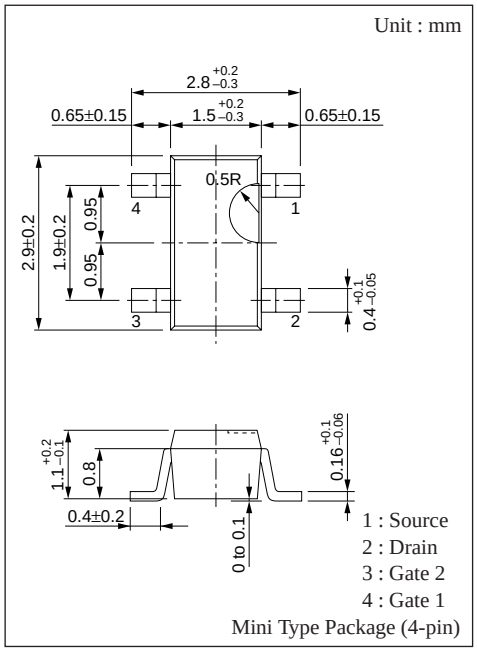
3SK219

Silicon N-Channel 4-pin MOS

For VHF amplification



■ Features

- Low noise-figure (NF)
- Large power gain PG
- Downsizing of sets by mini power package and automatic insertion by taping/magazine packing are available.

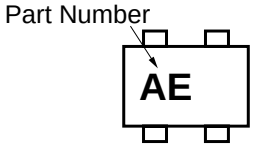
■ Absolute Maximum Ratings (Ta = 25˚C)

Parameter	Symbol	Rating	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
Allowable power dissipation	P_D	150	mW
Channel temperature	T_{ch}	150	˚C
Storage temperature	T_{stg}	– 55 to +150	˚C

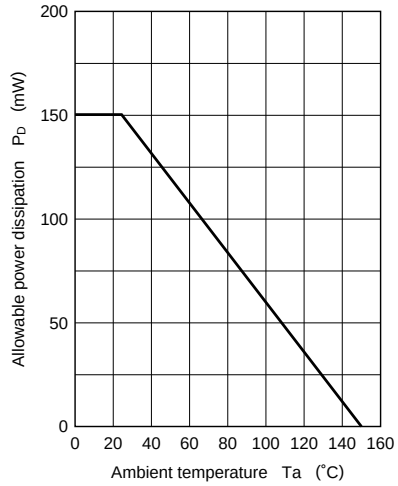
■ Electrical Characteristics (Ta = 25˚C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source cut-off current	I_{DSS}	V_{DS}=10V, V_{G1S}= 0, V_{G2S}= 4V	0		8	mA
Gate 1 cut-off current	I_{G1SS}	V_{DS}=V_{G2S}= 0, V_{G1S}= ±8V			± 20	nA
Gate 2 cut-off current	I_{G2SS}	V_{DS}=V_{G1S}= 0, V_{G2S}= ±8V			± 20	nA
Drain-Source voltage	V_{DSX}	I_D= 50µA, V_{G1S}= –5V, V_{G2S}= 0	15			V
Gate 1-Source cut-off voltage	V_{G1SC}	V_{DS}=10V, V_{G2S}= 4V, I_D=100µA	–1.5		0.5	V
Gate 2-Source cut-off voltage	V_{G2SC}	V_{DS}=10V, V_{G1S}= 4V, I_D=100µA	–1.5		0.5	V
Forward transadmittance	$\|Y_{fs}\|$	V_{DS}=10V, I_D=10mA, V_{G2S}= 4V, f=1kHz	14	20	26	mS
Input capacitance	C_{iss}	V_{DS}=10V, V_{G1S}= V_{G2S}= –5V, f=1MHz	4.4	5	5.8	pF
Output capacitance	C_{oss}		1	1.5	2.2	pF
Feedback capacitance	C_{rss}			0.02		pF
Power gain	PG	V_{DS}= 8V, I_D= 8mA, V_{G2S}= 3V, f=190 to 210MHz(Sweep)	19	21.5	24	dB
Noise figure	NF			1.2	2.5	dB

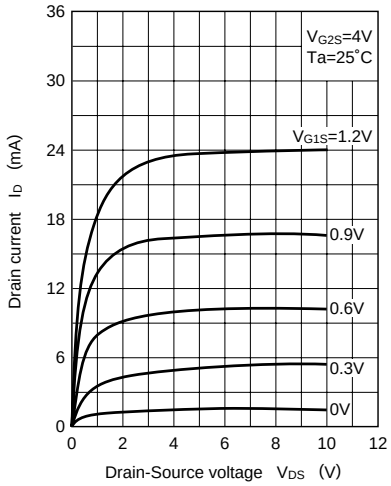
■ Marking



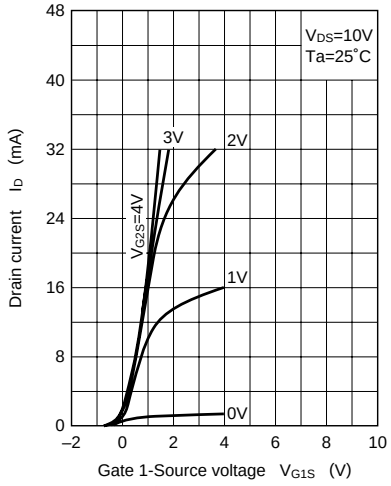
$P_D - Ta$



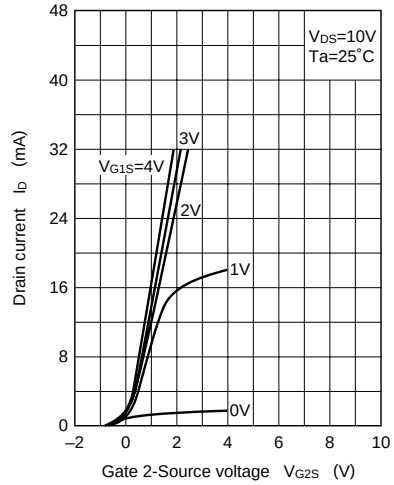
$I_D - V_{DS}$



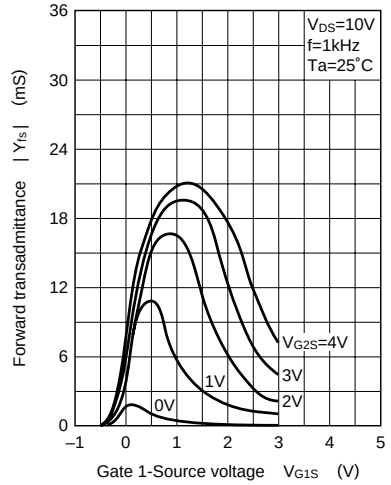
$I_D - V_{G1S}$



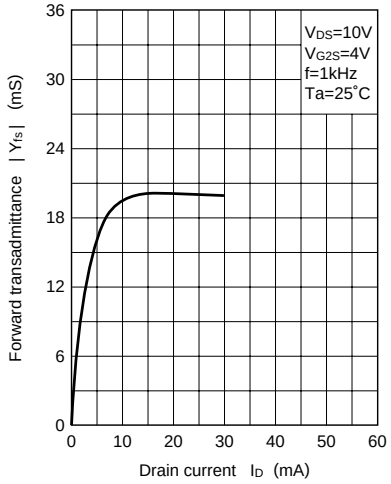
$I_D - V_{G2S}$



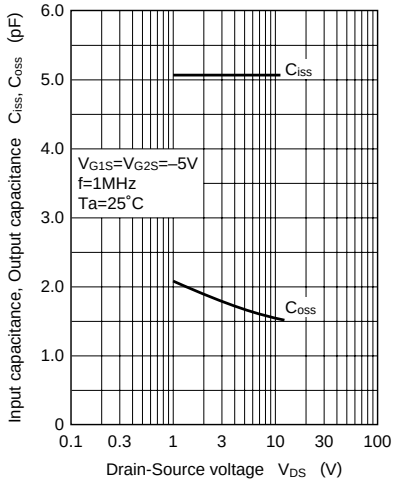
$|Y_{fs}| - V_{G1S}$



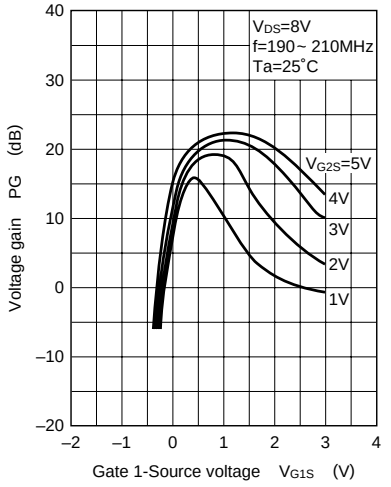
$|Y_{fs}| - I_D$



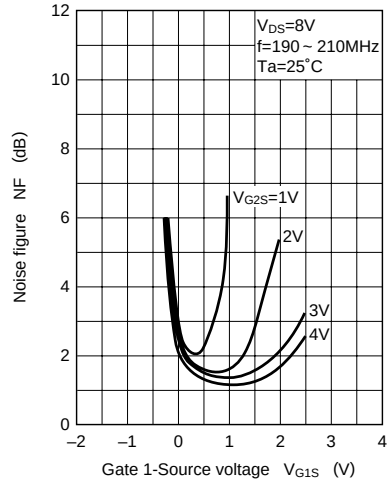
$C_{iss}, C_{oss} - V_{DS}$



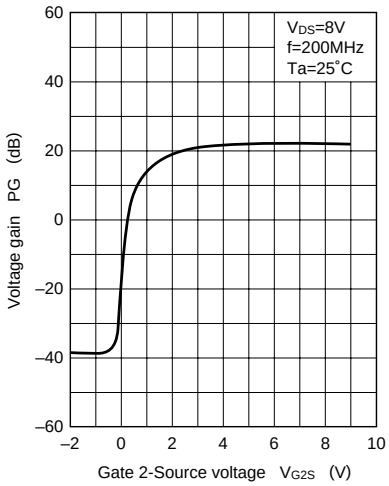
$PG - V_{G1S}$



$NF - V_{G1S}$



$PG - V_{G2S}$



$I_D - V_{G1S}$