

FA01219A

GaAs FET HYBRID IC

DESCRIPTION

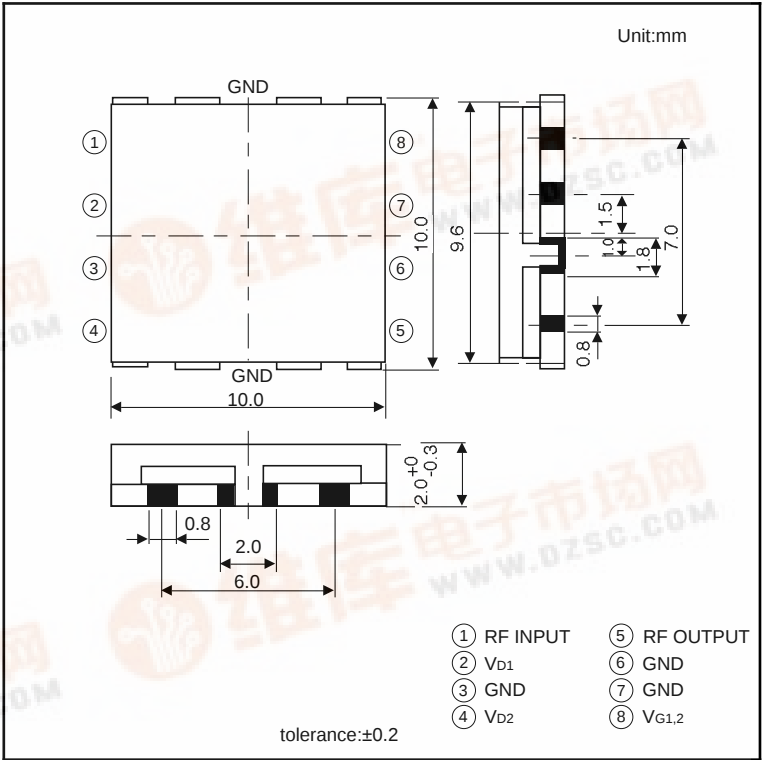
FA01219A is RF Hybrid IC designed for 0.8GHz band small size handheld radio.

FEATURES

- Low voltage 3.5V
- High gain 22.5B
- High efficiency 50%
- High power 30.5dBm

APPLICATION

PDC0.8GHz



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Condition	T _c	Ratings	Unit
V _D	Drain voltage	Po≤30.5dBm	25°C	4.5	V
P _{in}	Input power	Z _G =Z _L =50W	25°C	15	dBm
T _{c(op)}	Operation case temperature		—	-20 to +85	°C
T _{stg}	Storage temperature		—	-30 to +90	°C

Note: Each maximum ratings is guaranteed independently and duty=1/3 operation. T=20 msec

ELECTRICAL CHARACTERISTICS(T_a=25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
f	Frequency		925	—	958	MHz
P _{in}	Input power	Po=30.5dBm	—	5	8	dBm
I _{dt}	Total drain current	V _{D1} =V _{D2} =3.5V	—	640	720	mA
r _{in}	Return loss	V _{G1,2} =-2.5V	—	—	-6	dB
ACP50	±50kHz adjacent channel power	Z _G =Z _L =50W (p/4DQPSK)	—	—	-47	dBc
ACP100	±100kHz adjacent channel power		—	—	-62	dBc
2fo	2nd harmonics	Ditto (CW)	—	—	-30	dBc
3fo	3rd harmonics		—	—	-30	dBc

MITSUBISHI SEMICONDUCTOR (GaAs FET)

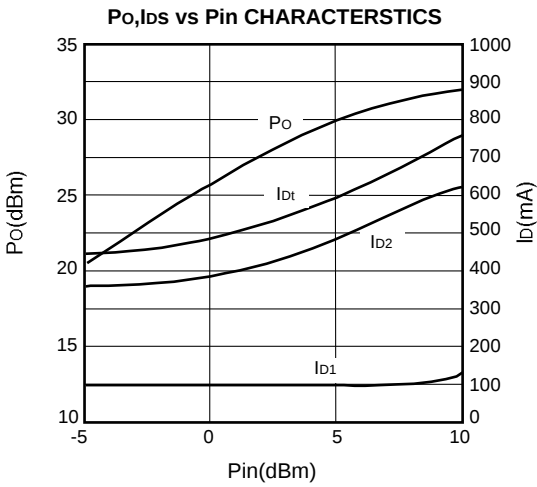
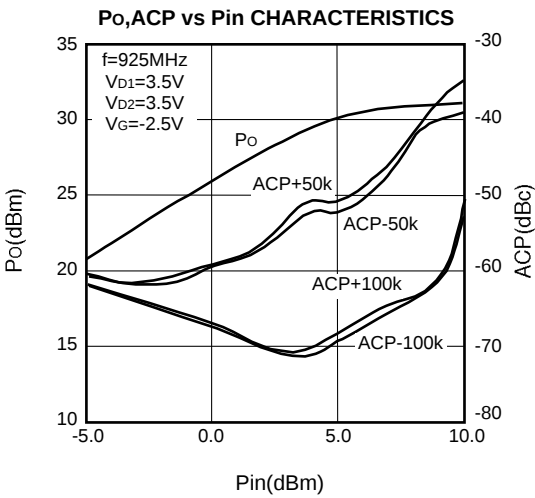
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TYPICAL CHARACTERISTICS 1

V_{D1}=3.5V,V_{D2}=3.5V,V_G=-2.5V

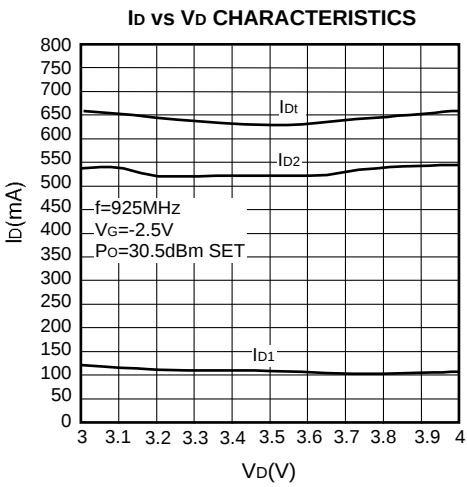
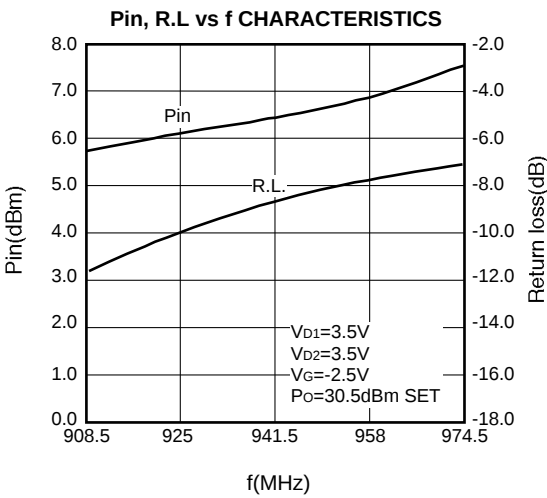
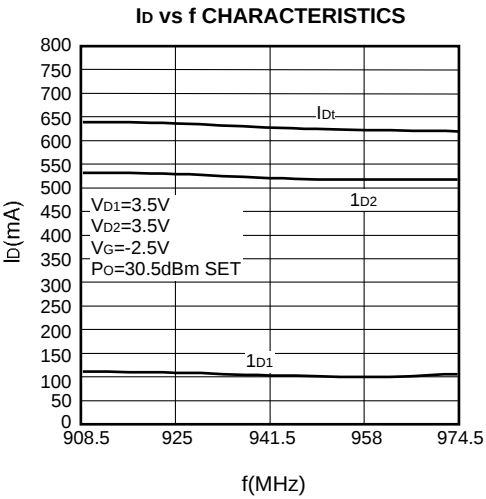
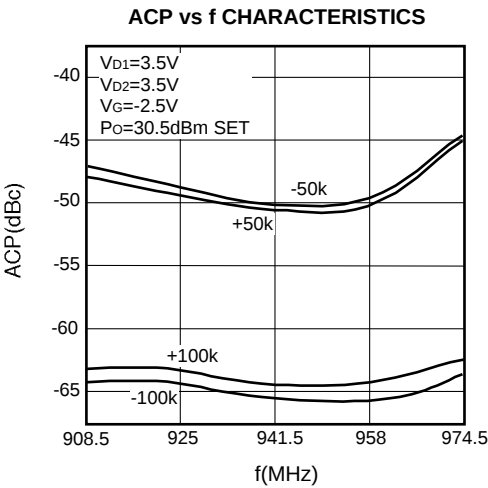
Frequency	Pin	Po	Id1	Id2	Idt	Ig1,2	-50k	+50k	-100k	+100k	2SP	3SP	RL
(MHz)	(dBm)	(dBm)	(mA)	(mA)	(mA)	(mA)	(dBc)	(dBc)	(dBc)	(dBc)	(dBc)	(dBc)	(dB)
925.0	5.78	30.5	93	552	644	-1.86	-49.9	-49.2	-62.5	-62.6	-37.5	-49.2	-10.7
941.5	6.05	30.5	90	547	637	-1.86	-51.7	-51.2	-63.6	-64.1	-37.4	-49.7	-9.4
958.0	6.52	30.5	91	543	634	-1.86	-51.6	-51.6	-64.4	-64.6	-37.2	-50.2	-8.5



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TYPICAL CHARACTERISTICS 2



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EQUIVALENT CIRCUIT

