3SK269

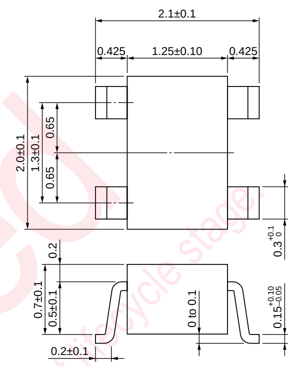
Silicon N-Channel 4-pin MOS FET

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.

unit: mm



1: Drain
2: Source
3: Gate1
4: Gate2
EIAJ: SC-82
S-Mini Type Package (4-pin)

Marking Symbol: 4C

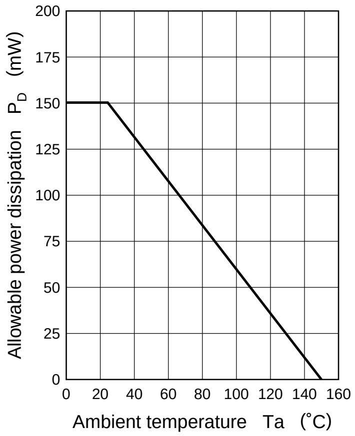
■ Absolute Maximum Ratings (Ta = 25°C)

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

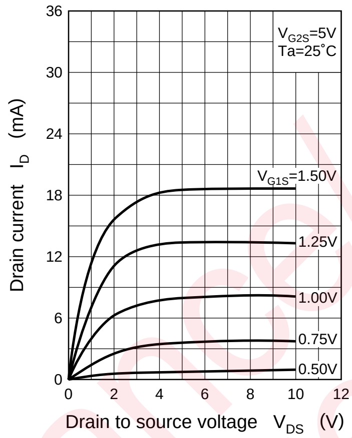
■ Electrical Characteristics (Ta = 25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Drain current	I_{DS}	V_{DS} = 10V, V_{G1S} = 1V, V_{G2S} = 5V	4		20	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 to Source voltage	V_{DSX}	I_D = 50μA, 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 = 100μA	−3		1	V
Gate 2 to Source cut-off voltage	V_{G2SC}	V_{DS} = 10V, V_{G1S} = 5V, I_D = 100μA	0		1	V
Forward transfer admittance	$\lvert Y_{fs} \rvert$	V_{DS} = 10V, I_D = 10mA, V_{G2S} = 5V, f = 1kHz	14	20	26	mS
Input capacitance (Common Source)	C_{iss}	V_{DS} = 10V, V_{G1S} = V_{G2S} = −5V f = 1MHz	13	1.8	2.3	pF
Output capacitance (Common Source)	C_{oss}			0.8	1.2	pF
Reverse transfer capacitance (Common Source)	C_{rss}			0.02		pF
Power gain	PG	V_{DS} = 6V, I_D = 8mA, V_{G2S} = 4V f = 790 to 810MHz (Sweep)	11.5	18.5		dB
Noise figure	NF			2.2	4	dB

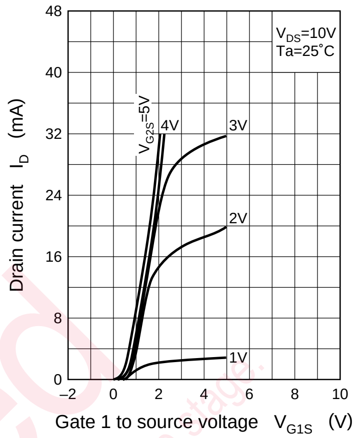
P_D — Ta



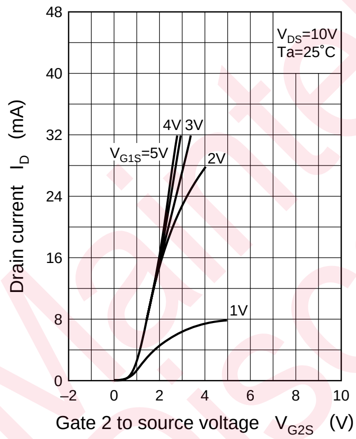
I_D — V_{DS}



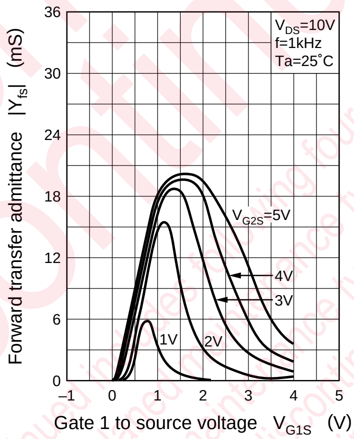
I_D — V_{G1S}



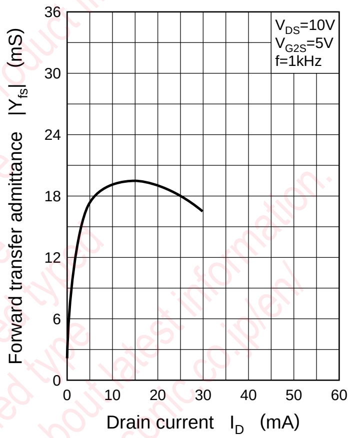
I_D — V_{G2S}



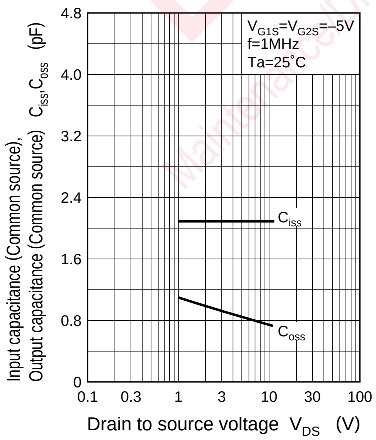
| Y_{fs} | — V_{G1S}



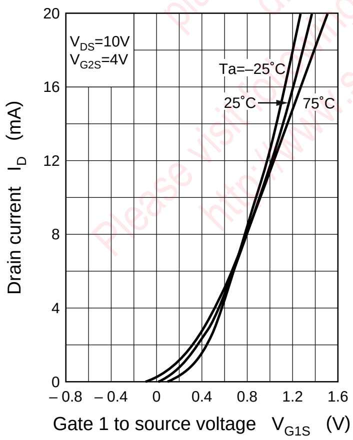
| Y_{fs} | — I_D



C_{iss}, C_{oss} — V_{DS}



I_D — V_{G1S}



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