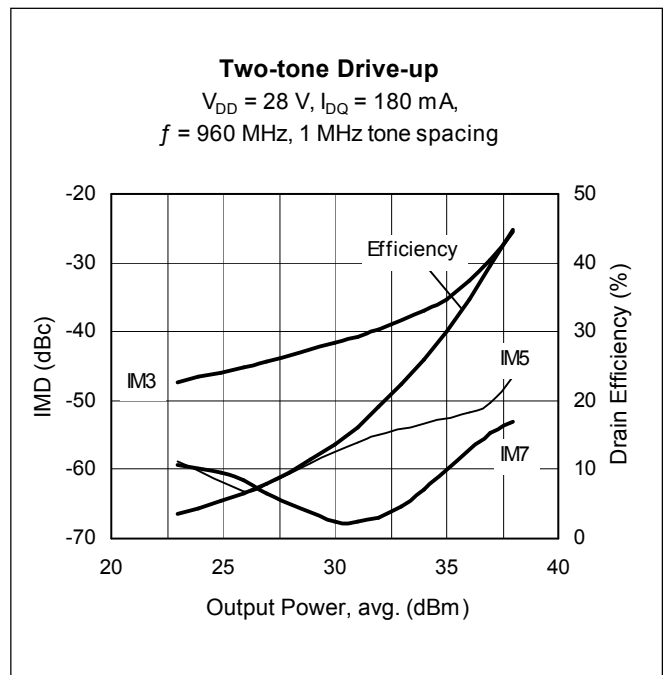
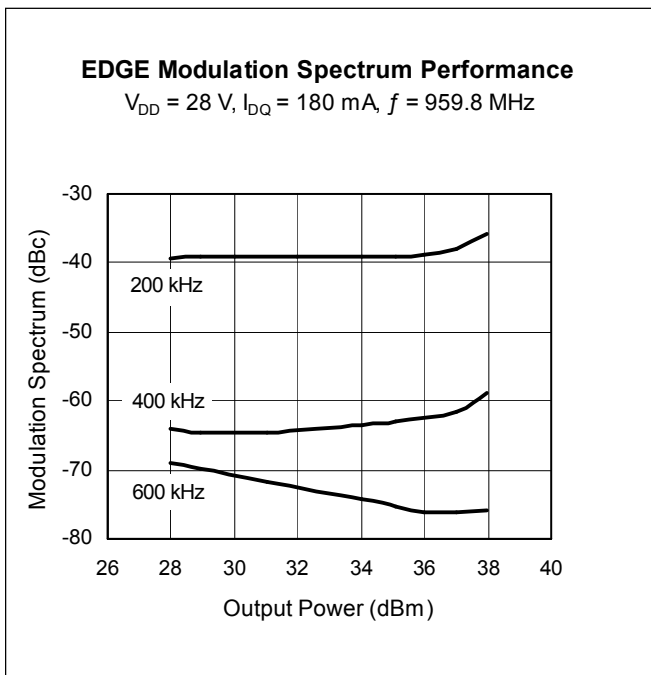
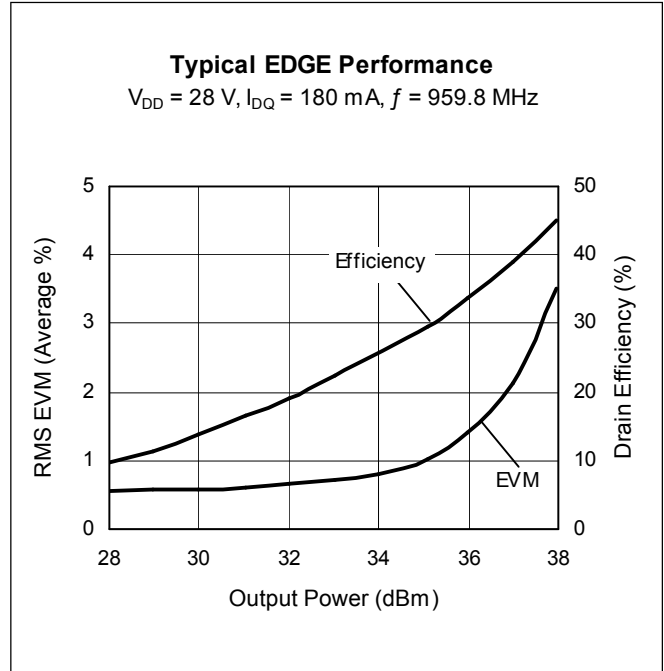
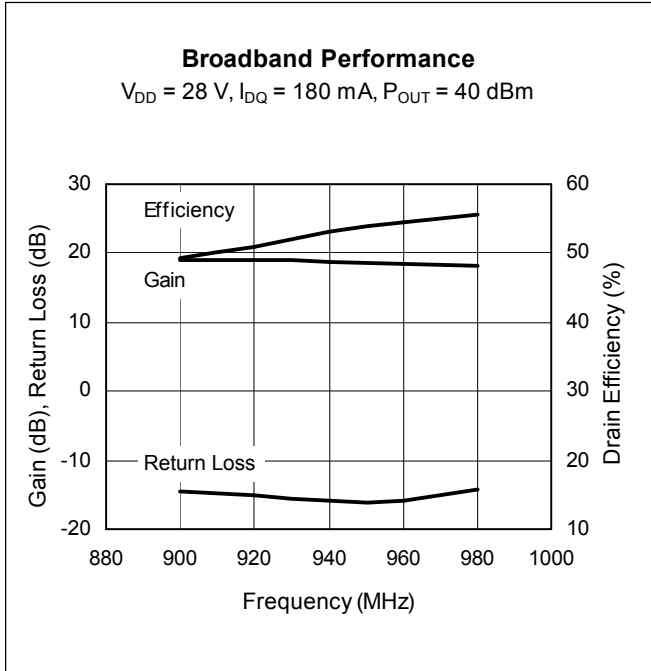
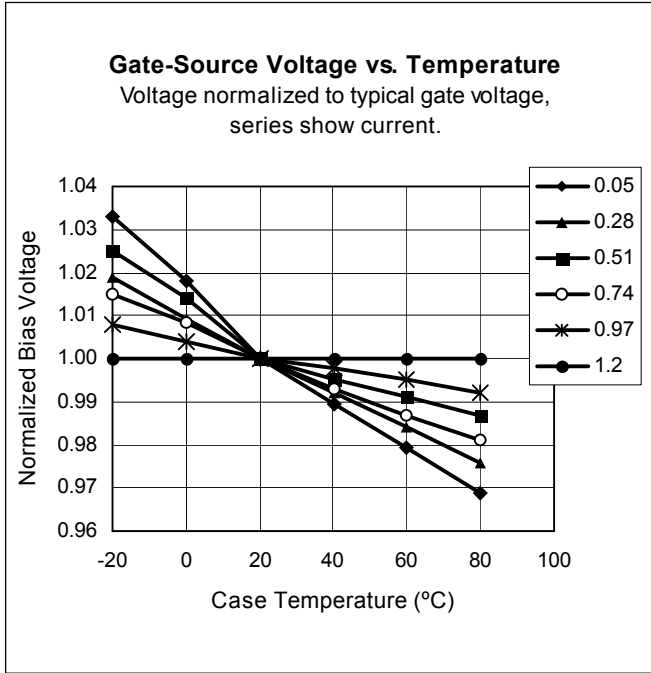


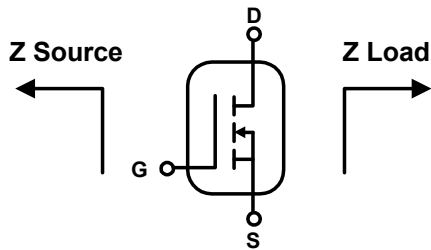
Typical Performance (data taken in production test fixture)



Typical Performance (cont.)

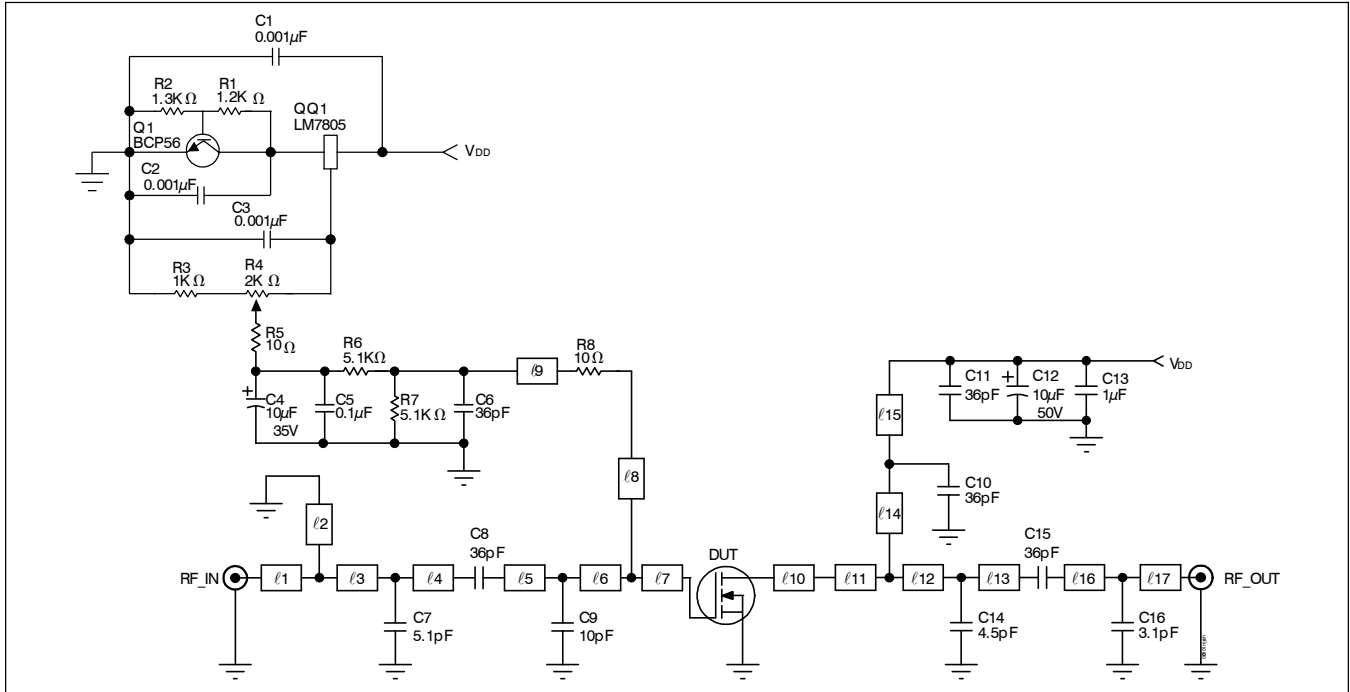


Broadband Circuit Impedance



Frequency MHz	Z Source W		Z Load W	
	R	jX	R	jX
820	3.73	2.10	10.41	3.92
840	3.81	2.22	9.61	4.14
860	3.83	2.30	9.00	4.48
880	3.76	2.39	8.55	4.89
900	3.61	2.50	8.24	5.32
920	3.37	2.69	8.02	5.76
940	3.08	2.96	7.89	6.20
960	2.76	3.35	7.84	6.63
980	2.43	3.86	7.85	7.04
1000	2.13	4.47	7.91	7.43

Reference Circuit



Reference circuit schematic for $f = 960 \text{ MHz}$

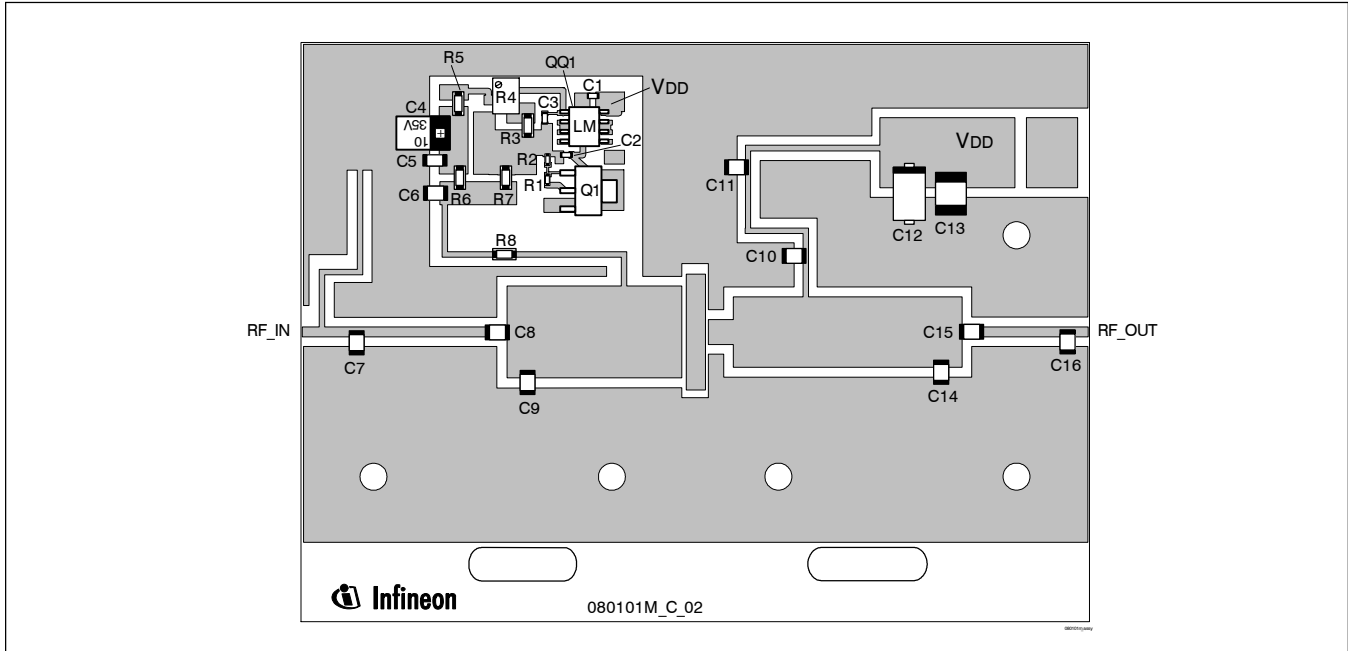
Circuit Assembly Information

DUT	PTF080101M	LDMOS Transistor	
PCB	0.76 mm [.030"] thick, $\epsilon_r = 4.5$	Rogers TMM4	2 oz. copper

Microstrip	Electrical Characteristics at 960 MHz ¹	Dimensions: L x W (mm)	Dimensions: L x W (in.)
l1	0.016 λ , 50.0 Ω	2.77 x 1.27	0.109 x 0.050
l2	0.132 λ , 75.0 Ω	25.65 x 0.64	1.010 x 0.025
l3	0.028 λ , 50.0 Ω	4.83 x 1.27	0.190 x 0.050
l4	0.101 λ , 50.0 Ω	17.20 x 1.27	0.677 x 0.050
l5	0.015 λ , 10.0 Ω	2.39 x 11.99	0.094 x 0.472
l6	0.086 λ , 10.0 Ω	13.08 x 11.99	0.515 x 0.472
l7	0.050 λ , 10.0 Ω	7.65 x 11.99	0.301 x 0.472
l8	0.106 λ , 73.0 Ω	18.49 x 0.64	0.728 x 0.025
l9	0.086 λ , 73.0 Ω	15.16 x 0.64	0.597 x 0.025
l10	0.020 λ , 29.0 Ω	3.30 x 3.30	0.130 x 0.130
l11	0.061 λ , 12.5 Ω	9.42 x 9.19	0.371 x 0.362
l12	0.111 λ , 12.5 Ω	17.53 x 9.19	0.690 x 0.362
l13	0.022 λ , 12.5 Ω	3.35 x 9.19	0.132 x 0.362
l14	0.028 λ , 73.0 Ω	4.90 x 0.64	0.193 x 0.025
l15	0.100 λ , 73.0 Ω	17.53 x 0.64	0.690 x 0.025
l16	0.070 λ , 50.0 Ω	11.94 x 1.22	0.470 x 0.048
l17	0.016 λ , 50.0 Ω	2.67 x 1.22	0.105 x 0.048

¹Electrical characteristics are rounded.

Reference Circuit (cont.)

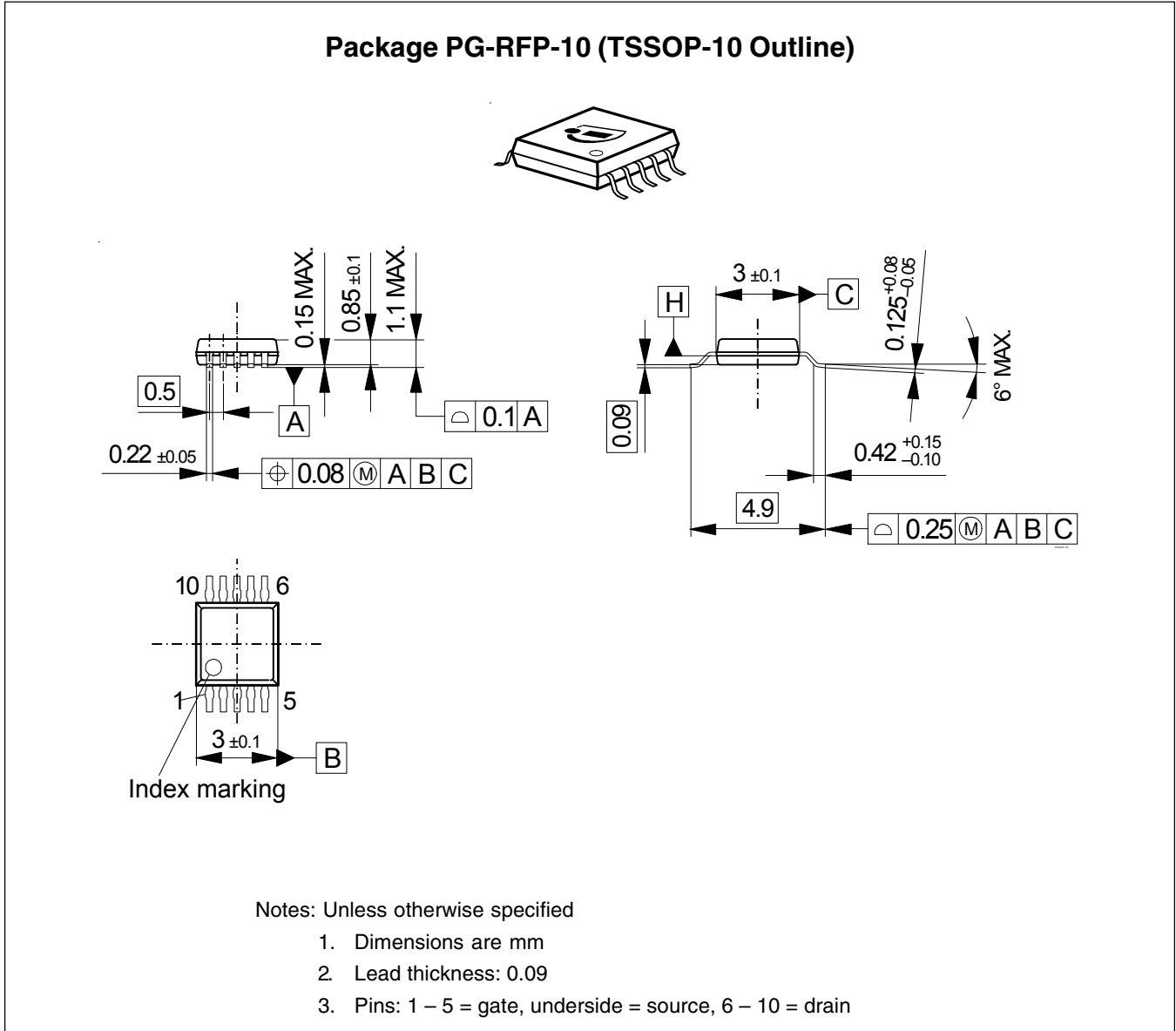


Reference circuit assembly diagram (not to scale)*

Component	Description	Suggested Manufacturer	P/N or Comment
C1, C2, C3	Capacitor, 0.001 μ F	Digi-Key	PCC1772CT-ND
C4	Tantalum capacitor, 10 μ F, 35 V	Digi-Key	PCS6106TR-ND
C5	Capacitor, 0.1 μ F	Digi-Key	PCC104BCT-ND
C6, C8, C10, C11, C15	Ceramic capacitor, 36 pF	ATC	100B 360
C7	Ceramic capacitor, 5.1 pF	ATC	100B 5R1
C9	Ceramic capacitor, 10 pF	ATC	100B 100
C12	Tantalum capacitor, 10 μ F, 50 V	Garrett Electronics	TPS106K050R0400
C13	Capacitor, 1.0 μ F	Toshiba	C4532XTRZA105M
C14	Ceramic capacitor, 4.5 pF	ATC	100B 4R5
C16	Ceramic capacitor, 3.1 pF	ATC	100B 3R1
Q1	Transistor	Infineon Technologies	BCP56
QQ1	Voltage regulator	National Semiconductor	LM7805
R1	Chip Resistor 1.2 k-ohms	Digi-Key	P1.2KGCT-ND
R2	Chip Resistor 1.3 k-ohms	Digi-Key	P1.3KGCT-ND
R3	Chip Resistor 1 k-ohms	Digi-Key	P1KECT-ND
R4	Potentiometer 2 k-ohms	Digi-Key	3224W-202ETR-ND
R5, R8	Chip Resistor 10 ohms	Digi-Key	P10ECT-ND
R6, R7	Chip Resistor 5.1 k-ohms	Digi-Key	P5.1KECT-ND

*Gerber Files for this circuit available on request

Package Outline Specifications



Find the latest and most complete information about products and packaging at the Infineon Internet page <http://www.infineon.com/products>

Revision History: 2009-02-18 Data Sheet

Previous version: 2005-12-16, Data Sheet

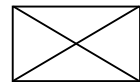
Page	Subjects (major changes since last revision)
4	Add Temperature graph and impedance information.
5 – 6	Add circuit information.
all	Remove Preliminary status
6	Fixed typing error

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