

PRELIMINARY

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

MITSUBISHI SEMICONDUCTOR <GaAs MMIC>

MGFC5218

K-Band 2-Stage Power Amplifier

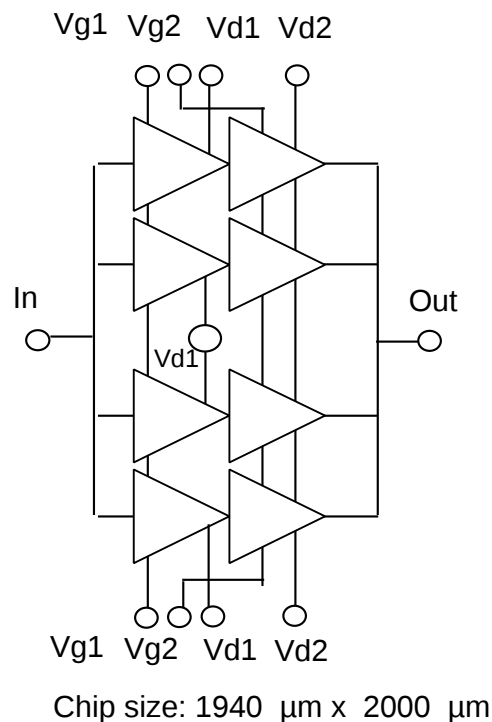
DESCRIPTION

The MGFC5218 is a GaAs MMIC chip especially designed for 18.0 ~ 19.0 GHz band High Power Amplifier (MPA) .

FEATURES

- RF frequency : 18.0 to 19.0 GHz
- P1dB : ≥ 29.0 dBm(min.) @ 18.0 to 19.0 GHz

BLOCK DIAGRAM



TARGET SPECIFICATIONS (Ta=25°C)

Symbol	Parameter	Test Conditions	Limits			Unit
			Min.	Typ.	Max.	
IDSS1	Drain Saturation Current	Vd=3.0V		720		mA
IDSS2	Drain Saturation Current			1440		mA
Vp1	Pinch Off Voltage	Vd=3.0V, Id=0.6mA	-2.0		-1.0	V
Vp2	Pinch Off Voltage	Vd=3.0V, Id=1.2mA	-2.0		-1.0	V
P1dB	Output Power at 1 dB Compression Point	f=18 - 20 GHz, Vd1=Vd2=6.0V , Id1=360mA* , Id2=720mA*	29.0			dBm
Gain	Gain			15.0		dB
Input Return Loss	Input Return Loss			8.0		dB
Output Return Loss	Output Return Loss			8.0		dB
IM3	Inter Modulation Level	f=18 - 20 GHz, Vd1=Vd2=6.0V , Id1=360mA* , Id2=720mA* Pout=TBD	TBD			dBc

*:Ids at RF off



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as of July '98

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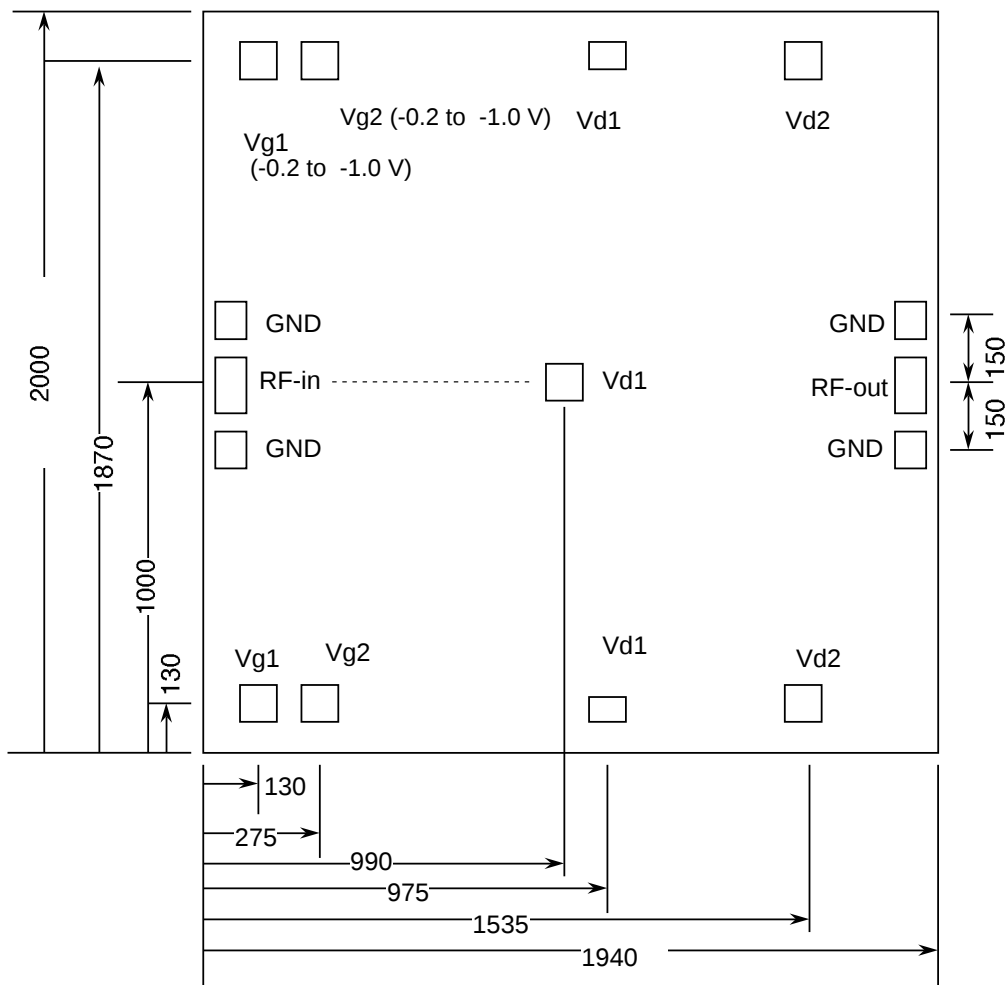
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DIE SIZE AND BOND PAD LOCATION(UNIT : μM)



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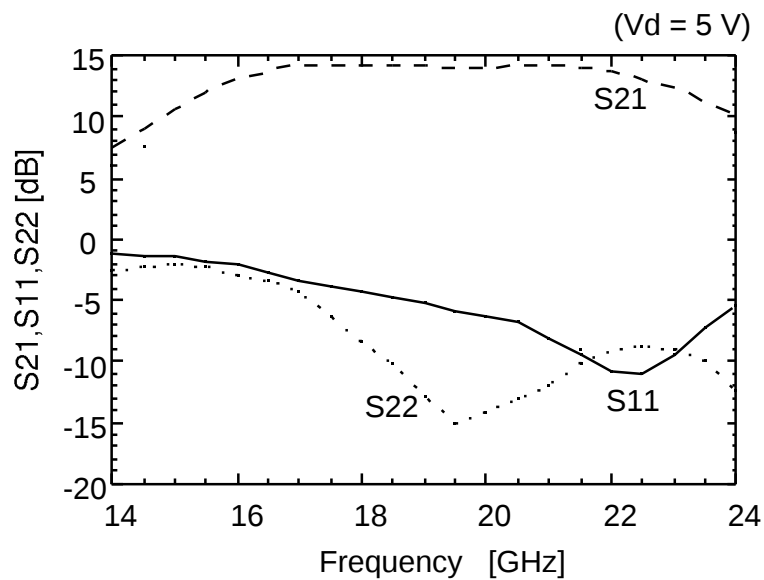
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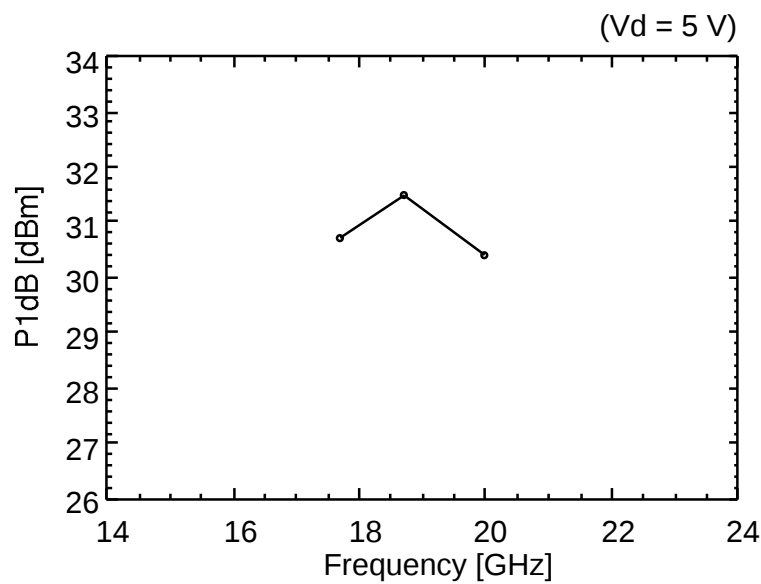
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TYPICAL CHARACTERISTICS

S-Parameter vs. Frequency



Output Power Performances



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