

3SK271

Silicon N-Channel 4-pin MOS FET

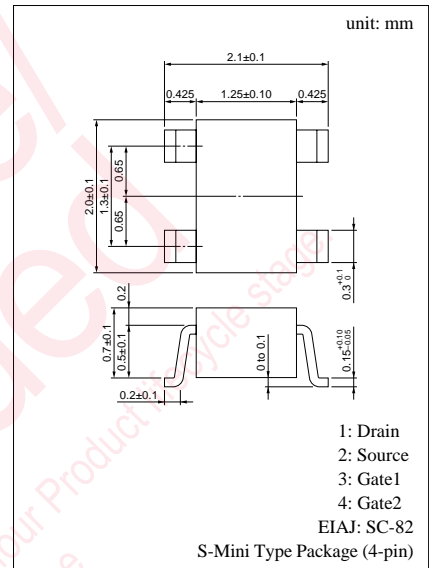
For UHF amplification

■ Features

- Low noise-figure (NF)
- Large power gain PG
- S-mini type package, allowing downsizing of the sets and automatic insertion through the tape/magazine packing.

■ Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Ratings	Unit
Drain to Source voltage	V_{DS}	15	V
Gate 1 to Source voltage	V_{G1S}	± 8	V
Gate 2 to 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

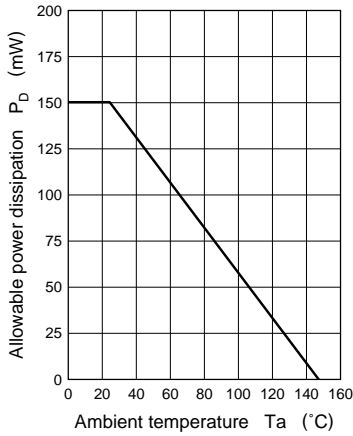


Marking Symbol: CX

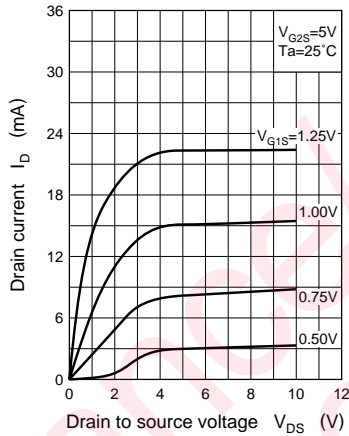
■ Electrical Characteristics (Ta = 25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Drain current	I_{DS}	$V_{DS} = 10V, V_{G1S} = 1V, V_{G2S} = 5V$	6		25	mA
Gate 1 cut-off current	I_{G1SS}	$V_{DS} = V_{G2S} = 0, V_{G1S} = \pm 8V$			± 20	nA
Gate 2 cut-off current	I_{G2SS}	$V_{DS} = V_{G1S} = 0, V_{G2S} = \pm 8V$			± 20	nA
Drain to Source voltage	V_{DSX}	$I_D = 50\mu A, V_{G1S} = -5V, V_{G2S} = 0$	15			V
Gate 1 to Source cut-off voltage	V_{G1SC}	$V_{DS} = 10V, V_{G2S} = 5V, I_D = 100\mu A$	-1.5		1	V
Gate 2 to Source cut-off voltage	V_{G2SC}	$V_{DS} = 10V, V_{G1S} = 5V, I_D = 100\mu A$	0		1	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 10V, I_D = 10mA, V_{G2S} = 5V, f = 1kHz$	21	26	31	mS
Input capacitance (Common Source)	C_{iss}	$V_{DS} = 10V, V_{G1S} = V_{G2S} = -5V$ $f = 1MHz$	2.1	2.8	3.6	pF
Output capacitance (Common Source)	C_{oss}			1.1	1.6	pF
Reverse transfer capacitance (Common Source)	C_{rss}			0.02		pF
Power gain	PG	$V_{DS} = 6V, I_D = 8mA, V_{G2S} = 4V$	15	20.5		dB
Noise figure	NF	$f = 790 \text{ to } 810MHz$ (Sweep)		2.5	4.6	dB

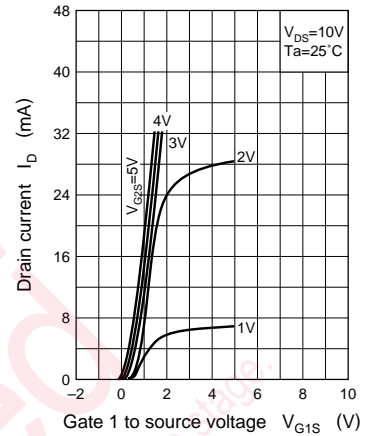
$P_D - T_a$



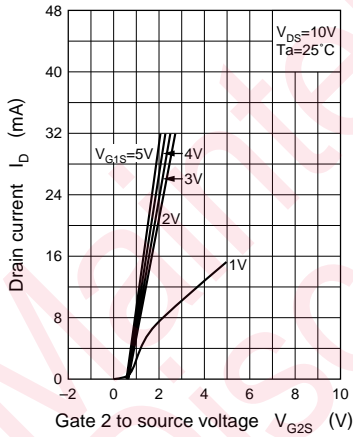
$I_D - V_{DS}$



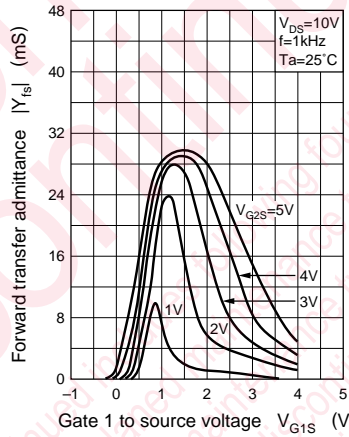
$I_D - V_{G1S}$



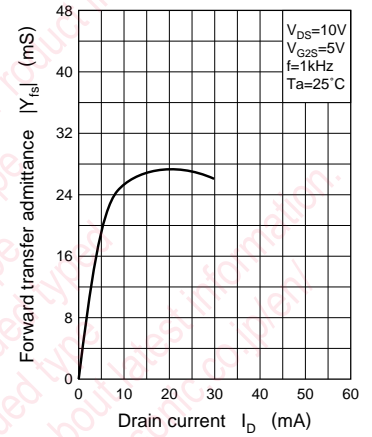
$I_D - V_{G2S}$



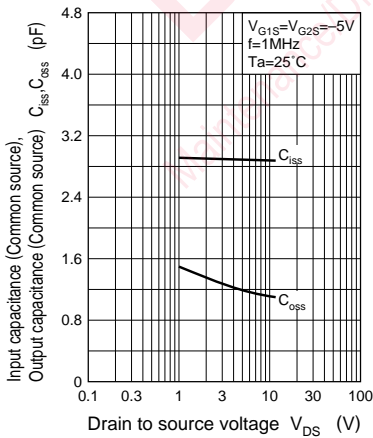
$|Y_{fs}| - V_{G1S}$



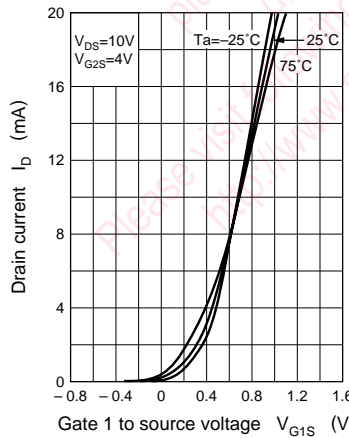
$|Y_{fs}| - I_D$



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



$I_D - V_{G1S}$



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