

GN2011

GaAs N-Channel MES IC

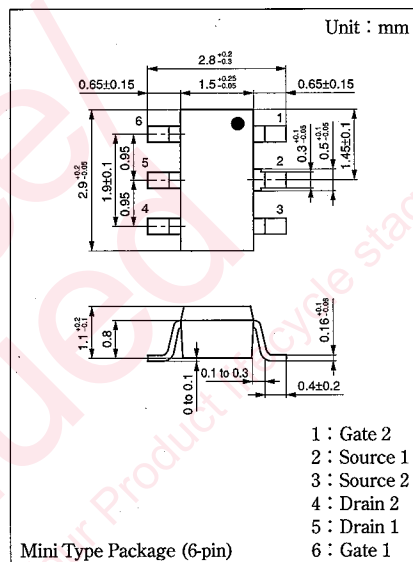
For VHF/UHF wide-band mixer

■ Features

- High conversion gain
- Operates in low local oscillation input

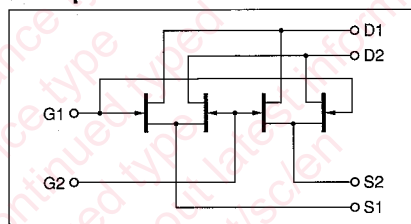
■ Absolute Maximum Ratings (Ta=25±2°C)

Parameter	Symbol	Rating	Unit
Drain-Source voltage	V _{DS}	5	V
Gate-Source voltage	V _{GS}	-4	V
Drain-Source current	I _{DS}	60	mA
Gate current	I _G	1	mA
Allowable power dissipation	P _D	200	mW
Channel temperature	T _{ch}	150	°C
Storage temperature	T _{stg}	-55 to +150	°C



■ Part Number Symbol : 4W

■ Equivalent Circuit



■ Electrical Characteristics (Ta=25°C)

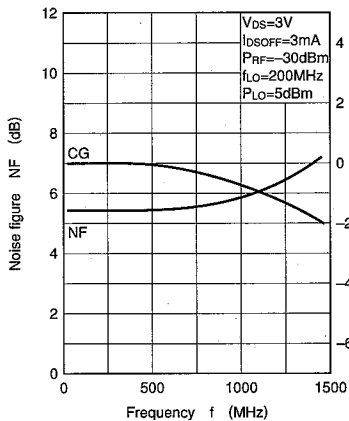
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain cut-off current	I _{D1SX}	V _{D1} =5V, V _{G1} =V _{G2} =-4V, V _{S1} =V _{S2} =0			100	μA
	I _{D2SX}	V _{D2} =5V, V _{G1} =V _{G2} =-4V, V _{S1} =V _{S2} =0			100	μA
Gate cut-off current	I _{G1S1S}	V _{G1} =-4V, V _{S1} =V _{D1} =0			-50	μA
	I _{G1S2S}	V _{G1} =-4V, V _{S2} =V _{D2} =0			-50	μA
	I _{G2S1S}	V _{G2} =-4V, V _{S1} =V _{D2} =0			-50	μA
	I _{G2S2S}	V _{G2} =-4V, V _{S2} =V _{D1} =0			-50	μA
Drain current	I _{D1S1S} *	V _{D1} =3V, V _{G2} =-4V, V _{G1} =V _{S1} =0	4	30	80	mA
	I _{D1S2S}	V _{D2} =3V, V _{G2} =-4V, V _{G2} =V _{S2} =0	4	30	80	mA
	I _{D2S1S}	V _{D2} =3V, V _{G1} =-4V, V _{G2} =V _{S1} =0	4	30	80	mA
	I _{D2S2S}	V _{D1} =3V, V _{G1} =-4V, V _{G2} =V _{S2} =0	4	30	80	mA

*I_{D1S1S} rank classification

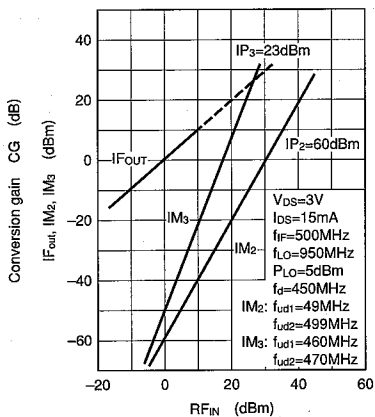
Rank	P	Q	R
I _{D1S1S} (mA)	4 to 25	20 to 45	40 to 80

GaAs
MMIC

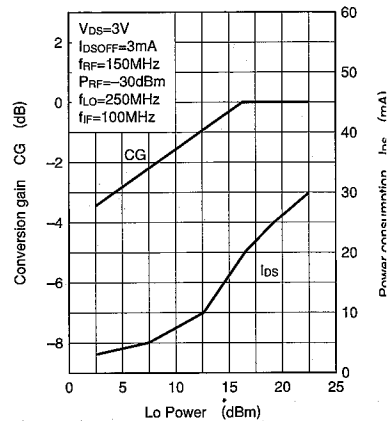
NF, CG—f



IF_{out} , IM_2 , IM_3 — RF_{IN}



CG, I_{DS} —LOCAL POWER LEVEL



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