

FA01215

GaAs FET HYBRID IC

DESCRIPTION

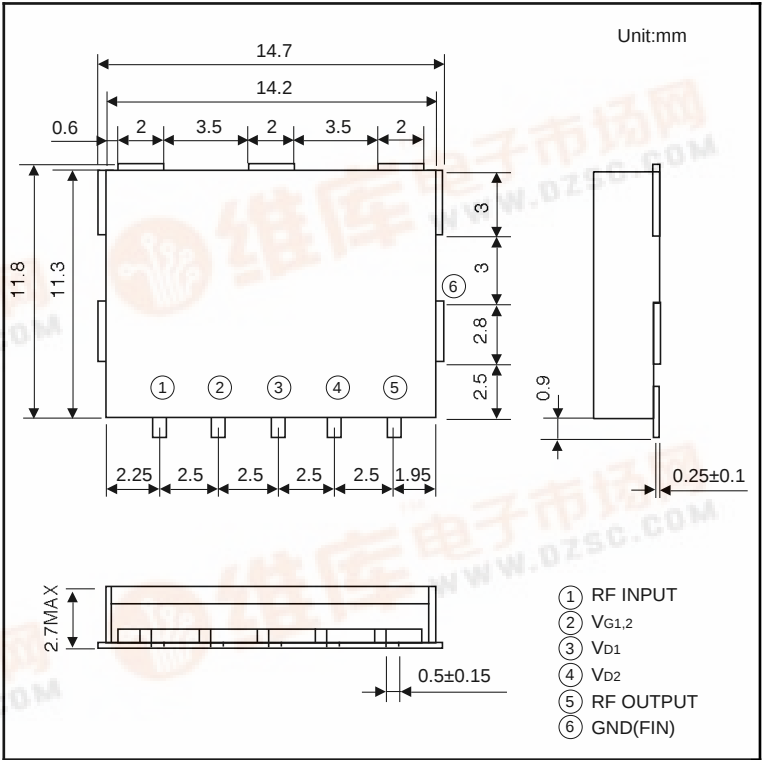
FA01215 is RF Hybrid IC designed for 900MHz band small size handheld radio.

FEATURES

- Low voltage 3.0V
- High gain 24dB(typ.)
- High efficiency 50%
- High power 34.5dBm

APPLICATION

GSM IV



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Condition	Ta	Ratings	Unit
V _D	Drain voltage	Po£34.5dBm	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 P.W.=580µs,duty=1/8 operation.

ELECTRICAL CHARACTERISTICS (Ta=25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
f	Frequency		890	—	915	MHz
P _o	Output power	Note1	34.5	—	—	dBm
ht	Total efficiency	Note2	50	—	—	%
I _{gt}	Total gate current		-3	—	0	mA
r _{in}	Return loss	Note3	—	—	-6	dB
2fo,3fo	2nd harmonics, 3rd harmonics		—	—	-30	dBc
OSC.T	Stability	Note4	—	—	-60	dBc
VSWR.T	Load VSWR tolerance	Note5	No degradation or destroy			—

Note1: Pin=13dBm,VD1=VD2=3.0V(Pulse: P.W.=580µs,duty=1/8),VG1,2=-2.0V,ZG=ZL=50W

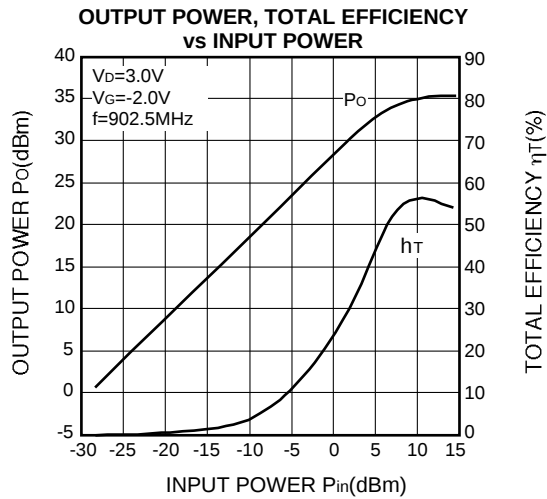
Note2: Po=34.5dBm(Pin controlled),VD1=VD2=3.0V(Pulse: P.W.=580µs,duty=1/8),VG1,2=-2.0V,ZG=ZL=50W

Note3: Po=34.5dBm(Pin controlled),VD1=VD2=3.0V(DC),VG1,2=-2.0V,ZG=ZL=50W

Note4: Po=0-34.5dBm(Pin controlled),VD1=VD2=3.0V(DC),VG1,2=-2.0V,r L=3:1(all phase),ZG=50W

Note5: Po=34.5dBm(Pin controlled),VD1=VD2=4.5V(Pulse:P.W.=580µs,duty=1/8),VG1,2=-2.0V,r L=6:1(all phase),ZG=50W

TYPICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)



EQUIVALENT CIRCUIT

