

MAPL-000817-015CPC



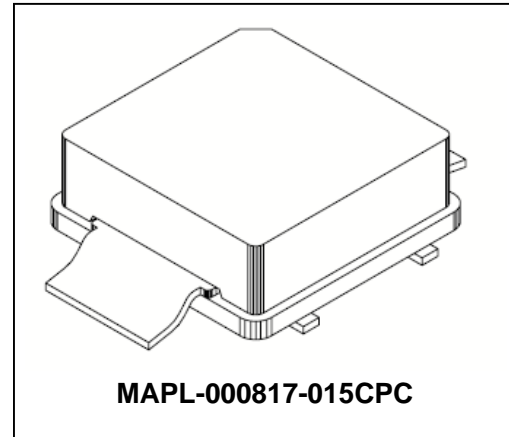
LDMOS RF Line Power FET Transistor
15 W , 800-1700 MHz, 26V

Discontinued
(For Reference Only)

Designed for broadband commercial applications up to 1.7GHz

- High gain, high efficiency and high linearity
- Aluminum-Copper Metallization for high reliability
- RoHS Compliant
- Typical P1dB performance at 960MHz, 26Vdc, CW
Typical power output: 16.5W
Gain: 17.0dB
Efficiency: 50%
10:1 VSWR ruggedness at 15W, 26Vdc, 960MHz

Product Image



MAXIMUM RATINGS

Parameter	Symbol	Rating	Units
Drain—Source Voltage	V_{DS}	65	V_{dc}
Gate—Source Voltage	V_{GS}	+20, -20	V_{dc}
Total Power Dissipation @ $T_C = 25\text{ }^\circ\text{C}$	P_D	31	W
Storage Temperature	T_{STG}	-65 to +150	$^\circ\text{C}$
Junction Temperature	T_J	200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	4	$^\circ\text{C/W}$

NOTE—**CAUTION**—MOS devices are susceptible to damage from electrostatic charge. Precautions in handling and packaging MOS devices should be observed.

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Characteristic	Symbol	Min	Typ	Max	Unit
DC CHARACTERISTICS @ 25°C					
Drain-Source Breakdown Voltage ($V_{GS} = 0$ Vdc, $I_D = 20$ μ Adc)	$V_{(BR)DSS}$	65	—	—	Vdc
Gate Quiescent Voltage ($V_{ds} = 26$ Vdc, $I_d = 100$ mA)	$V_{DS(Q)}$	3	—	5	Vdc
Drain-Source On-Voltage ($V_{gs} = 10$ Vdc, $I_d = 1$ A)	$V_{DS(on)}$	—	0.25	—	Vdc
RF FUNCTIONAL TESTS @ 25°C (In M/A-COM Test Fixture) (1)					
Common Source Amplifier Gain ($V_{DD} = 26$ Vdc, $I_{DQ} = 150$ mA, $f = 960$ MHz, $P_{OUT} = 15$ W)	G_p	—	17	—	dB
Drain Efficiency ($V_{DD} = 26$ Vdc, $I_{DQ} = 150$ mA, $f = 960$ MHz, $P_{OUT} = 15$ W)	EFF (η)	—	50	—	%
Input Return Loss ($V_{DD} = 26$ Vdc, $I_{DQ} = 150$ mA, $f = 960$ MHz, $P_{OUT} = 15$ W)	IRL	—	-10	—	dB
Output VSWR Tolerance ($V_{DD} = 26$ Vdc, $I_{DQ} = 150$ mA, $f = 960$ MHz, $P_{OUT} = 15$ W, VSWR = 10:1, All Phase Angles at Frequency of Tests)	Ψ	No Degradation In Output Power Before and After Test			
Common Source Amplifier Gain ($V_{DD} = 26$ Vdc, $I_{DQ} = 150$ mA, $f = 1670$ MHz, $P_{OUT} = 15$ W)	G_p	13.0	15	—	dB
Drain Efficiency ($V_{DD} = 26$ Vdc, $I_{DQ} = 150$ mA, $f = 1670$ MHz, $P_{OUT} = 15$ W)	EFF (η)	45	50	—	%
Input Return Loss ($V_{DD} = 26$ Vdc, $I_{DQ} = 150$ mA, $f = 1670$ MHz, $P_{OUT} = 15$ W)	IRL	—	-10	-8	dB

(1) Device specifications obtained on a Production Test Fixture.

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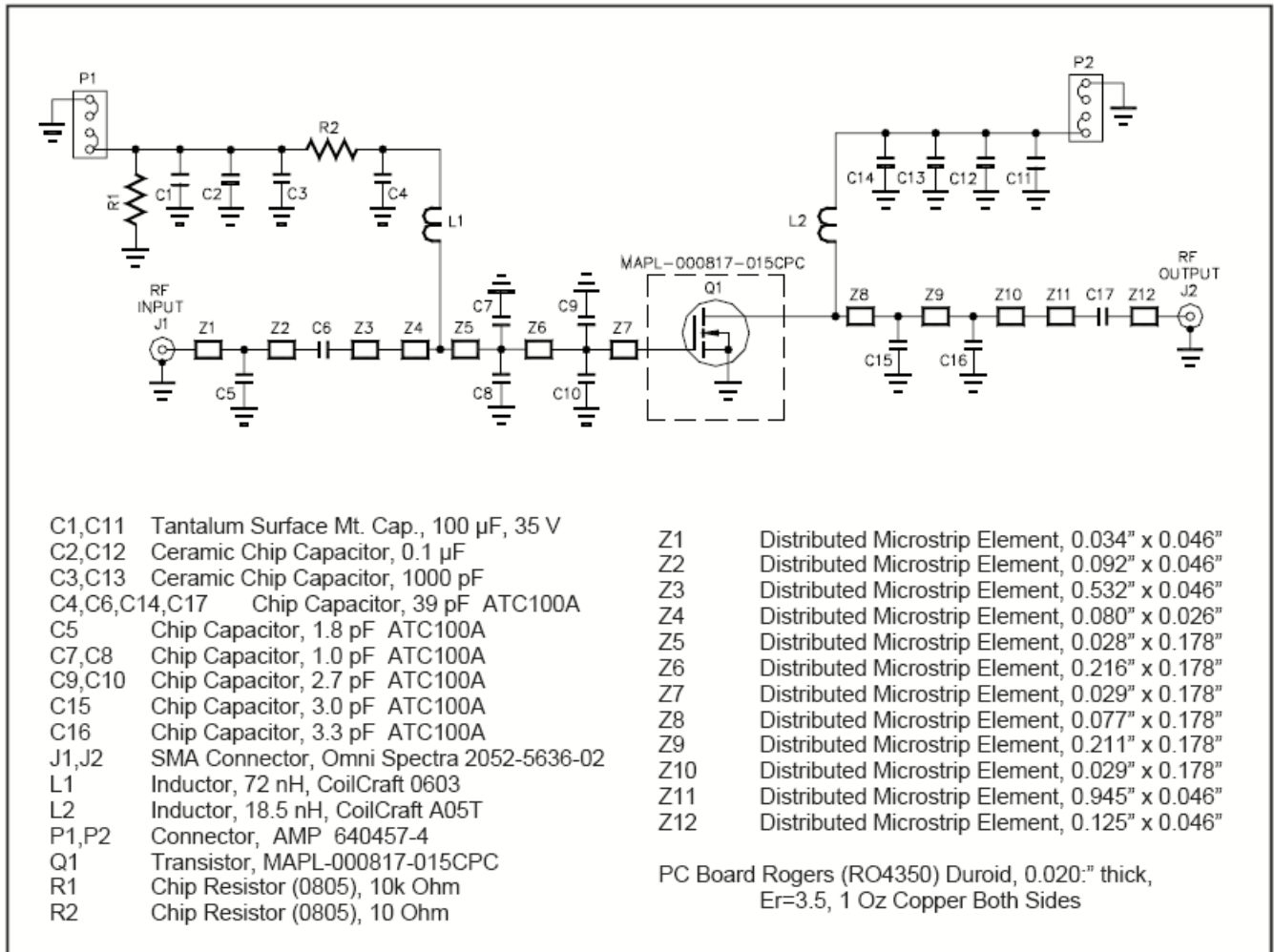


Figure 1. 1620-1670 MHz Test Fixture Schematic

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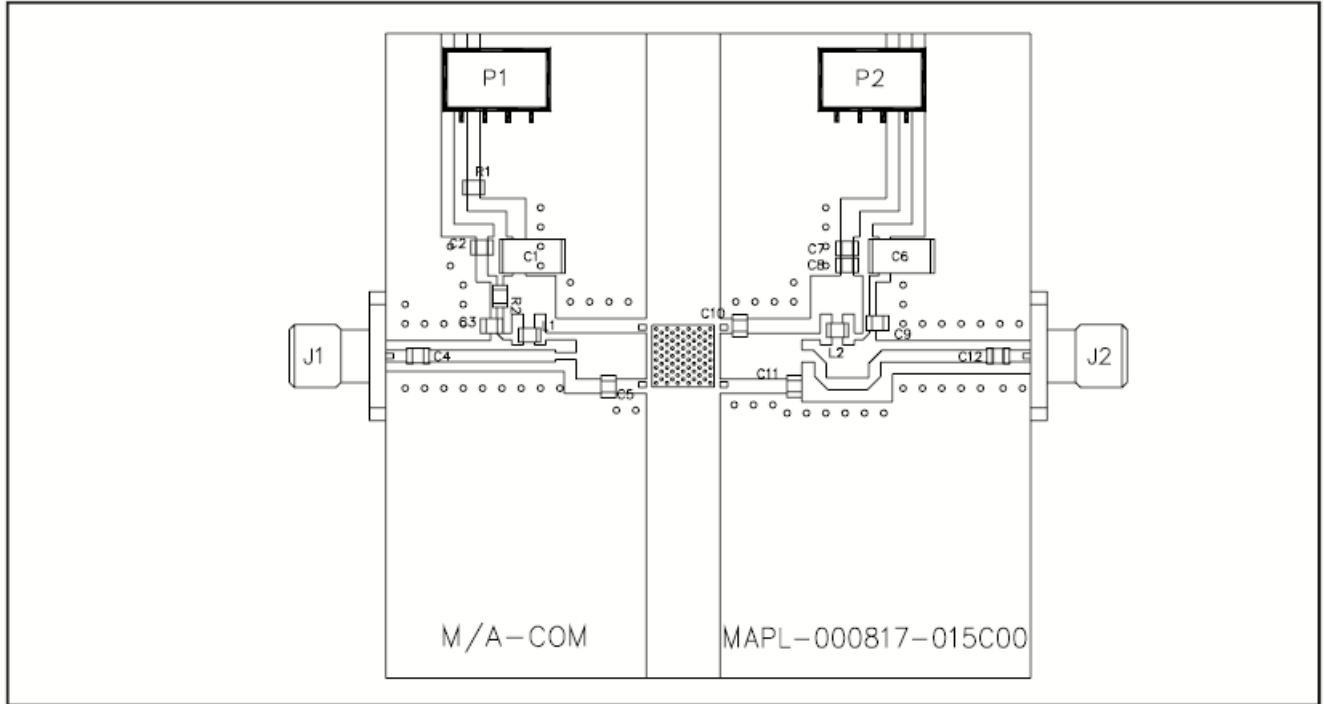
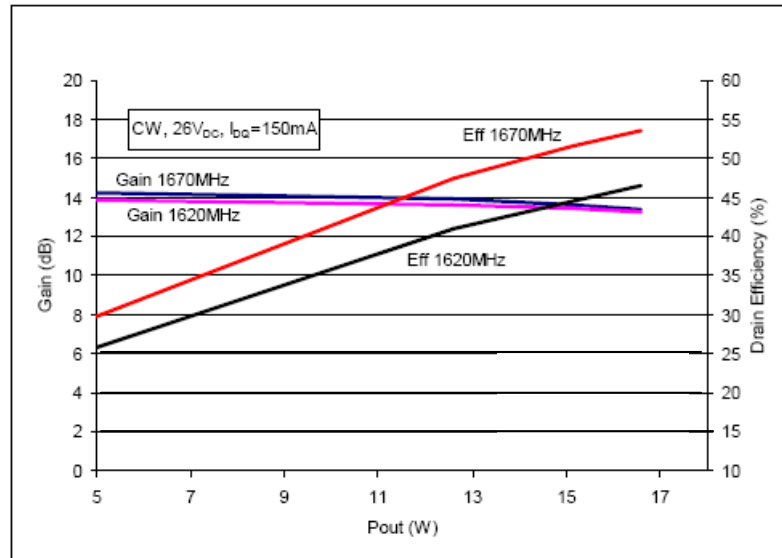
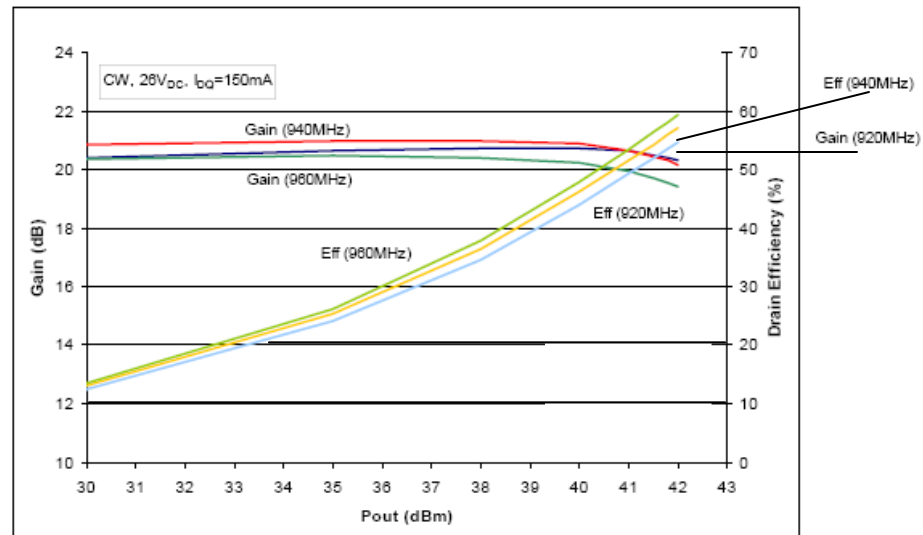


Figure 2. 1620—1670 MHz Test Fixture Component Layout



Graph 1. 1620, 1670MHz: CW Power Gain and Drain Efficiency vs. Output Power



Graph 2. 920, 940, 960MHz: CW Power Gain and Drain Efficiency vs. Output Power

PACKAGE DIMENSIONS

