

UF28100V



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

M/A-COM Products
Released; RoHS Compliant

Features

- N-channel enhancement mode device
- DMOS structure
- Lower capacitances for broadband operation
- High saturated output power
- Lower noise figure than competitive devices

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}	12*	A
Power Dissipation	P_D	250	W
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-55 to +150	°C
Thermal Resistance	θ_{JC}	0.7	°C/W

TYPICAL DEVICE IMPEDANCES

F (MHz)	Z_{IN} (Ω)	Z_{LOAD} (Ω)
100	4.5-j6.0	14.5+j0.5
300	2.25-j1.75	7.5+j1.0
500	1.5+j5.5	3.5+j3.5

$V_{DD}=28V, I_{DQ}=600\text{ Ma}, P_{OUT}=100.0\text{ W}$

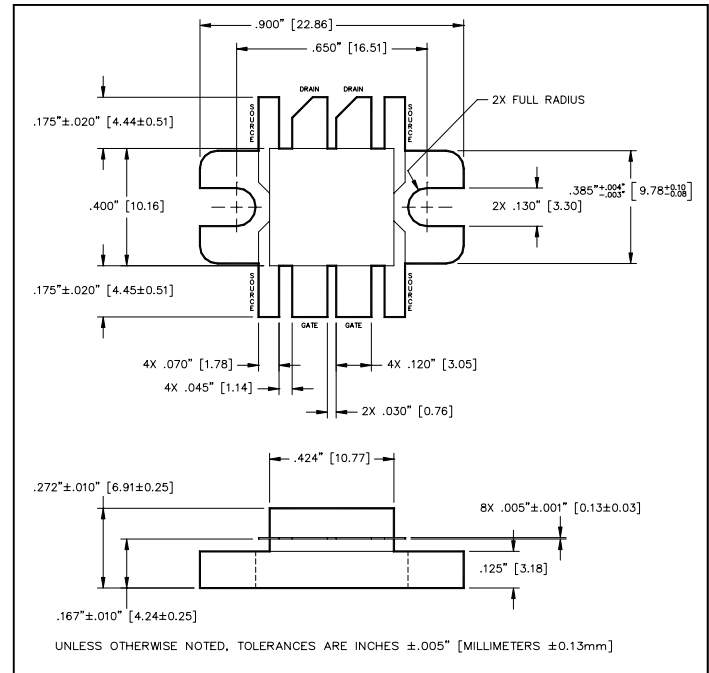
Z_{IN} is the series equivalent input impedance of the device from gate to gate.

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	$V_{GS} = 0.0\text{ V}, I_{DS} = 15.0\text{ mA}$
Drain-Source Leakage Current	I_{DSS}	-	3.0	mA	$V_{DS} = 28.0\text{ V}, V_{GS} = 0.0\text{ V}$
Gate-Source Leakage Current	I_{GSS}	-	3.0	μA	$V_{GS} = 20.0\text{ V}, V_{DS} = 0.0\text{ V}$
Gate Threshold Voltage	$V_{GS(TH)}$	2.0	6.0	V	$V_{DS} = 10.0\text{ V}, I_{DS} = 300.0\text{ mA}$
Forward Transconductance	G_M	1.5	-	S	$V_{DS} = 10.0\text{ V}, I_{DS} = 3000.0\text{ mA}, \Delta V_{GS} = 1.0V, 80\ \mu\text{s Pulse}$
Input Capacitance	C_{ISS}	-	135	pF	$V_{DS} = 28.0\text{ V}, F = 1.0\text{ MHz}$
Output Capacitance	C_{OSS}	-	90	pF	$V_{DS} = 28.0\text{ V}, F = 1.0\text{ MHz}$
Reverse Capacitance	C_{RSS}	-	24	pF	$V_{DS} = 28.0\text{ V}, F = 1.0\text{ MHz}$
Power Gain	G_P	10	-	dB	$V_{DD} = 28.0\text{ V}, I_{DQ} = 600.0\text{ mA}, P_{OUT} = 100.0\text{ W } F = 500\text{ MHz}$
Drain Efficiency	η_D	50	-	%	$V_{DD} = 28.0\text{ V}, I_{DQ} = 600.0\text{ mA}, P_{OUT} = 100.0\text{ W } F = 500\text{ MHz}$
Return Loss	R_L	10	-	dB	$V_{DD} = 28.0\text{ V}, I_{DQ} = 600.0\text{ mA}, P_{OUT} = 100.0\text{ W } F = 500\text{ MHz}$
Load Mismatch Tolerance	VSWR-T	-	30:1	-	$V_{DD} = 28.0\text{ V}, I_{DQ} = 600.0\text{ mA}, P_{OUT} = 100.0\text{ W } F = 500\text{ MHz}$

*Per side



1

M/A-COM Technology Solutions reserves the right to make changes to the product(s) or information contained herein without notice. M/A-COM makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does M/A-COM assume any liability whatsoever arising out of the use or application of any product(s) or information.

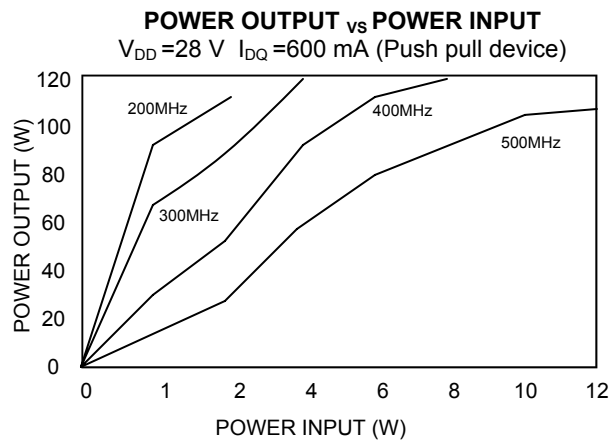
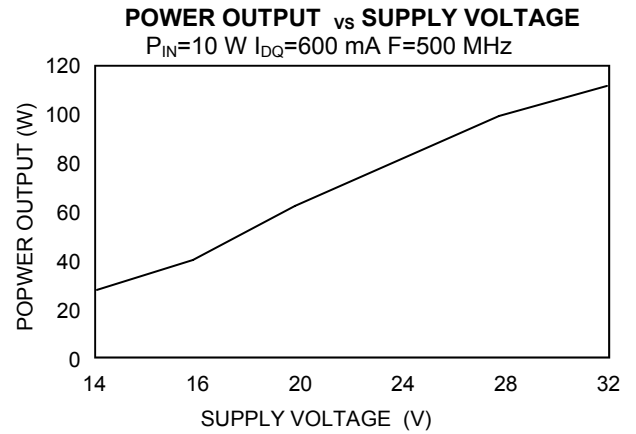
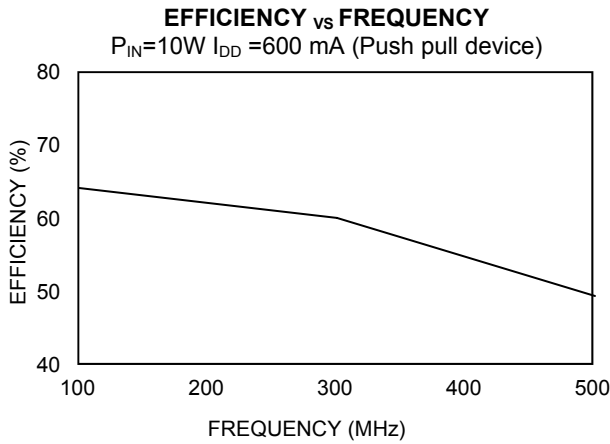
• **North America** Tel: 800.366.2266 / Fax: 978.366.2266
 • **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
 • **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298
 Visit www.macom.com for additional data sheets and product information.

ADVANCED: Data Sheets contain information regarding a product M/A-COM 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 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.

RELEASED: In full production, samples readily available, standard lead times apply.

Typical Broadband Performance Curves

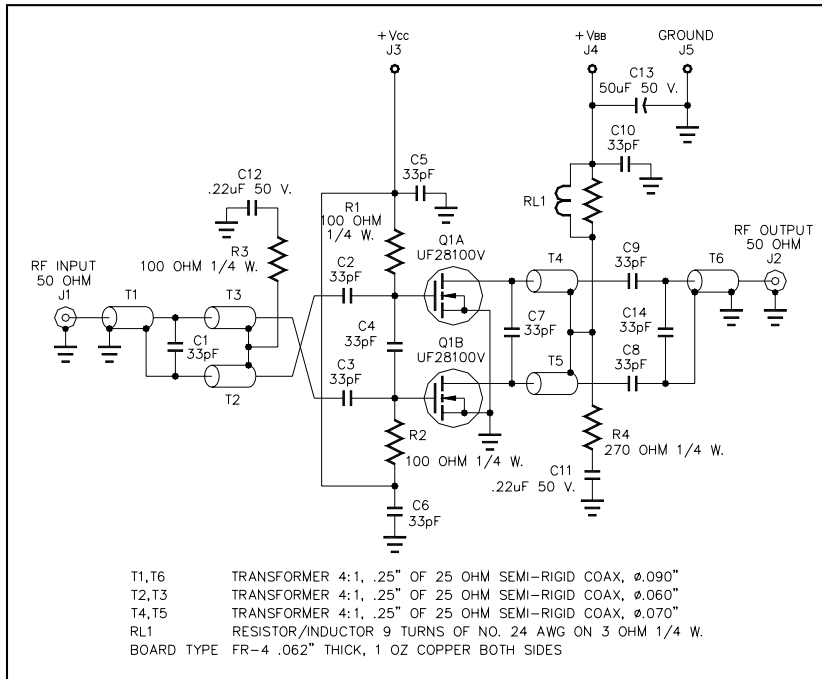


UF28100V

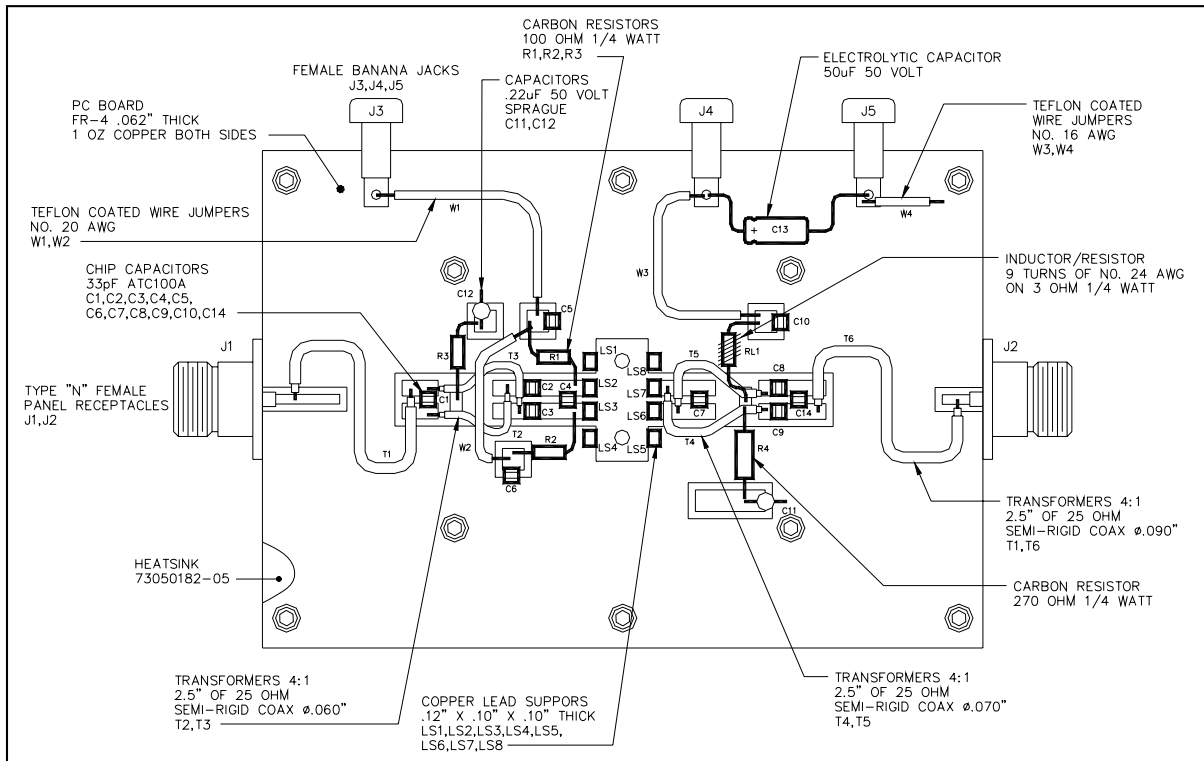
RF Power MOSFET Transistor
100W, 100-500 MHz, 28V

M/A-COM Products
Released; RoHS Compliant

TEST FIXTURE SCHEMATIC



TEST FIXTURE ASSEMBLY



3

M/A-COM Technology Solutions reserves the right to make changes to the product(s) or information contained herein without notice. M/A-COM makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does M/A-COM assume any liability whatsoever arising out of the use or application of any product(s) or information.

- **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.macom.com for additional data sheets and product information.

ADVANCED: Data Sheets contain information regarding a product M/A-COM 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 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.

RELEASED: In full production, samples readily available, standard lead times apply.

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9