

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



MAXIMUM RATINGS

Parameter	Symbol	Rating	Units
Drain—Source Voltage	V _{DSS}	65	V _{dc}
Gate—Source Voltage	V _{GS}	+20, -20	V _{dc}
Total Power Dissipation @ T _c = 25 °C	Po	31	W
Storage Temperature	Т _{stg}	-65 to +150	°C
Junction Temperature	TJ	200	Э°

THERMAL CHARACTERISTICS

Characteristic	Symbol	Мах	Unit
Thermal Resistance, Junction to Case	R _{øjc}	4	°C/W

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

1

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Characteristic	Symbol	Min	Тур	Max	Unit
DC CHARACTERISTICS @ 25°C					
Drain-Source Breakdown Voltage $(V_{GS} = 0 \text{ Vdc}, I_D = 20 \mu \text{Adc})$	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 (ŋ)	—	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 $(V_{DD} = 26 \text{ Vdc}, I_{DQ} = 150 \text{ mA}, f = 960 \text{ MHz}, P_{OUT} = 15 \text{ W},$ 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 (ŋ)	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

3

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Figure 2. 1620—1670 MHz Test Fixture Component Layout

4

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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

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PACKAGE DIMENSIONS



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