

3SK192

Silicon N Channel 4-pole MOS Type

For VHF/UHF band high-gain low-noise amplification

■ Features

- Low noise figure NF
- Large power gain PG
- A MINI type package that allows downsizing of equipment and automatic insertion by taping and magazine packaging

■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	15	V
Gate 1-Source Voltage	V _{G1S}	±8	V
Gate 2-Source Voltage	V _{G2S}	±8	V
Drain Current	I _D	30	mA
Power Dissipation	P _D	150	mW
Channel Temperature	T _{ch}	150	°C
Storage Temperature	T _{stg}	-55~+150	°C

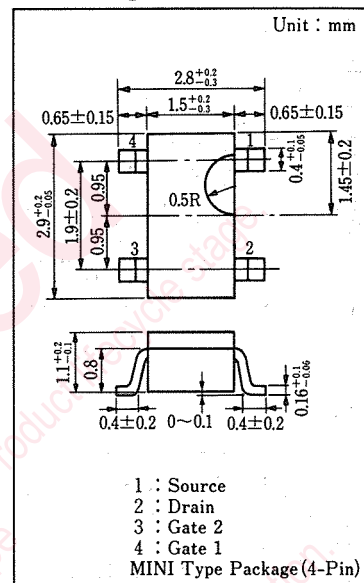
■ Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Drain-Source Voltage	V _{DSX}	I _D =50 μA, V _{G1S} =-5 V, V _{G2S} =0	1.5			V
Drain Current	I _{DSS} *1	V _{DD} =10V, V _{G1S} =0, V _{G2S} =4 V	1.5		10	mA
Gate 1-Source Cutoff Current	V _{G1SC}	V _{DS} =10V, V _{G2S} =4 V, I _D =100 μA	-3.0		+0.5	V
Gate 2-Source Cutoff Current	V _{G2SC}	V _{DS} =10V, V _{G1S} =4 V, I _D =100 μA	-1.5		+1.5	V
Gate 1 Cutoff Current	I _{G1SS}	V _{G1S} =±8 V, V _{DS} =V _{G2S} =0			+2.0	nA
Gate 2 Cutoff Current	I _{G2SS}	V _{G2S} =±8 V, V _{DS} =V _{G1S} =0			+2.0	nA
Forward Transfer Admittance (Common Source)	Y _{fs}	V _{DS} =10V, V _{G2S} =4 V, I _D =10mA, f=1 kHz	18	26	34	mS
Input Capacitance	C _{iss}	V _{DS} =10V, V _{G1S} =V _{G2S} =-5 V, f=1 MHz	1.7	2.7		pF
Output Capacitance	C _{oss}	V _{DS} =10V, V _{G1S} =V _{G2S} =-5 V, f=1MHz		1.1	1.7	pF
Small-Signal Reverse Transfer Capacitance	C _{rss}	V _{DS} =10V, V _{G1S} =V _{G2S} =-5 V, f=1 MHz		0.02		pF
Power Gain	PG ₁ *1	V _{DS} =8 V, V _{G2S} =3 V, I _D =8 mA	22	24		dB
Noise Figure	NF ₁ *1	f=50~60MHz (SWEEP)		2.4	3.2	dB
Power Gain	PG ₂ *2	V _{DS} =8 V, V _{G2S} =3 V, I _D =8 mA	22	24		dB
Noise Figure	NF ₂ *2	f=190~210MHz (SWEEP)		1.5	2.5	dB
Power Gain	PG ₃ *3	V _{DS} =8 V, V _{G2S} =3 V, I _D =8 mA	14.5	17		dB
Noise Figure	NF ₃ *3	f=490~510MHz (SWEEP)		2.8	4.5	dB

*I_{DSS} Ranking

Rank	P	Q
I _{DSS} (mA)	1~5	4~12
Marking	3XP	3XQ

■ Package Dimensions



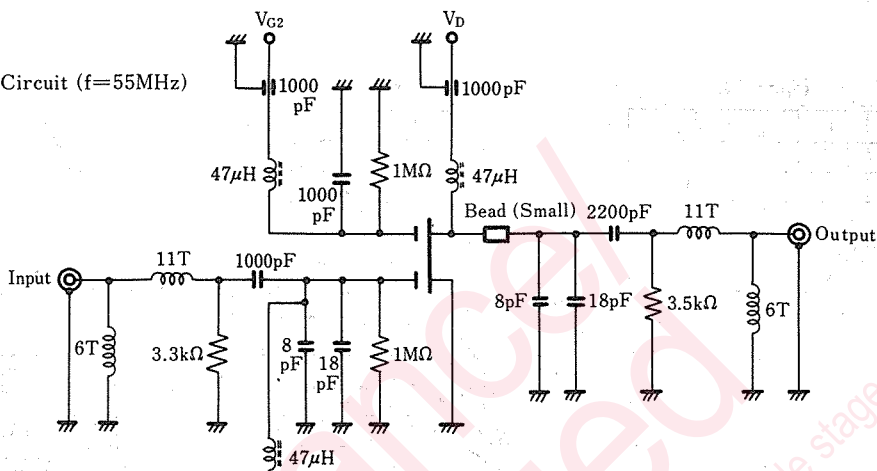
■ Type Name Marking (Example)

Type No. I_{DSS} Ranking



*1 PG, NF

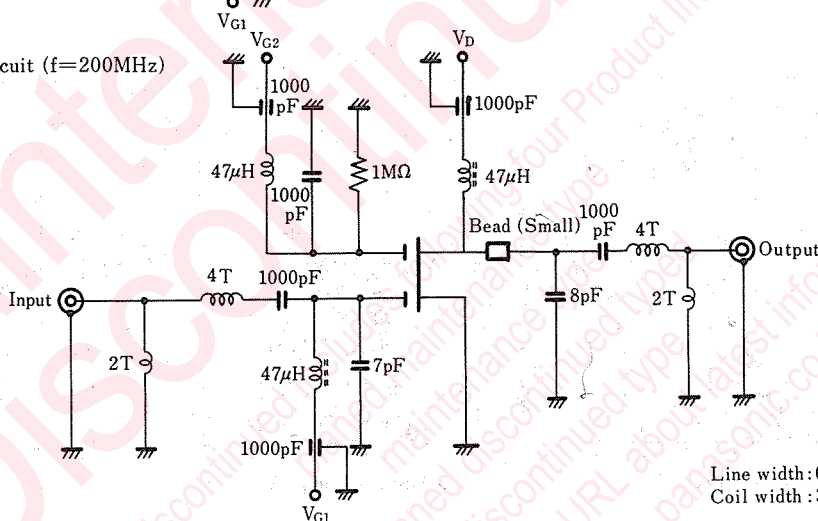
Measuring Circuit ($f=55\text{MHz}$)



Line width: 0.4 dia
Coil width: 3.4 dia

*2 PG, NF

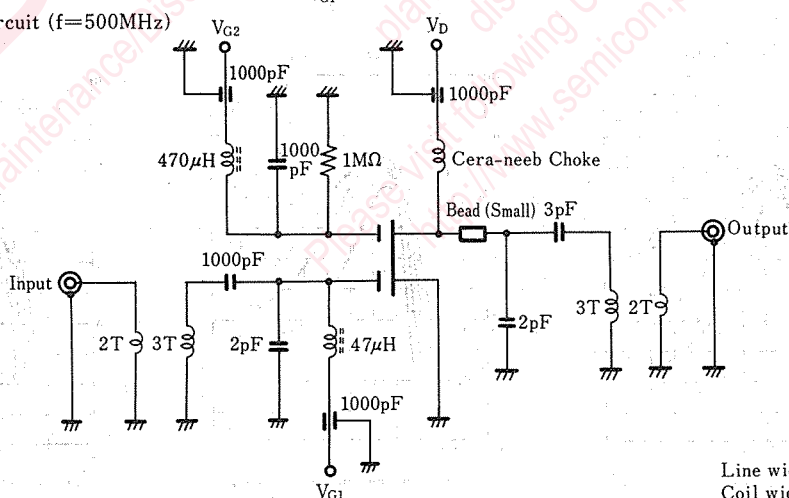
Measuring Circuit ($f=200\text{MHz}$)



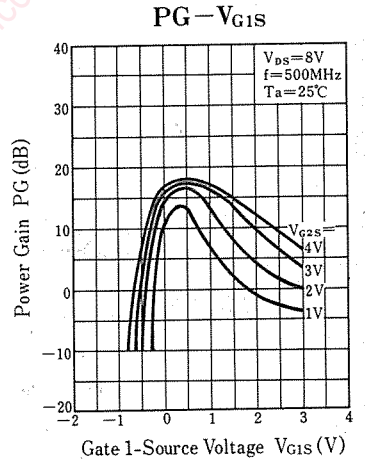
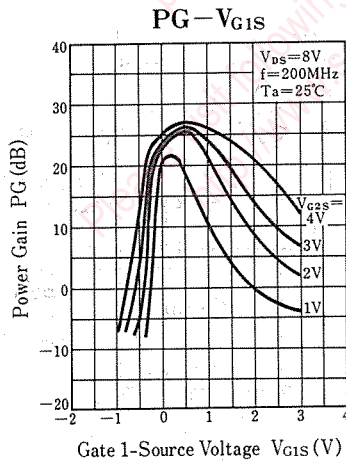
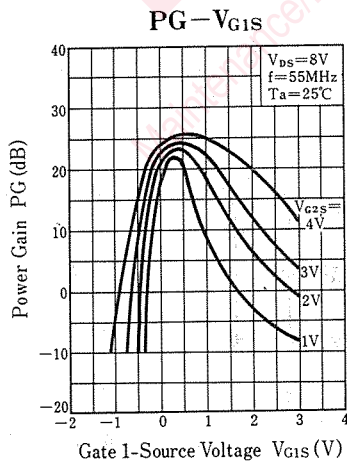
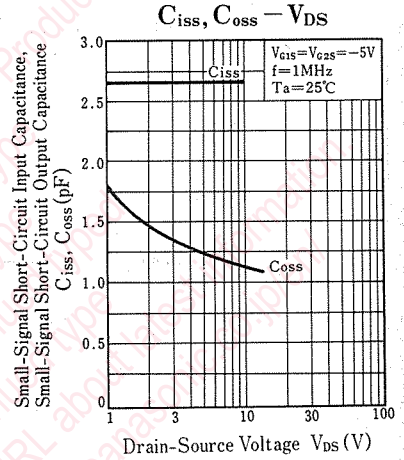
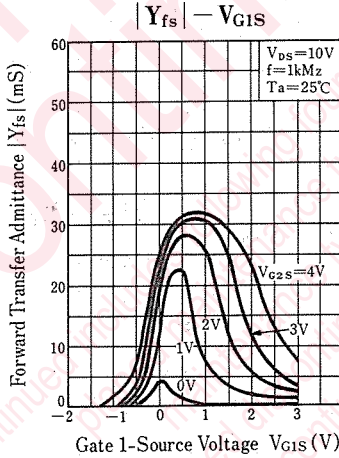
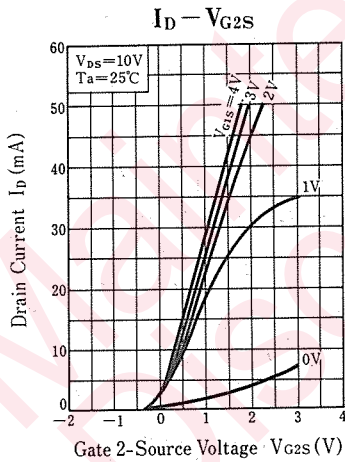
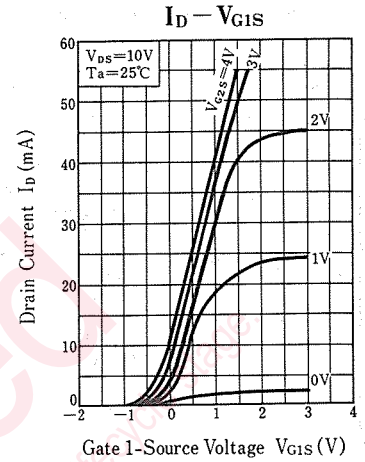
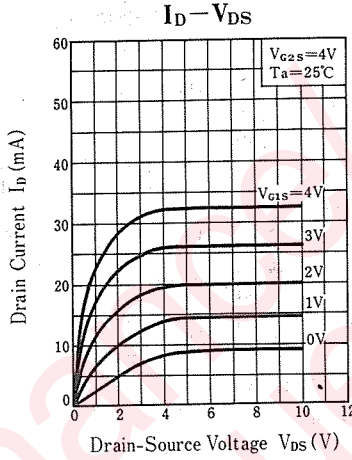
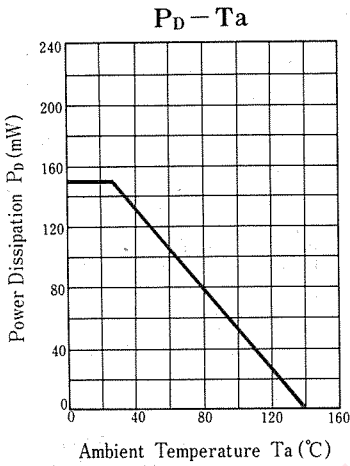
Line width: 0.6 dia
Coil width: 3.5 dia

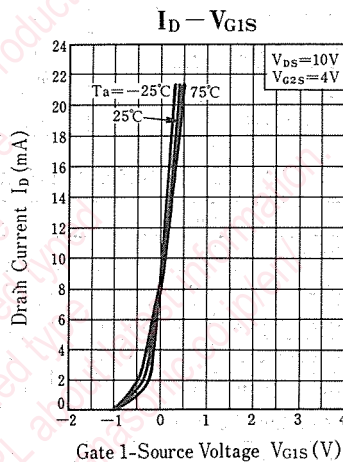
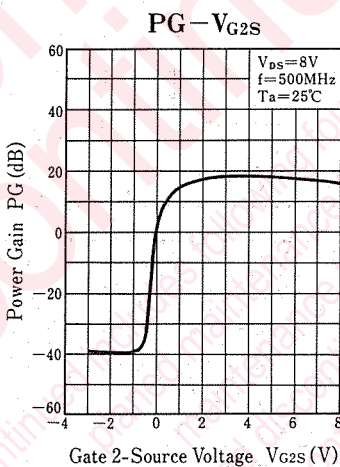
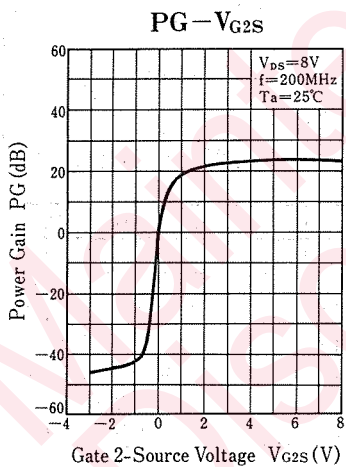
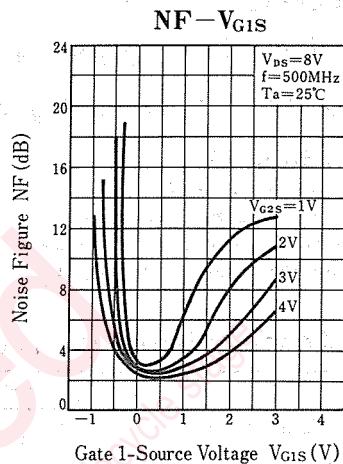
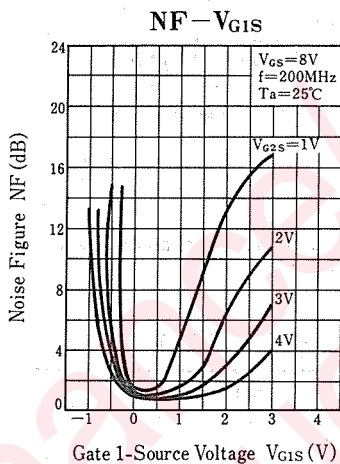
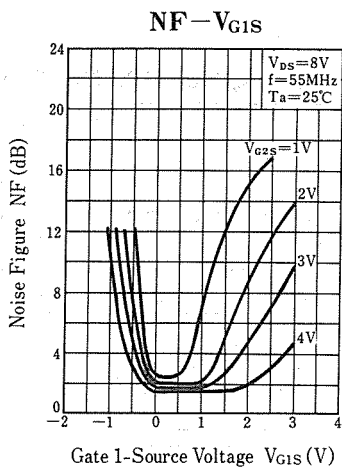
*3 PG, NF

Measuring Circuit ($f=500\text{MHz}$)



Line width: 0.6 dia
Coil width: 3.5 dia





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