
1400	1400 3.5 - j1.0 7.5 + j23.3			
V_{DD} = 28V, I_{DQ} = 25mA, P_{OUT} = 2.0 W				

 Z_{IN} is the series equivalent input impedance of the device from gate to source.

Z_{LOAD} is the optimum series equivalent load impedance as measured from drain to ground.

Package Outline



LETTER	MILLIMETERS		INCHES	
DIM	MIN	MAX	MIN	MAX
Α	20.70	20.96	.815	.825
В	14.35	14.61	.565	.575
С	13.72	14.22	.540	.560
D	6.27	6.53	.247	.257
E	6.22	6.48	.245	.255
F	6.22	6.48	.245	.255
G	1.14	1.40	.045	.055
Н	2.92	3.18	.115	.125
J	1.40	1.65	.055	.065
К	1.96	2.46	.077	.097
L	3.61	4.37	.142	.172
М	.08	.15	.003	.006

ELECTRICAL CHARACTERISTICS AT 25°C

Parameter	Symbol	Min	Max	Units	Test Conditions
Drain-Source Breakdown Voltage	BV _{DSS}	65	-	V	V _{GS} = 0.0 V , I _{DS} = 1.0 mA
Drain-Source Leakage Current	I _{DSS}	-	0.5	mA	V _{GS} = 28.0 V , V _{GS} = 0.0 V
Gate-Source Leakage Current	I _{GSS}	-	0.5	μΑ	V _{GS} = 20.0 V , V _{DS} = 0.0 V
Gate Threshold Voltage	$V_{GS(TH)}$	2.0	6.0	V	V _{DS} = 10.0 V , I _{DS} = 5.0 mA
Forward Transconductance	G _M	40	-	mS	V_{DS} = 28.0 V , I_{DS} = 50.0 mA , Δ V_{GS} = 1.0V, 80 μ s Pulse
Input Capacitance	C _{ISS}	-	3.5	pF	V _{DS} = 28.0 V , F = 1.0 MHz
Output Capacitance	Coss	-	3.75	pF	V _{DS} = 28.0 V , F = 1.0 MHz
Reverse Capacitance	C _{RSS}	-	1.2	pF	V _{DS} = 28.0 V , F = 1.0 MHz
Power Gain	G _P	10	-	dB	V _{DD} = 28.0 V, I _{DQ} = 25 mA, P _{OUT} = 2.0 W F =1.0 GHz
Drain Efficiency	η _D	40	-	%	V _{DD} = 28.0 V, I _{DQ} = 25 mA, P _{OUT} = 2.0 W F =1.0 GHz
Load Mismatch Tolerance	VSWR-T	-	20:1	-	V _{DD} = 28.0 V, I _{DQ} = 25 mA, P _{OUT} = 2.0 W F =1.0 GHz

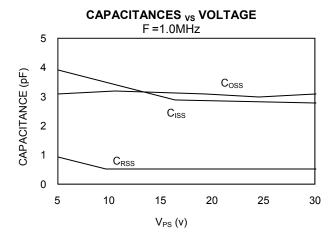
- North America Tel: 800.366.2266 / Fax: 978.366.2266
- Europe Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- Asia/Pacific Tel: 81.44.844.8296 / Fax: 81.44.844.8298 Visit www.macomtech.com for additional data sheets and product information.

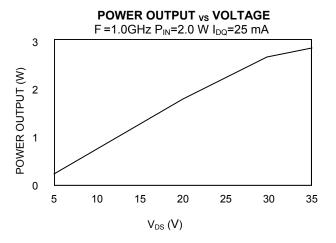


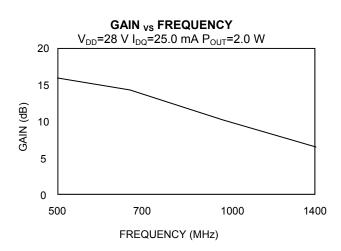
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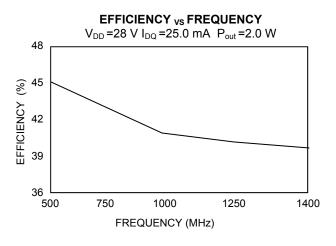
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Typical Broadband Performance Curves

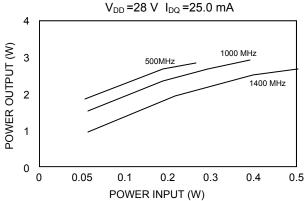








POWER OUTPUT _{VS} POWER INPUT



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.

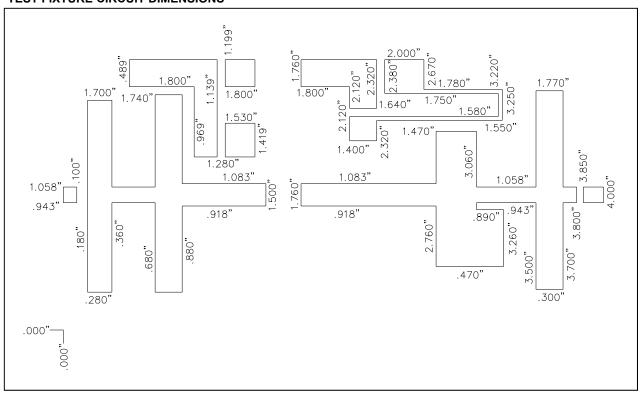
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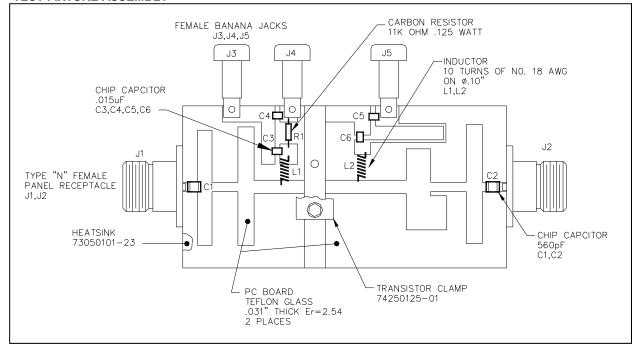
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TEST FIXTURE CIRCUIT DIMENSIONS



TEST FIXTURE ASSEMBLY



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.

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