

# 2SK198

## Silicon N-Channel Junction

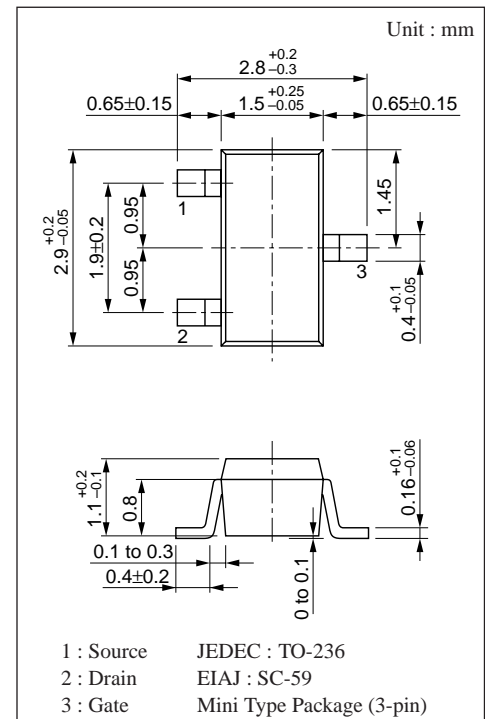
For low-frequency amplification

### ■ Features

- High mutual conductance  $g_m$
- Low noise type
- Downsizing of sets by mini-type package and automatic insertion by taping/magazine packing are available.

### ■ Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Rating	Unit
Drain-Source voltage	$V_{DSX}$	30	V
Gate-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



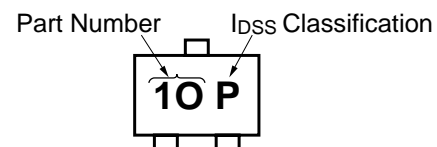
### ■ Electrical Characteristics (Ta = 25°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source cut-off current	$I_{DSS}^*$	$V_{DS}=10V, V_{GS}=0$	0.5		12	mA
Gate-Source leakage current	$I_{GSS}$	$V_{GS}=-30V, V_{DS}=0$			-100	nA
Gate-Source cut-off voltage	$V_{GSC}$	$V_{DS}=10V, I_D=10\mu A$	- 0.1		-1.5	V
Mutual conductance	$g_m$	$V_{DS}=10V, I_D=0.5mA, f=1kHz$	4			mS
		$V_{DS}=10V, V_{GS}=0, f=1kHz$		12		
Input capacitance	$C_{iss}$	$V_{DS}=10V, V_{GS}=0, f=1MHz$		14		pF
Feedback capacitance	$C_{rss}$			3.5		pF
Noise voltage	NV	$V_{DS}=30V, I_D=1mA, G_V=80dB$ $R_g=100k\Omega, Function=FLAT$		60		mV

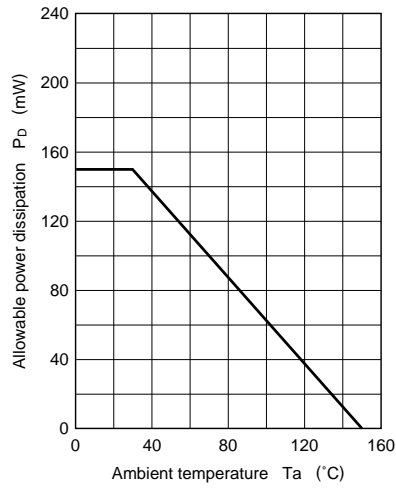
\*  $I_{DSS}$  rank classification

Rank	P	Q	R
$I_{DSS}$ (mA)	0.5 to 3	2 to 6	4 to 12
Part number symbol	10P	10Q	10R

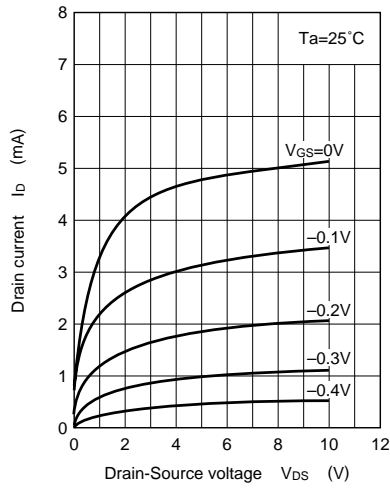
### ■ Marking (Example)



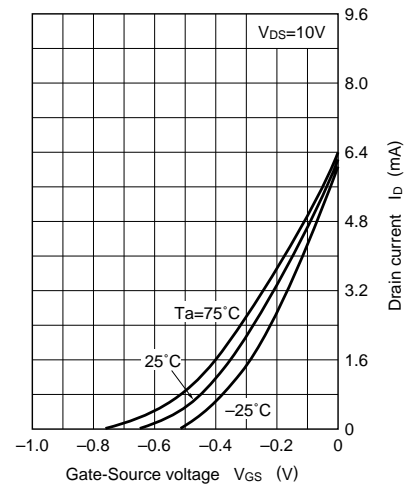
$P_D - T_a$



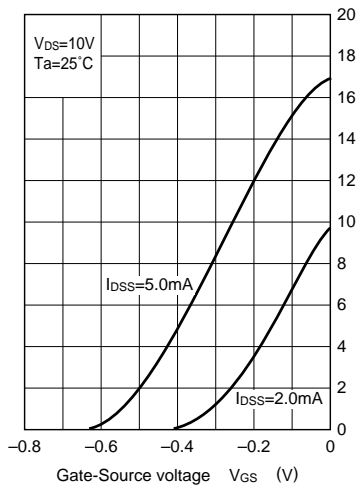
$I_D - V_{DS}$



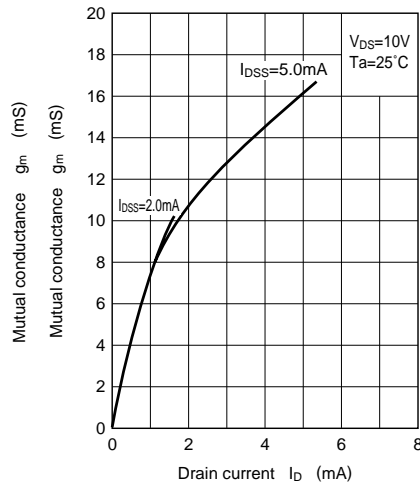
$I_D - V_{GS}$



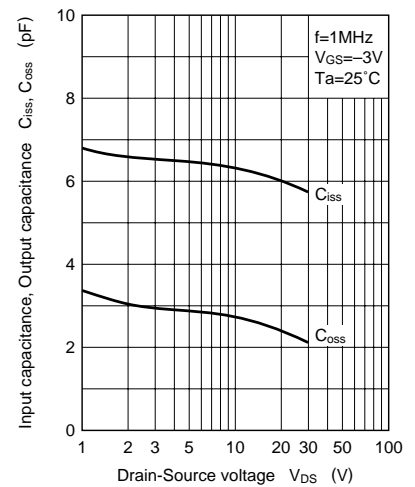
$g_m - V_{GS}$



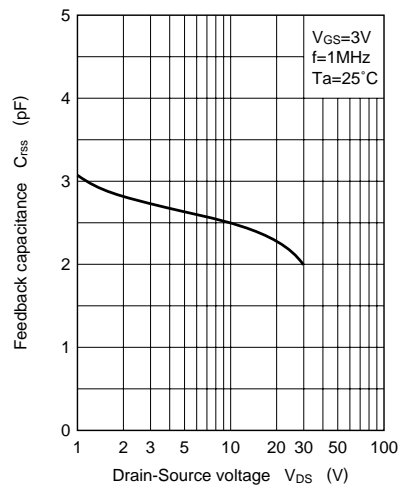
$g_m - I_D$



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



$C_{rss} - V_{DS}$



NF - f

