

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
BV_{DSS} Drain-Source Breakdown Voltage	$V_{GS} = 0$ $I_D = 100mA$	70			V
I_{DSS} Zero Gate Voltage Drain Current	$V_{DS} = 28V$ $V_{GS} = 0$			1	mA
I_{GSS} Gate Leakage Current	$V_{GS} = 20V$ $V_{DS} = 0$			1	μA
$V_{GS(th)}$ Gate Threshold Voltage*	$I_D = 10mA$ $V_{DS} = V_{GS}$	1		7	V
g_{fs} Forward Transconductance*	$V_{DS} = 10V$ $I_D = 1A$	0.8			S
G_{PS} Common Source Power Gain	$P_O = 20W$	13			dB
η Drain Efficiency	$V_{DS} = 28V$ $I_{DQ} = 0.2A$	50			%
VSWR Load Mismatch Tolerance	$f = 500MHz$	20:1			—
C_{iss} Input Capacitance	$V_{DS} = 28V$ $V_{GS} = -5V$ $f = 1MHz$			60	pF
C_{oss} Output Capacitance	$V_{DS} = 28V$ $V_{GS} = 0$ $f = 1MHz$			30	pF
C_{rss} Reverse Transfer Capacitance	$V_{DS} = 28V$ $V_{GS} = 0$ $f = 1MHz$			2.5	pF

* Pulse Test: Pulse Duration = 300 μs , Duty Cycle $\leq 2\%$

HAZARDOUS MATERIAL WARNING

The ceramic portion of the device between leads and metal flange is beryllium oxide. Beryllium oxide dust is highly toxic and care must be taken during handling and mounting to avoid damage to this area.

THESE DEVICES MUST NEVER BE THROWN AWAY WITH GENERAL INDUSTRIAL OR DOMESTIC WASTE.

THERMAL DATA

$R_{THj-case}$	Thermal Resistance Junction – Case	Max. 3.5 $^{\circ}C / W$
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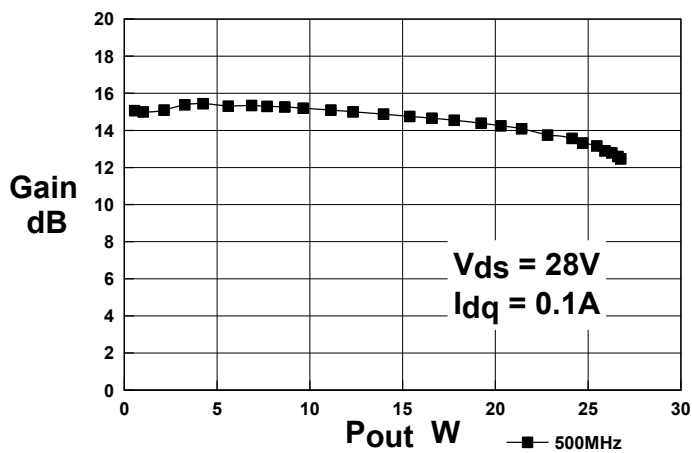


Figure 1
Gain vs. Output Power

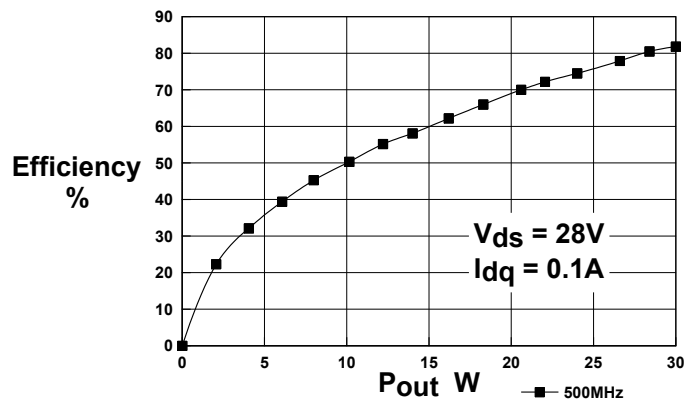


Figure 2
Efficiency vs. Output Power

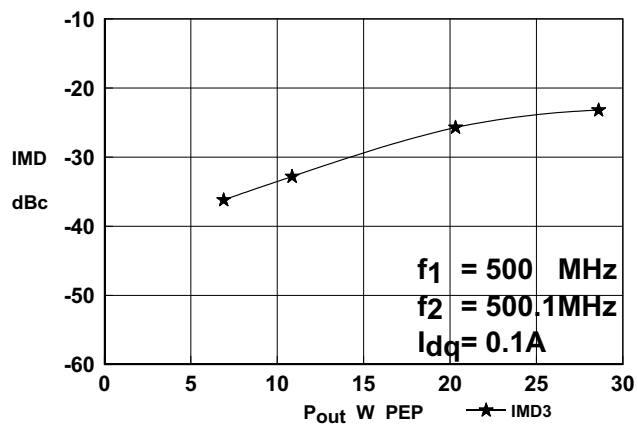
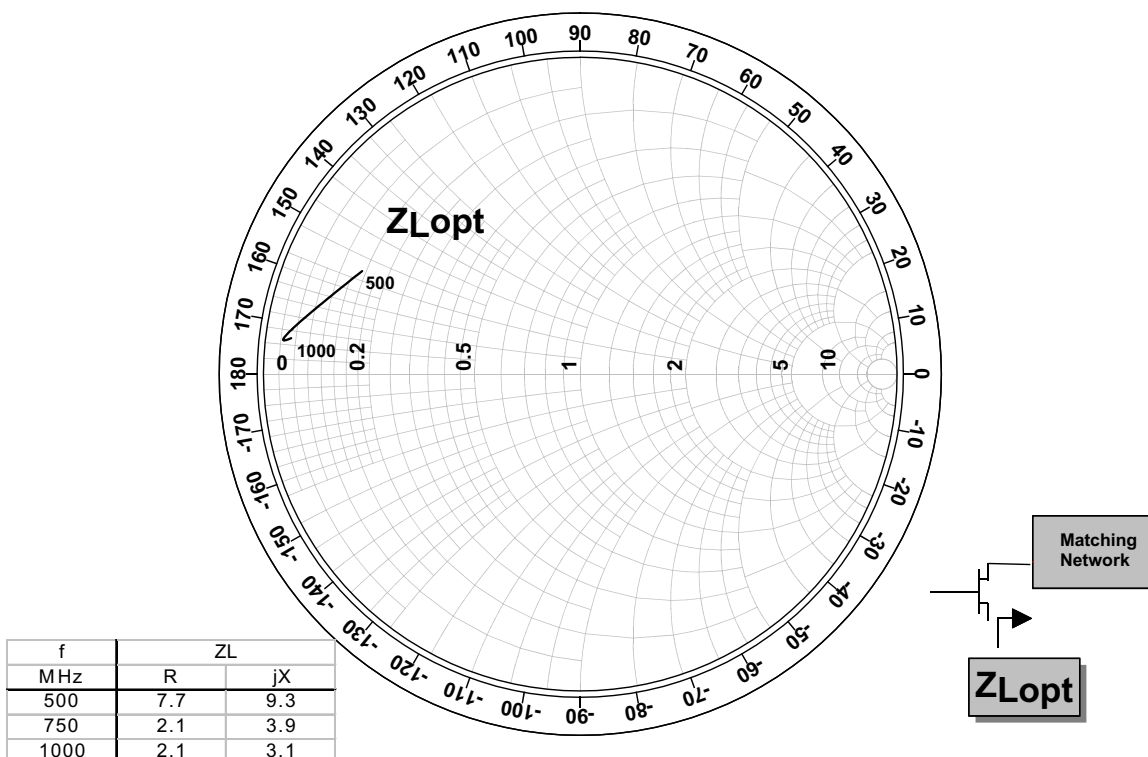
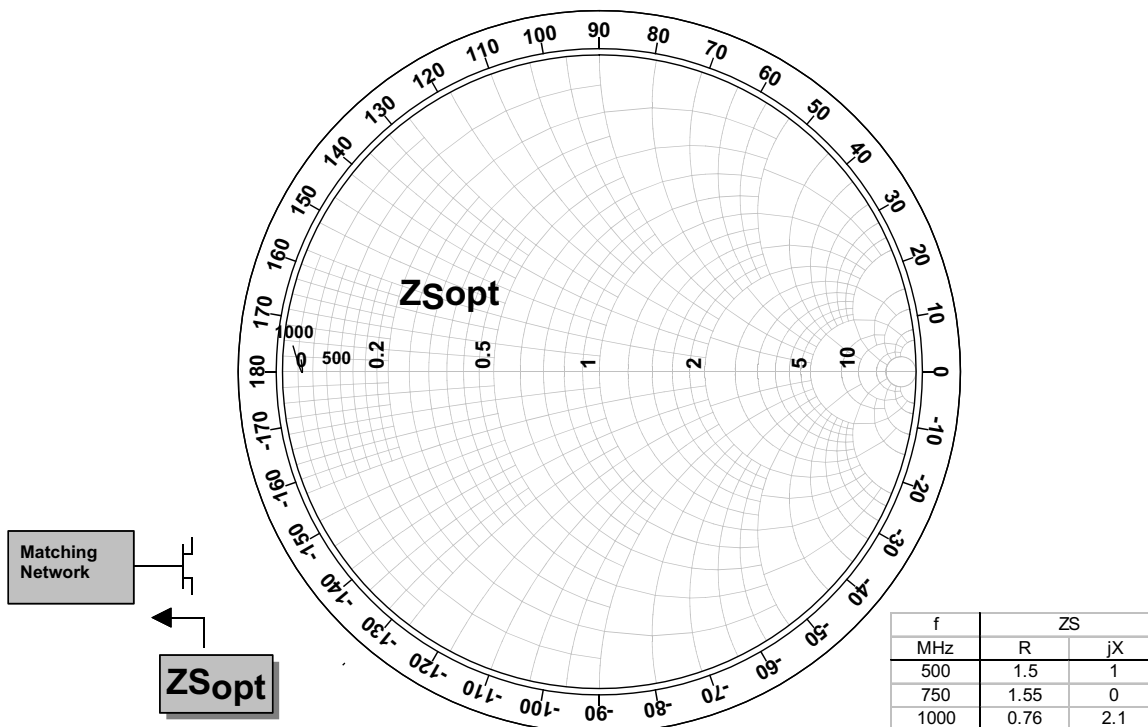
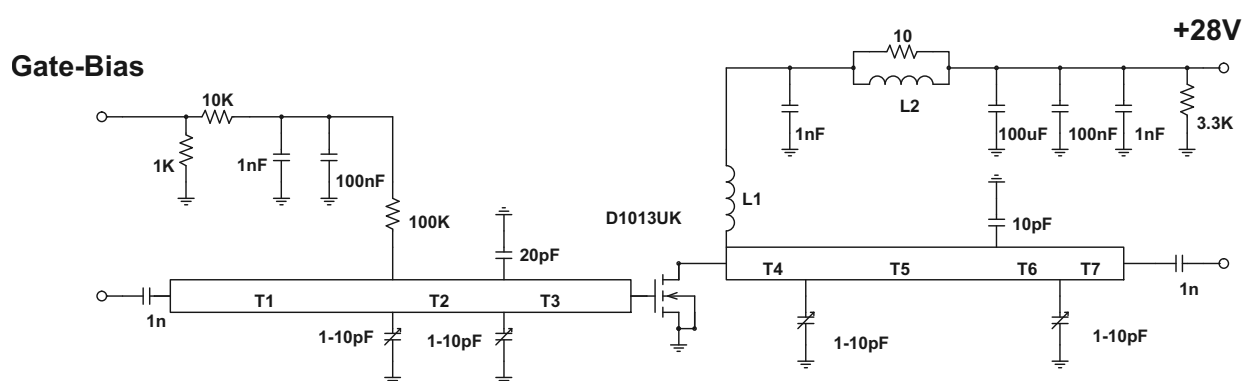


Figure 3
IMD vs. Output Power



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500MHz Test Fixture

Substrate 0.8 mm FR4, $\epsilon_r = 2.2$

All microstrip lines $W = 2.2\text{mm}$

T1	35mm
T2	15mm
T3	10mm
T4	14mm
T5	30mm
T6	6mm
T7	12.5mm

L1 5.5 turns 20swg enamelled copper wire 7mm i.d.

L2 1.5 turns 24swg enamelled copper wire on Siemens B62152A7X 2 hole

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