

2SK0198 (2SK198)

Silicon N-Channel Junction FET

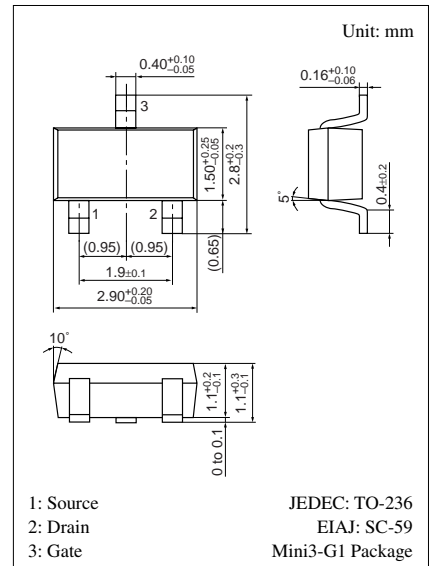
For low-frequency amplification

■ 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.

■ Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Rated	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	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



Marking Symbol (Example): 10

■ Electrical Characteristics ($T_a = 25^\circ\text{C}$)

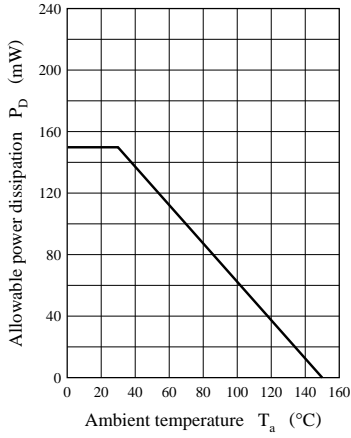
Parameter	Symbol	Conditions	min	typ	max	Unit
Drain to Source cut-off current	I_{DSS}^*	$V_{DS} = 10\text{ V}, V_{GS} = 0$	0.5		12	mA
Gate to Source leakage current	I_{GSS}	$V_{GS} = -30\text{ V}, V_{DS} = 0$			-100	nA
Gate to Source cut-off voltage	V_{GSC}	$V_{DS} = 10\text{ V}, I_D = 10\ \mu\text{A}$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

* I_{DSS} rank classification

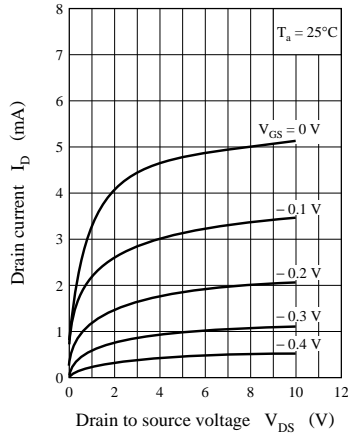
Rank	P	Q	R
I_{DSS} (mA)	0.5 to 3	2 to 6	4 to 12
Marking Symbol	1OP	1OQ	1OR

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

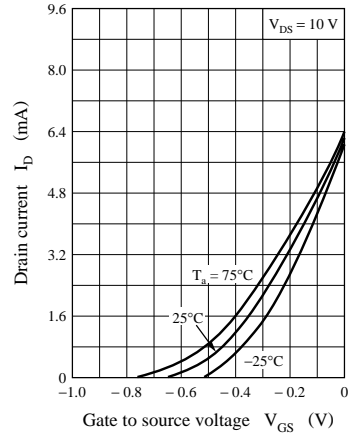
$P_D - T_a$



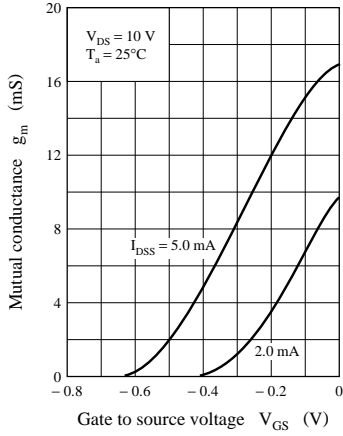
$I_D - V_{DS}$



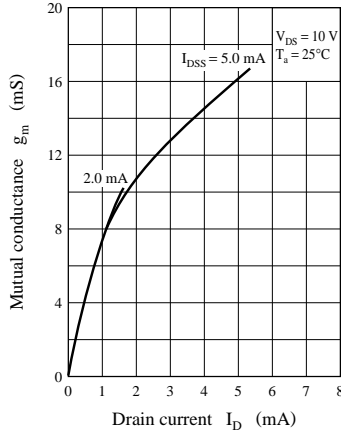
$I_D - V_{GS}$



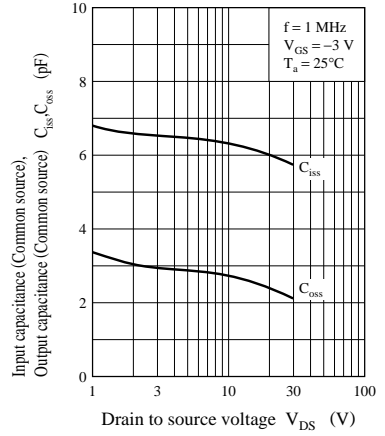
$g_m - V_{GS}$



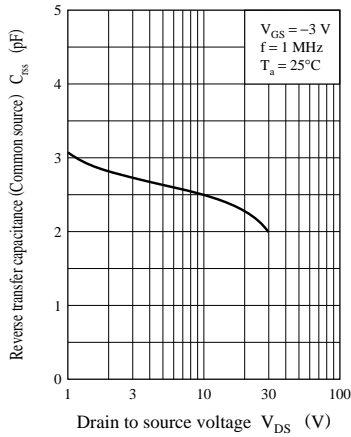
$g_m - I_D$



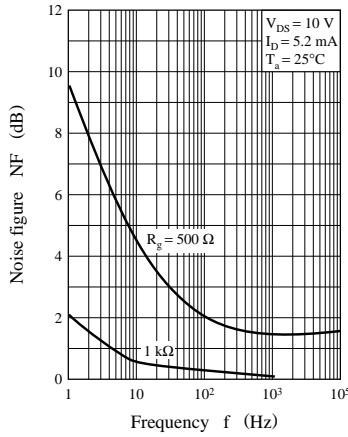
$C_{iss}, C_{oss} - V_{DS}$



$C_{rss} - V_{DS}$



NF — f



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