# 2SK0198 (2SK198)

## Silicon N-Channel Junction FET

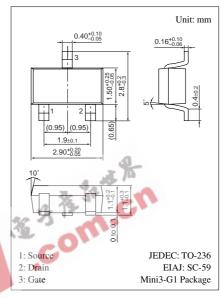
### For low-frequency amplification

### ■ Features

- lacktriangle 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<sub>a</sub> = 25°C)

Parameter	Symbol	Ratings	Unit	
Drain to Source voltage	V <sub>DSX</sub>	30	V	
Gate to Drain voltage	$V_{GDO}$	-30	V	
Drain current	I <sub>D</sub> 20		mA	
Gate current	$I_G$	10	mA	
Allowable power dissipation	P <sub>D</sub>	150	mW	
Channel temperature	T <sub>ch</sub>	150	°C	
Storage temperature	T <sub>stg</sub>	-55 to +150	°C	



Marking Symbol (Example): 10

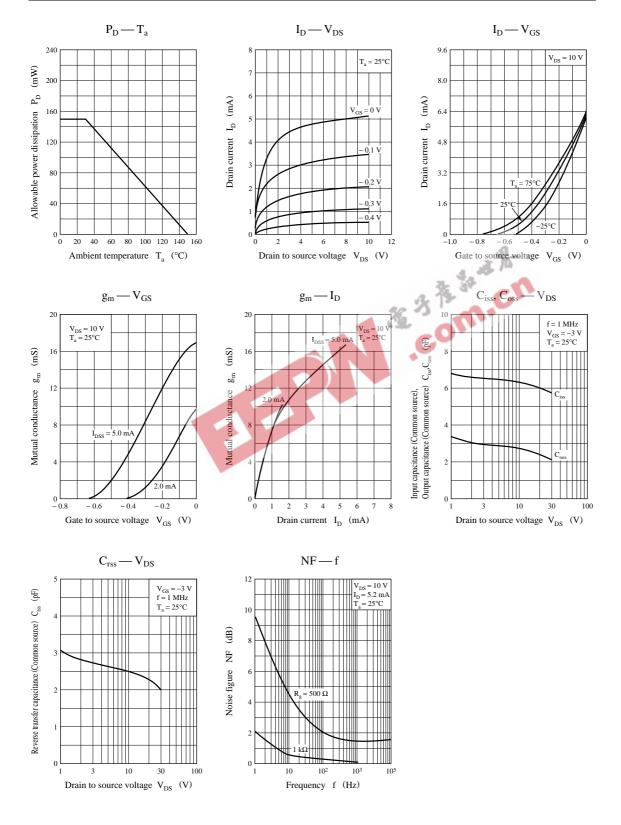
## ■ Electrical Characteristics (T<sub>a</sub> = 25°C)

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

#### \* I<sub>DSS</sub> rank classification

Runk	P	Q	R
I <sub>DSS</sub> (mA)	0.5 to 3	2 to 6	4 to 12
Marking Symbol	1OP	10Q	1OR

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



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