APPLICATION NOTE

MITSUBISHI
ELECTRIC SEMICONDUCTOR

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SUBJECT:

RF Characteristic of MGF0913A in 800 to 900 MHz-band

SUMMARY: This application note shows RF characteristics of MGF0913A

- Measurement conditions are as follows :
- Modulated signal; W - CDMA (3GPP TEST MODEL1 64ch's 1carrier)

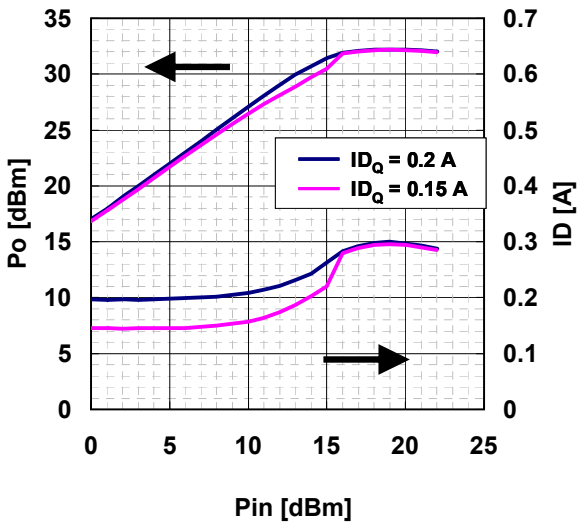
CW Signal		ID_Q (A)		
		0.2	0.15	Ta = 25 deg. C
VD	10	O	O	Freq. = 850 MHz
(V)	9	O	N/A	

Modulated Signal		ID_Q (A)		
		0.2	0.15	Ta = 25 deg. C
VD	10	O	O	Freq. = 850 MHz
(V)	9	O	N/A	

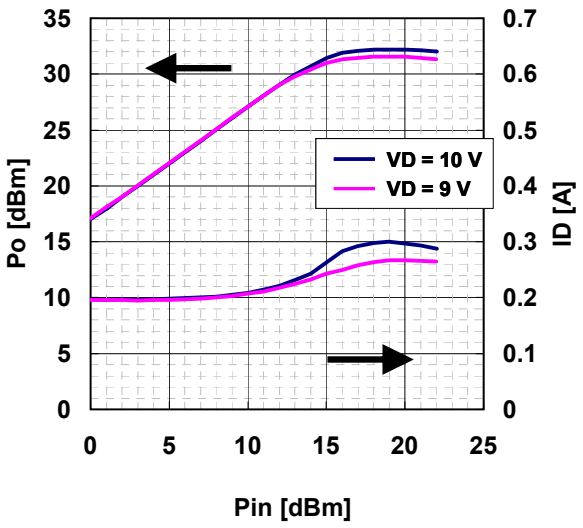
Freq.	Input Signal		
(MHz)	CW	Modulated	Ta = 25 deg. C
800	O	O	VD = 10 V
850	O	O	ID_Q = 0.2 A
900	O	O	

- Contents

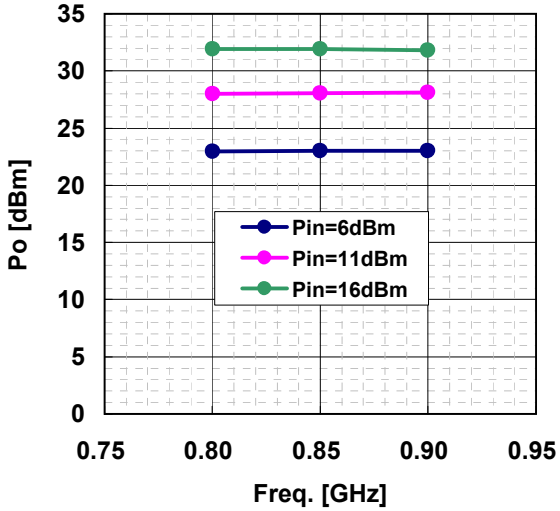
Po, ID v.s. Pin Freq. = 850 MHz (CW)
VD = 10 V



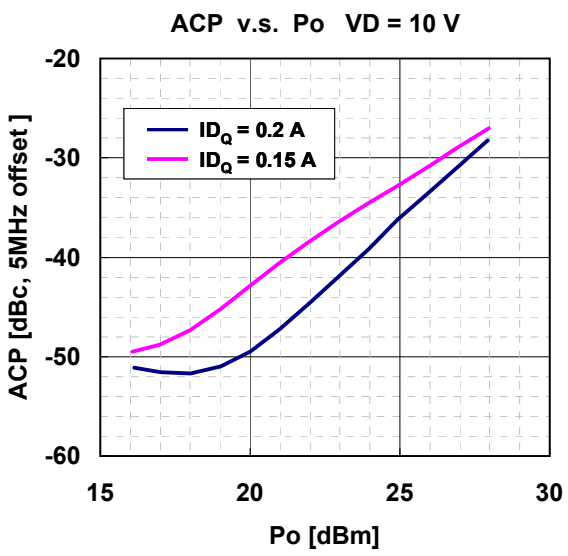
Po, ID v.s. Pin Freq. = 850 MHz (CW)
IDQ = 0.2 A

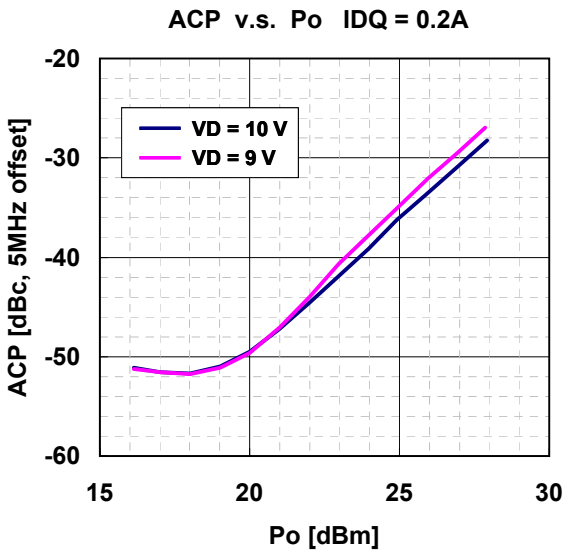


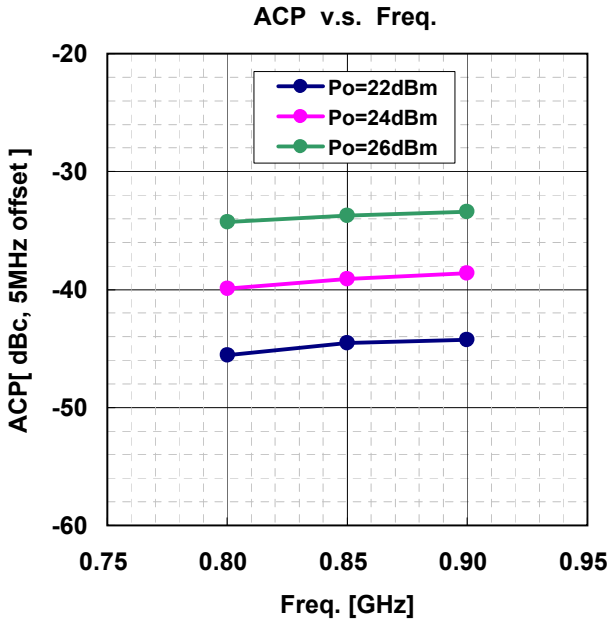
Po v.s. Freq. (CW) VD = 10 V,
IDQ = 0.2 A



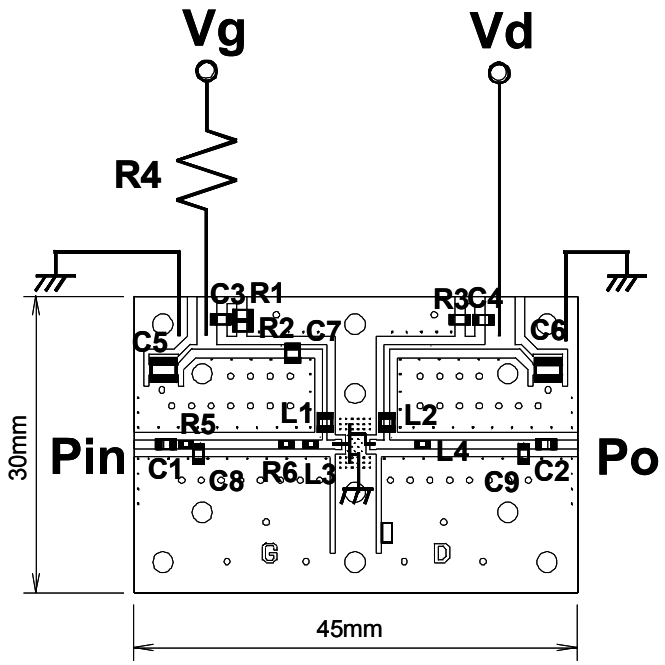
Input signal; W - CDMA (3GPP TEST MODEL1 64ch's 1carrier)



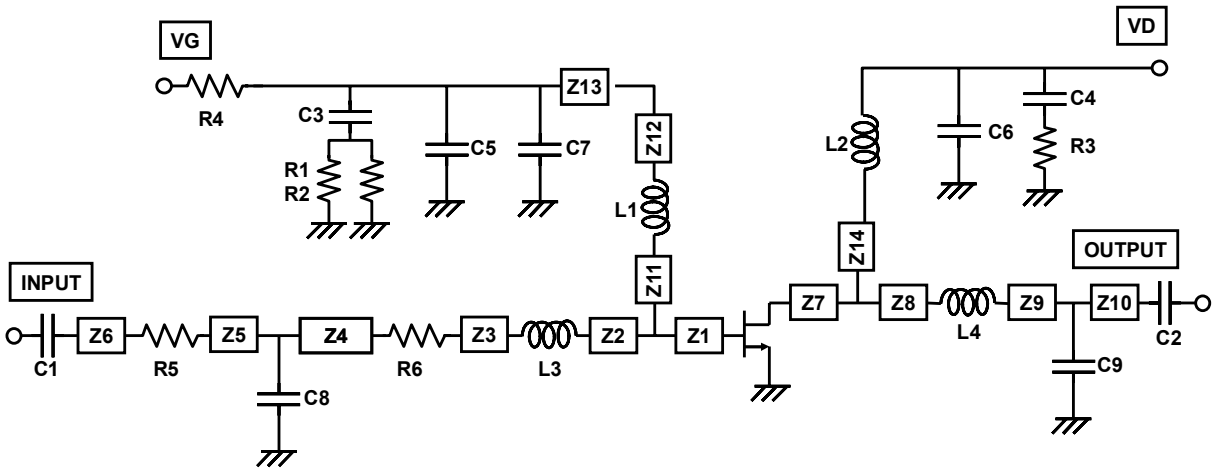




MGF0913A TEST FIXTURE f = 850MHz



C1, C2 : 22 pF Chip Capacitor
C3, C4 : 1000 pF Chip Capacitor
C5, C6 : 4.7 uF Chip Capacitor
C7 : 20 pF Chip Capacitor
C8 : 4 pF Chip Capacitor
C9 : 1.8 pF Chip Capacitor
L1, L2 : 21 nH Chip Inductor
L3 : 5.6 nH Chip Inductor
L4 : 3.9 nH Chip Inductor
R1, R2, R3 : 51 ohm Chip Resistor
R4 : 500 ohm
R5 : 8.2 ohm Chip Resistor
R6 : 5.6 ohm Chip Resistor



Z1: W = 0.9 mm, L = 1.05 mm
Z2: W= 0.9 mm, L = 1.35 mm
Z3: W= 0.9 mm, L = 2.5 mm
Z4: W= 0.9 mm, L = 9.0 mm
Z5: W= 0.9 mm, L = 1.2 mm
Z6: W= 0.9 mm, L = 2.0 mm
Z7: W = 0.9 mm, L = 1.05 mm
Z8: W= 0.9 mm, L = 3.65 mm
Z9: W= 0.9 mm, L = 10.2 mm
Z10: W= 0.9 mm, L = 2.3 mm
Z11: W= 0.5 mm, L = 2.2 mm
Z12: W= 0.5 mm, L = 7.6 mm
Z13: W= 0.5 mm, L = 3.2 mm
Z14: W= 0.5 mm, L = 2.2 mm

Substrate :
Mitsubishi Gas Chemical Company
CCL-870HL TypeM

εr = 3.4, t = 0.4 mm