

3SK202**Silicon N Channel 4-pole MOS Type**

For VHF band high-gain low-noise amplification

■ Features

- Low noise figure NF
- Large power gain PG
- Cross pack package

■ Absolute Maximum Ratings (Ta=25°C)

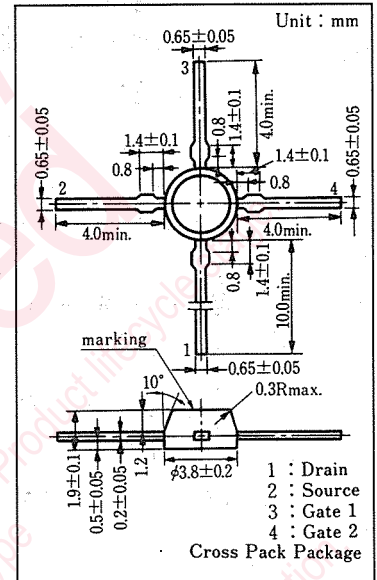
Item	Symbol	Value	Unit
Drain-Source Voltage	V_{DSX}	15	V
Gate 1-Source Voltage	V_{G1S}	± 8	V
Gate 2-Source Voltage	V_{G2S}	± 8	V
Drain Current	I_D	30	mA
Power Dissipation	P_D	250	mW
Channel Temperature	T_{ch}	135	°C
Storage Temperature	T_{stg}	-55 ~ +135	°C

■ Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Drain-Source Voltage	V_{DSX}	$I_D=50\mu A$, $V_{GS}=-5V$, $V_{G2S}=0$ $R_D=56\Omega$, $R_S=270\Omega$	15			V
Gate 1-Source Cut off Current	V_{G1SC}	$V_{DS}=10V$, $V_{G2S}=4V$, $I_D=100\mu A$		-0.6	-3.0	V
Gate 2-Source Cutoff Current	V_{G2SC}	$V_{DS}=10V$, $V_{G1S}=4V$, $I_D=100\mu A$		-0.4	-3.0	V
Gate 1 Cutoff Current	I_{G1SS}	$V_{DS}=V_{G2S}=0$, $V_{G1S}=\pm 8V$			± 20	nA
Gate 2 Cutoff Current	I_{G2SS}	$V_{GS}=V_{G1S}=0$, $V_{G2S}=\pm 8V$			± 20	nA
Drain Current	I_{DSS}^{*1}	$V_{DS}=10V$, $V_{G1S}=0$, $V_{G2S}=4V$	0.8		10	mA
Forward Transfer Admittance (Common Source)	$ Y_{fs} $	$V_{DS}=10V$, $V_{G2S}=4V$, $I_D=10mA$, $f=1kHz$	25	30		mS
Input Capacitance	C_{iss}	$V_{DS}=10V$, $V_{G1S}=V_{G2S}=-5V$, $f=1MHz$	3.5	5.0	7.0	pF
Output Capacitance	C_{oss}	$V_{DS}=10V$, $V_{G1S}=V_{G2S}=-5V$, $f=1MHz$	1.0	1.4	2.2	pF
Small-Signal Reverse Transfer Capacitance	C_{rss}	$V_{DS}=10V$, $V_{G1S}=V_{G2S}=-5V$, $f=1MHz$		0.02		pF
Power Gain	$PG_1^{*1,2}$	$V_{DS}=8V$, $I_D=8mA$, $V_{G2S}=3V$, $f=195\sim 205MHz$	20	25	30	dB
Noise Figure	$NF_1^{*1,2}$	$V_{DS}=8V$, $I_D=8mA$, $V_{G2S}=3V$, $f=195\sim 205MHz$		2.0	3.0	dB
Power Gain	$PG_2^{*1,2}$	$V_{DS}=8V$, $I_D=8mA$, $V_{G2S}=3V$, $f=45\sim 55MHz$	22	26	32	dB
Noise Figure	$NF_1^{*1,2}$	$V_{DS}=8V$, $I_D=8mA$, $V_{G2S}=3V$, $f=45\sim 55MHz$		3.8	4.5	dB

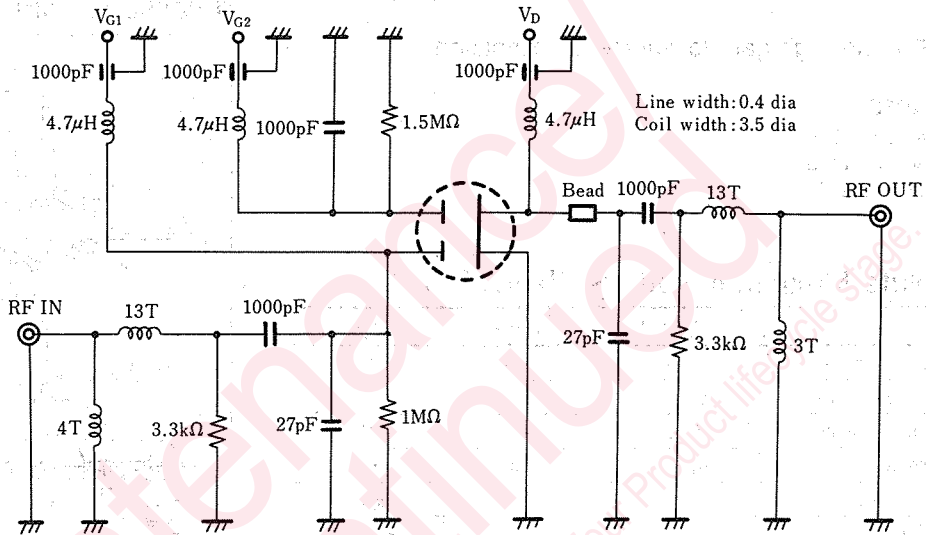
* I_{DSS} Ranking

Rank	Q	R
I_{DSS} (mA)	0.8~7.0	4.0~10

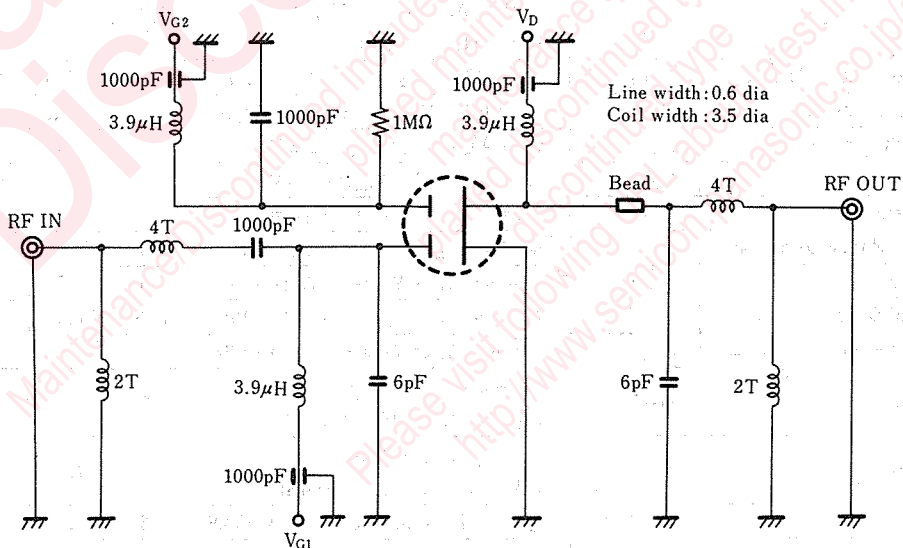
■ Package Dimensions

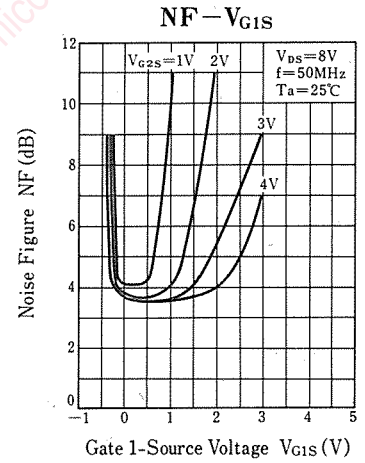
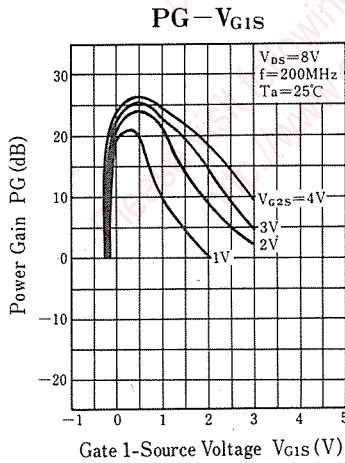
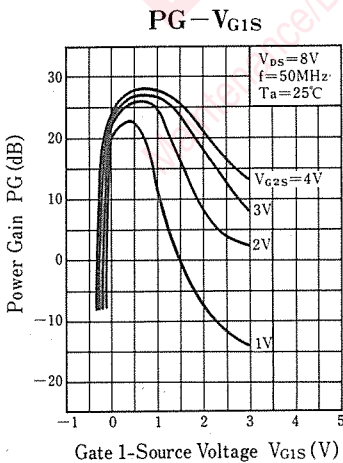
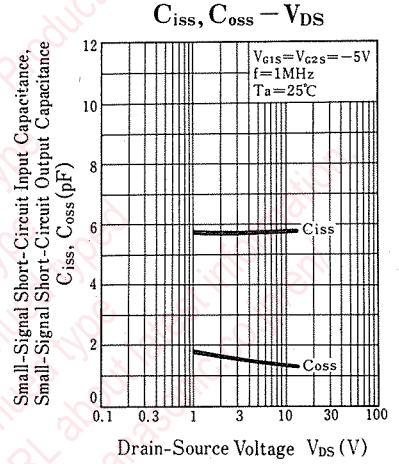
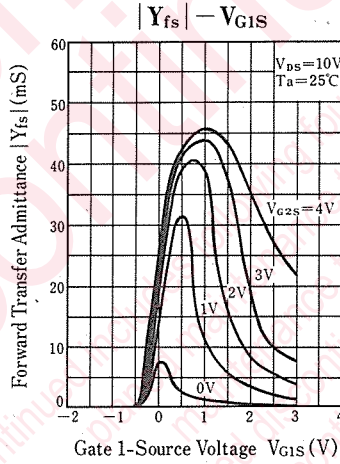
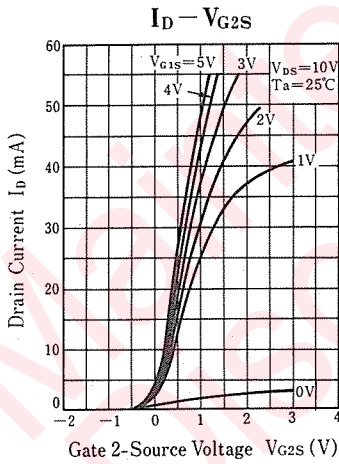
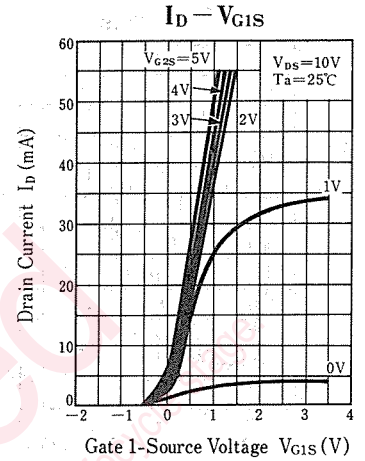
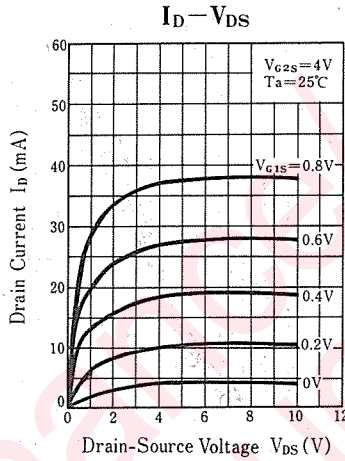
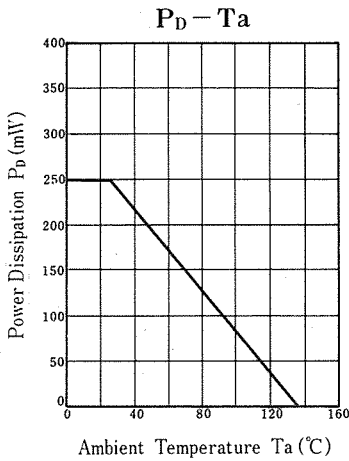
Note: In the range of f : PG=max. value and NF=min. value

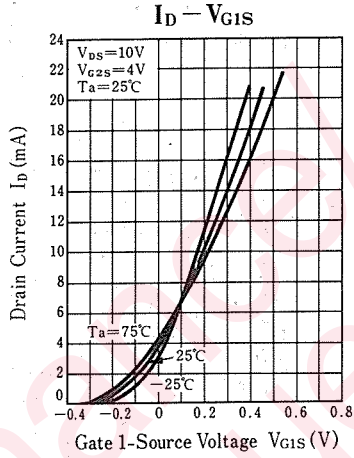
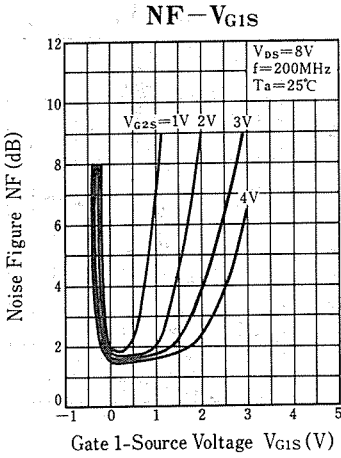
* 2 PG, NF Measuring Circuit ($f=50\text{MHz}$)



* 3 PG, NF Measuring Circuit ($f=200\text{MHz}$)







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