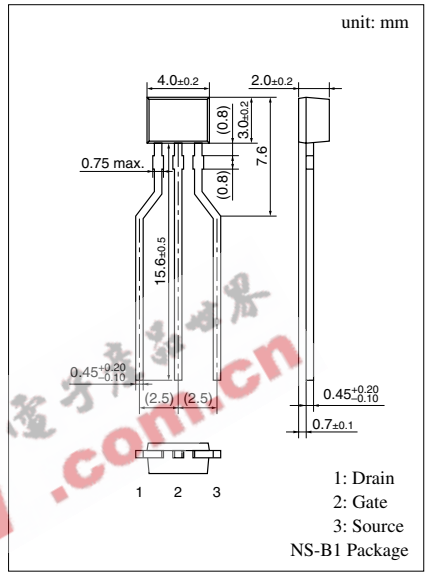
2SK0065 (2SK65)

Silicon N-Channel Junction FET

For impedance conversion in low frequency
For electret capacitor microphone



■ Features

- Diode is connected between gate and source
- Low noise voltage

■ Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Ratings	Unit
Drain to Source voltage	V_{DSO}	12	V
Gate to Drain voltage	V_{GDO}	−12	V
Drain to Source current	I_{DSO}	2	mA
Drain to Gate current	I_{DGO}	2	mA
Gate to Source current	I_{GSO}	2	mA
Allowable power dissipation	P_D	20	mW
Operating ambient temperature	T_{opr}	−10 to +70	°C
Storage temperature	T_{stg}	−20 to +150	°C

■ Electrical Characteristics (Ta = 25°C)

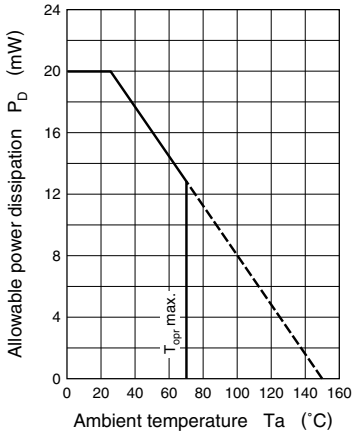
Parameter	Symbol	Conditions	min	typ	max	Unit
Drain to Source cut-off current	I_{DSS}*	V_{DS} = 4.5V, V_{GS} = 0, R_S = 2.2kΩ ± 1%	0.04		0.8	mA
Mutual conductance	g_m	V_{DS} = 4.5V, V_{GS} = 0 R_S = 2.2kΩ ± 1%, f = 1kHz	300	500		μS
Noise figure	NV	V_{DS} = 4.5V, R_S = 2.2kΩ ± 1% C_G = 10pF, A-curve			4	μV
Voltage gain	G_{V1}*	V_{DS} = 4.5V, R_S = 2.2kΩ ± 1% C_G = 10pF, e_G = 100mV, f = 70Hz		−10		dB
	G_{V2}*	V_{DS} = 12V, R_S = 2.2kΩ ± 1% C_G = 10pF, e_G = 100mV, f = 70Hz		−9.5		dB
	G_{V3}*	V_{DS} = 1V, R_S = 2.2kΩ ± 1% C_G = 10pF, e_G = 100mV, f = 70Hz		−11		dB

* I_{DSS} rank classification and G_V value

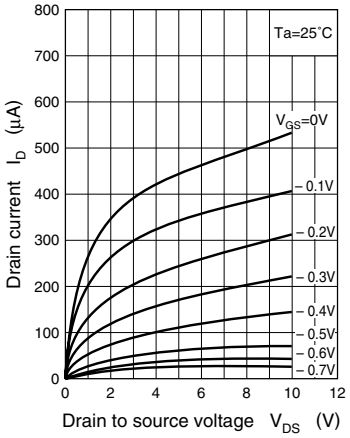
Runk	P	Q
I_{DSS} (mA)	0.04 to 0.2	0.15 to 0.8
G_{V1} (dB)	> −13	> −12
G_{V2} (dB)	> −12	> −11
$\Delta\lvert G_{V1} - G_{V2} \rvert$ (dB)	< 3	< 3

Note) The part number in the parenthesis shows conventional part number.

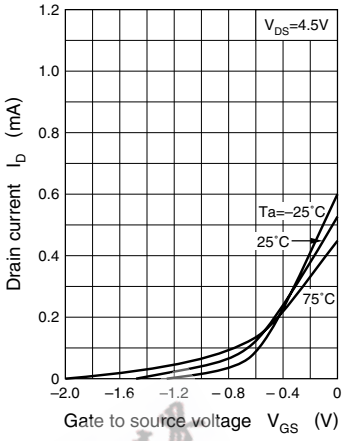
P_D — Ta



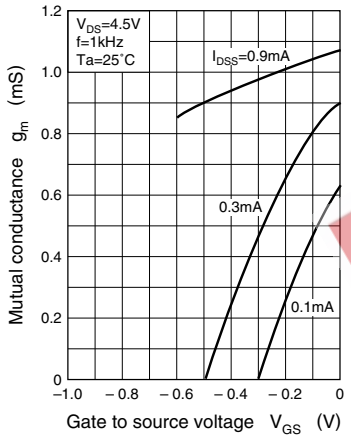
I_D — V_{DS}



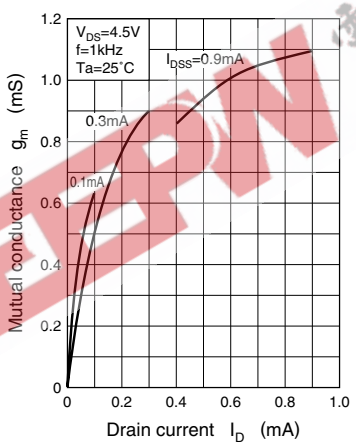
I_D — V_{GS}



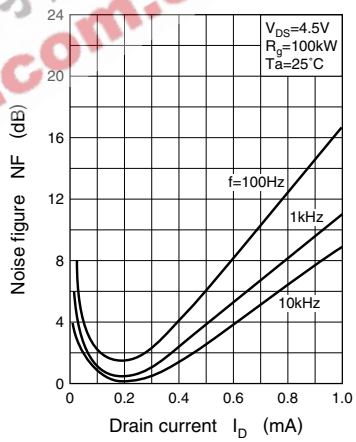
g_m — V_{GS}



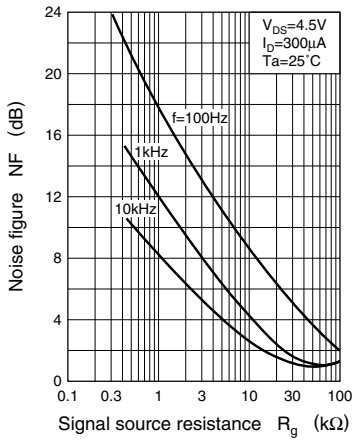
g_m — I_D



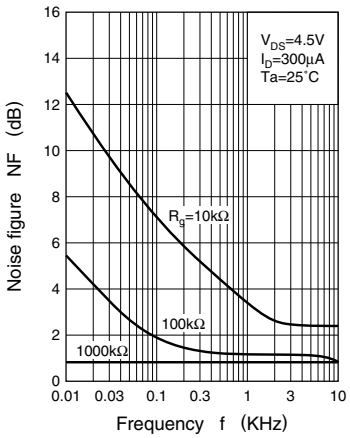
NF — I_D



NF — R_g



NF — f



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