PRELIMINARY

Notice : This is not a final specification
Some parametric limits are subject to change.

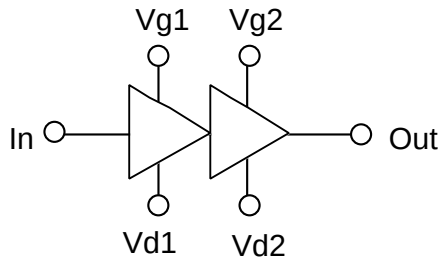
MGFC5217

K-Band 2-Stage Power Amplifier

DESCRIPTION

The MGFC5217 is a GaAs MMIC chip especially designed for 18.0 ~ 19.0 GHz band Middle Power Amplifier (MPA) .

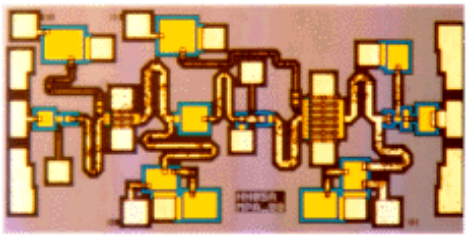
BLOCK DIAGRAM



FEATURES

- RF frequency : 18.0 to 19.0 GHz
- P2dB : ≥ 25.5 dBm(TYP.) @ 18.0 to 19.0 GHz

PHOTOGRAPH

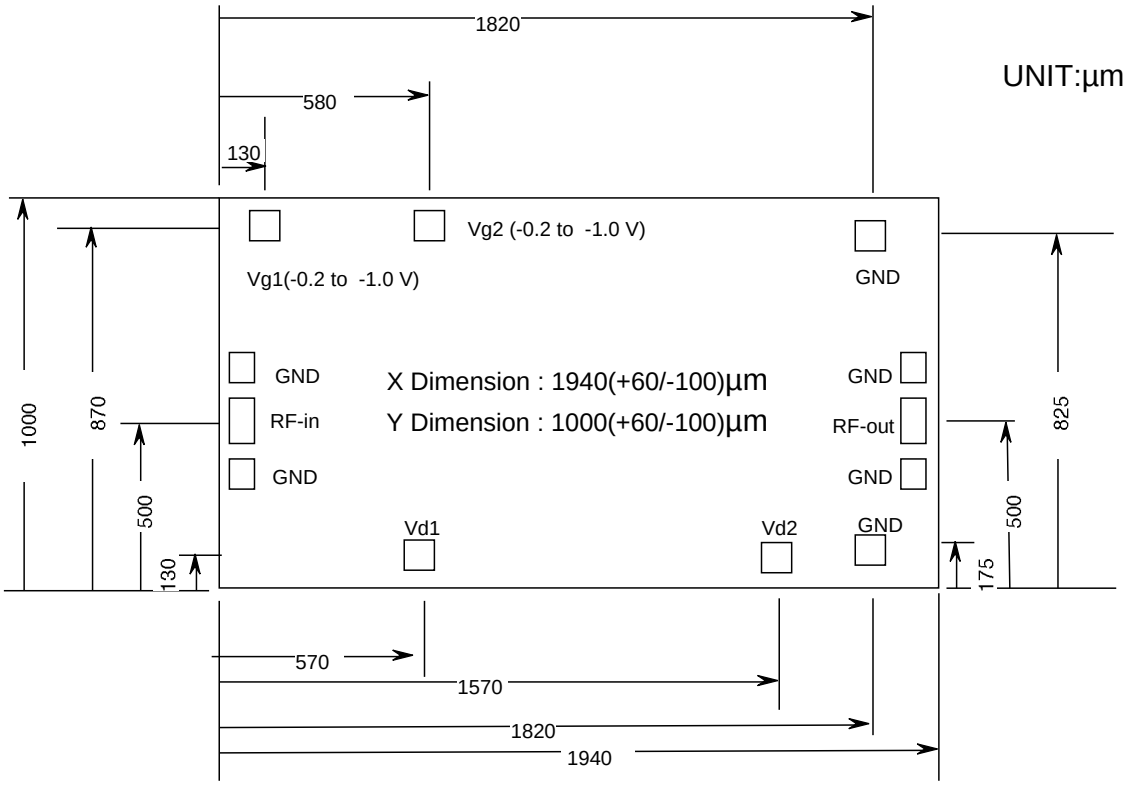


TARGET SPECIFICATIONS (Ta=25˚C)

Symbol	Parameter	Test Conditions	Limits			Unit
			Min.	Typ.	Max.	
IDSS1	Drain Saturation Current	Vd=3.0V	80	-	140	mA
IDSS2	Drain Saturation Current		300	-	540	mA
Vp1	Pinch Off Voltage	Vd=3.0V,Id=0.032mA	-2.0	-	-1.0	V
Vp2	Pinch Off Voltage	Vd=3.0V,Id=0.12mA	-2.0	-	-1.0	V
P3dB	Output Power at 3 dB Compression Point	f=18.0-19.0 GHz, Vd1=Vd2=5V , Id1=40mA*, Id2=180mA*	-	25.5	-	dBm
Gain	Gain		-	17.0	-	dB
Input Return Loss	Input Return Loss		-	6.0	-	dB
Output Return Loss	Output Return Loss		-	6.0	-	dB
IM3	Inter Modulation Level	f=18.0-19.0 GHz, Vd1=Vd2=5V , Id1=40mA*, Id2=180mA*	-	TBD	-	dBc

* : Ids at RF off

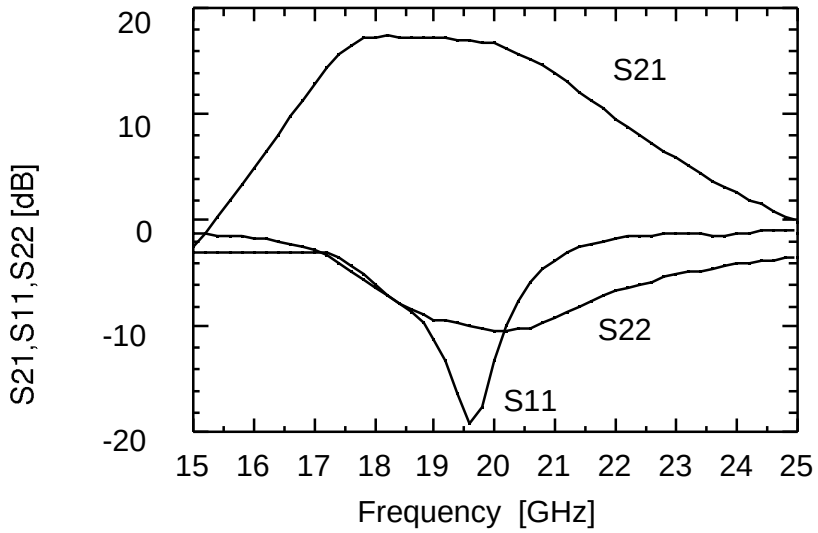
DIE SIZE AND BOND PAD LOCATION(UNIT : µM)



TYPICAL CHARACTERISTICS

S-Parameter vs. Frequency

(Vd = 5 V, Ids = 220 mA, Ta = 25 degrees C.)



Output Power Performances

(Vd = 5 V, Ids = 220 mA, Ta = 25 degrees C.)