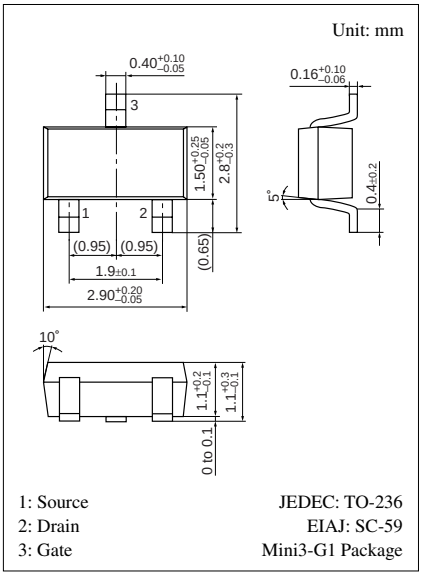
2SK0198 (2SK198)

Silicon N-Channel Junction FET

For low-frequency amplification

■ Features

- High mutual conductance g_m
- Low noise type
- Mini-type package, allowing downsizing of the sets and automatic insertion through the tape/magazine packing.



Marking Symbol (Example): 1O

■ Absolute Maximum Ratings ($T_a = 25°C$)

Parameter	Symbol	Ratings	Unit
Drain to Source voltage	V_{DSX}	30	V
Gate to Drain voltage	V_{GDO}	−30	V
Drain current	I_D	20	mA
Gate current	I_G	10	mA
Allowable power dissipation	P_D	150	mW
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

■ Electrical Characteristics ($T_a = 25°C$)

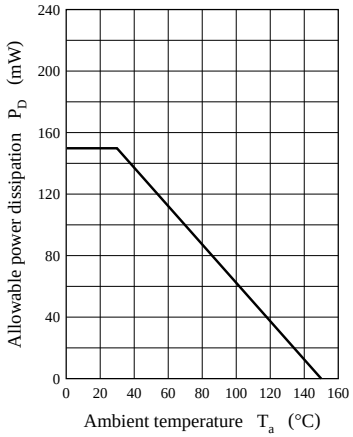
Parameter	Symbol	Conditions	min	typ	max	Unit
Drain to Source cut-off current	I_{DSS}*	V_{DS} = 10 V, V_{GS} = 0	0.5		12	mA
Gate to Source leakage current	I_{GSS}	V_{GS} = −30 V, V_{DS} = 0			−100	nA
Gate to Source cut-off voltage	V_{GSC}	V_{DS} = 10 V, I_D = 10 µA	− 0.1		−1.5	V
Mutual conductance	g_m	V_{DS} = 10 V, I_D = 0.5 mA, f = 1 kHz	4			mS
		V_{DS} = 10 V, V_{GS} = 0, f = 1 kHz		13		
Input capacitance (Common Source)	C_{iss}	V_{DS} = 10 V, V_{GS} = 0, f = 1 MHz		14		pF
Reverse transfer capacitance (Common Source)	C_{rss}			3.5		pF
Noise figure	NV	V_{DS} = 30 V, I_D = 1 mA, G_V = 80 dB R_g = 100 kΩ, Function = FLAT		60		mV

* I_{DSS} rank classification

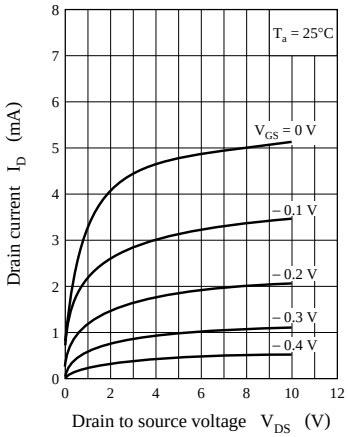
Runk	P	Q	R
I_{DSS} (mA)	0.5 to 3	2 to 6	4 to 12
Marking Symbol	1OP	1OQ	1OR

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

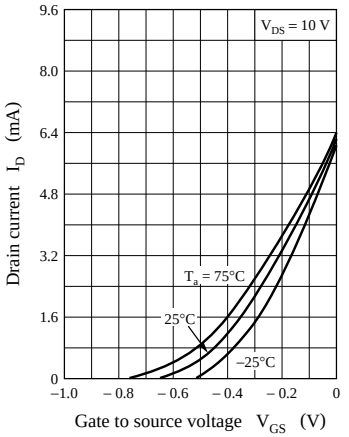
P_D — T_a



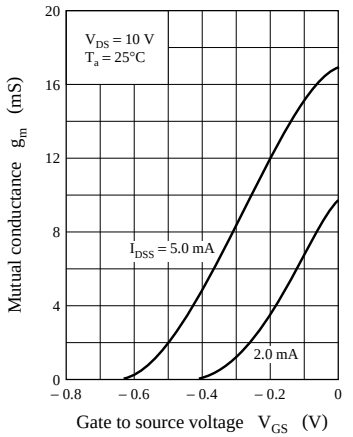
I_D — V_{DS}



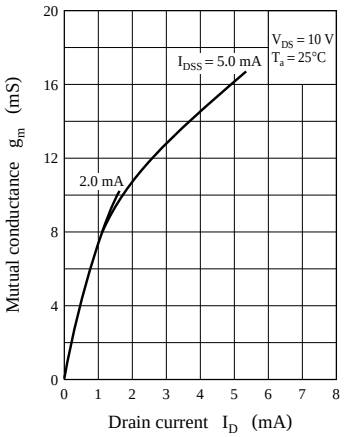
I_D — V_{GS}



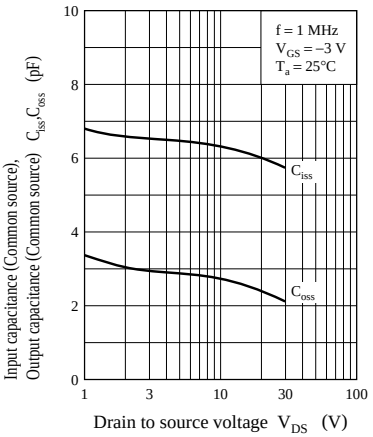
g_m — V_{GS}



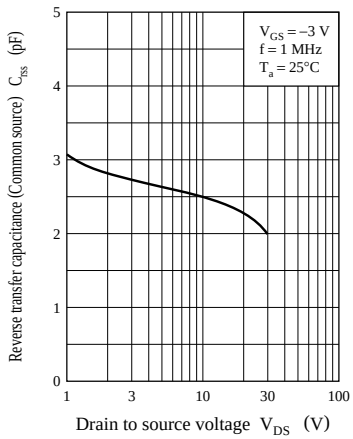
g_m — I_D



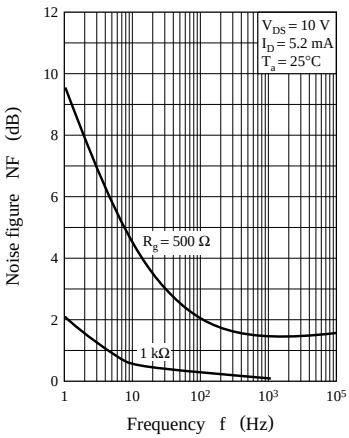
C_{iss}, C_{oss} — V_{DS}



C_{rss} — V_{DS}



NF — f



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