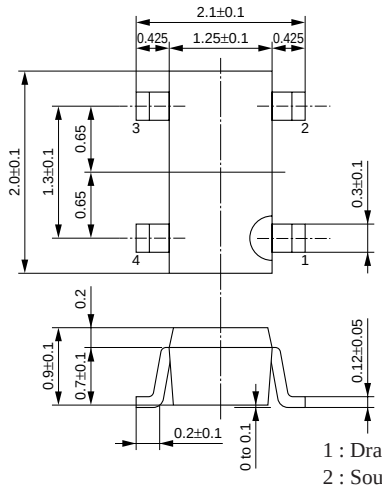
3SK270

Silicon N-Channel 4-pin MOS

For VHF-UHF amplification

Unit : mm



S-Mini Type Package (4-pin)

■ Features

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

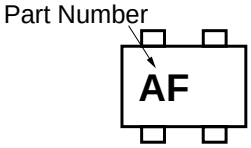
■ Absolute Maximum Ratings (Ta = 25˚C)

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

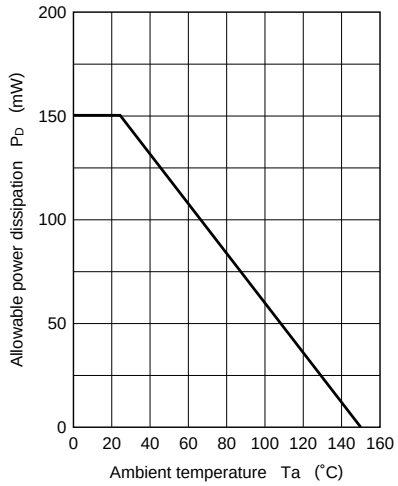
■ Electrical Characteristics (Ta = 25˚C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source cut-off current	I_{DSS}	V_{DS}=10V, V_{G1S}= 1.5, V_{G2S}= 5V	12		22	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}= 5V, I_D=100µA	0		1	V
Gate 2-Source cut-off voltage	V_{G2SC}	V_{DS}=10V, V_{G1S}= 5V, I_D=100µA	0		1	V
Forward transadmittance	$\|Y_{fs}\|$	V_{DS}=10V, I_D=10mA, V_{G2S}= 5V, f=1kHz	16	21	25	mS
Input capacitance	C_{iss}	V_{DS}=10V, V_{G1S}=V_{G2S}= –5V, f=1MHz	2.2	3.3	4.5	pF
Output capacitance	C_{oss}			0.9	1.3	pF
Feedback capacitance	C_{rss}			0.02		pF
Power gain (3)	PG	V_{DS}= 6V, I_D= 8mA, V_{G2S}= 4V, f=495 to 515MHz(Sweep)	11	15.5		dB
Noise figure (3)	NF			2.8	4.6	dB

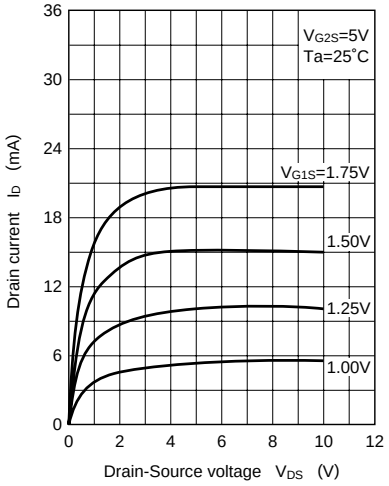
■ Marking



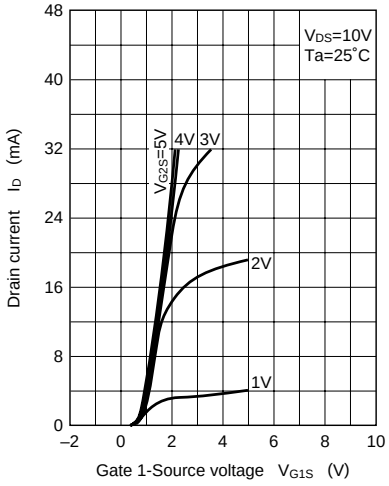
$P_D - Ta$



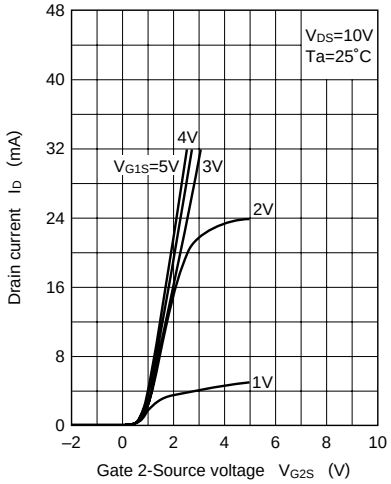
$I_D - V_{DS}$



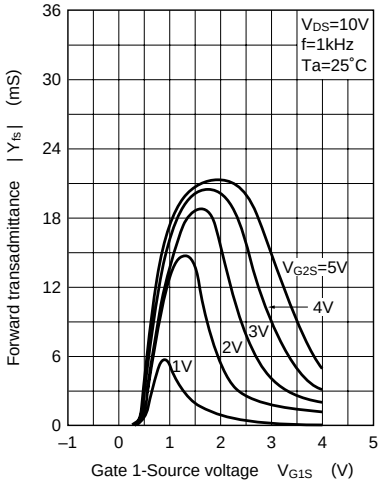
$I_D - V_{G1S}$



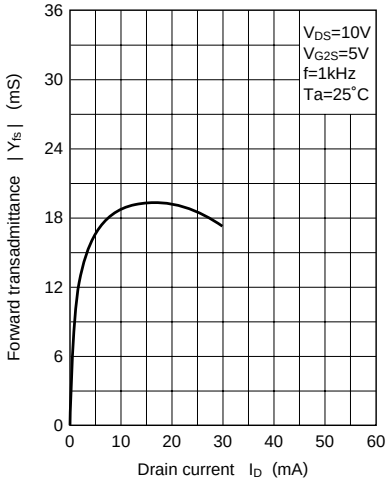
$I_D - V_{G2S}$



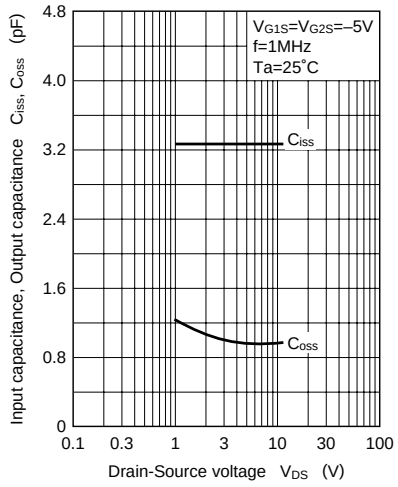
$|Y_{fs}| - V_{G1S}$



$|Y_{fs}| - I_D$



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



$I_D - V_{G1S}$