UF2810P

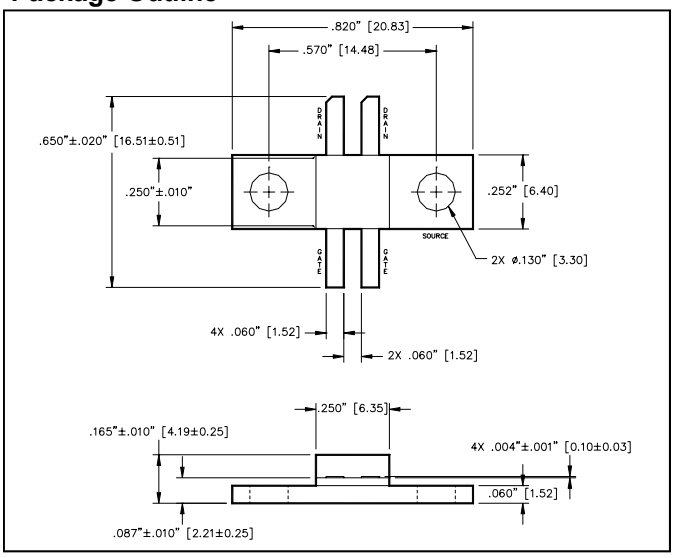
RF Power MOSFET Transistor
10W, 100-500 MHz, 28V

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
- 100 MHz to 500 MHz operation

Package Outline



UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES ±.005" [MILLIMETERS ±0.13mm]

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}	1.4*	A
Power Dissipation	P_D	26.9	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-55 to +150	°C
Thermal Resistance	θ_{JC}	6.5	°C/W

TYPICAL DEVICE IMPEDANCES

F (MHz)	Z_{IN} (Ω)	Z_{LOAD} (Ω)
100	30.0-j150.0	70.0+j110.0
300	15.0-j90.0	55.0+j80.0
500	4.2-j46.0	48.0+j50.0
V_{DD}=28V, I_{DQ}=100 Ma, P_{OUT} =10.0 W		

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

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

ELECTRICAL CHARACTERISTICS AT 25°C

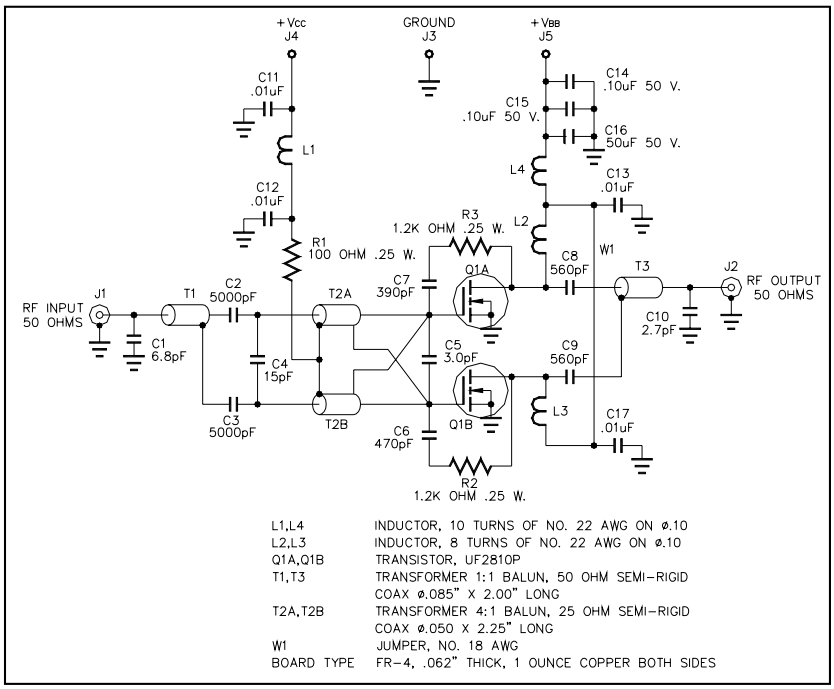
Parameter	Symbol	Min	Max	Units	Test Conditions
Drain-Source Breakdown Voltage	BV_{DSS}	65	-	V	V_{GS} = 0.0 V , I_{DS} = 2.0 mA
Drain-Source Leakage Current	I_{DSS}	-	1.0	mA	V_{GS} = 28.0 V , V_{GS} = 0.0 V
Gate-Source Leakage Current	I_{GSS}	-	1.0	µA	V_{GS} = 20.0 V , V_{DS} = 0.0 V
Gate Threshold Voltage	$V_{GS(TH)}$	2.0	6.0	V	V_{DS} = 10.0 V , I_{DS} = 10.0 mA
Forward Transconductance	G_M	80	-	S	V_{DS} = 10.0 V , I_{DS} 100.0 mA , Δ V_{GS} = 1.0V, 80 µs Pulse
Input Capacitance	C_{ISS}	-	7	pF	V_{DS} = 28.0 V , F = 1.0 MHz
Output Capacitance	C_{OSS}	-	5	pF	V_{DS} = 28.0 V , F = 1.0 MHz
Reverse Capacitance	C_{RSS}	-	2.4	pF	V_{DS} = 28.0 V , F = 1.0 MHz
Power Gain	G_P	10	-	dB	V_{DD} = 28.0 V, I_{DQ} = 100.0 mA, P_{OUT} = 50.0 W F =500 MHz
Drain Efficiency	η_D	50	-	%	V_{DD} = 28.0 V, I_{DQ} = 100.0 mA, P_{OUT} = 50.0 W F =500 MHz
Load Mismatch Tolerance	VSWR-T	-	20:1	-	V_{DD} = 28.0 V, I_{DQ} = 100.0 mA, P_{OUT} = 50.0 W F =500 MHz

*Per side

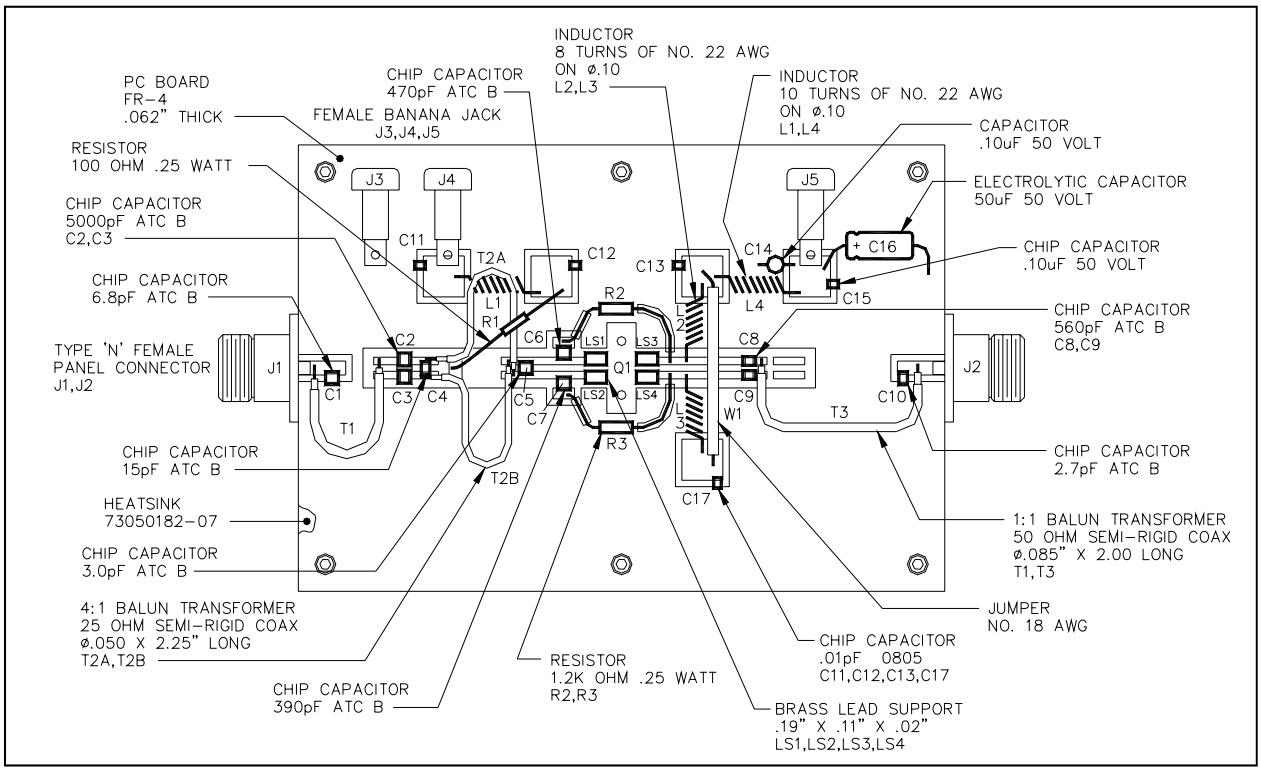
- **North America** Tel: 800.366.2266 / Fax: 978.366.2266
- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

Visit www.macomtech.com for additional data sheets and product information.

TEST FIXTURE SCHEMATIC



TEST FIXTURE ASSEMBLY



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