# **XN01871** (XN1871)

# Silicon n-channel junction FET

### For low-frequency amplification

#### ■ Features

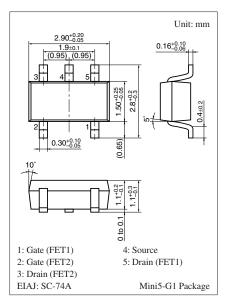
- Two elements incorporated into one package (Source-coupled FETs)
- Reduction of the mounting area and assembly cost by one half

#### ■ Basic Part Number

• 2SK0198 (2SK198) × 2

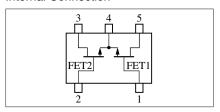
### ■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Drain-source voltage	V <sub>DSX</sub>	30	V	
Gate-drain voltage (Source open)	$V_{GDO}$	-30	V	
Drain curennt	$I_D$	20	mA	
Gate current	$I_G$	10	mA	
Total power dissipation	P <sub>T</sub>	300	mW	
Channel temperature	T <sub>ch</sub>	150	°C	
Storage temperature	T <sub>stg</sub>	-55 to +150	°C	



Marking Symbol: 5T

#### Internal Connection



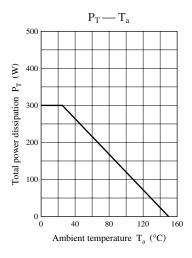
## ■ Electrical Characteristics $T_a = 25$ °C $\pm 3$ °C

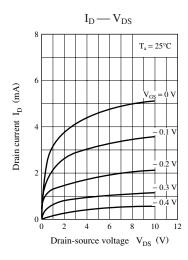
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Drain-source cutoff current	$I_{DSS}$	$V_{DS} = 10 \text{ V}, V_{GS} = 0$	0.5		12	mA
Gate-source cutoff current	$I_{GSS}$	$V_{GS} = -30 \text{ V}, V_{DS} = 0$			-100	nA
Gate-source cutoff voltage	V <sub>GSC</sub>	$V_{DS} = 10 \text{ V}, I_{D} = 10  \mu\text{A}$	- 0.1		-1.5	V
Mutual conductance	g <sub>m</sub>	$V_{DS} = 10 \text{ V}, I_D = 0.5 \text{ mA}, f = 1 \text{ MHz}$	4			mS
		$V_{DS} = 10 \text{ V}, V_{GS} = 0, f = 1 \text{ kHz}$	4	12		
Short-circuit forward transfer 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>	$V_{DS} = 10 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$		3.5		pF
Noise voltage	NV	$V_{DS} = 30 \text{ V}, I_D = 1 \text{ mA}, G_V = 80 \text{ dB}$ $R_g = 100 \text{ k}\Omega$ , Function = FLAT		60		mV

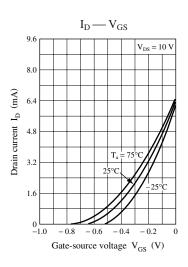
Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

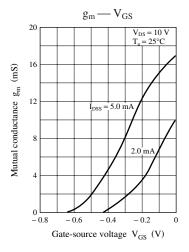
Note) The part number in the parenthesis shows conventional part number.

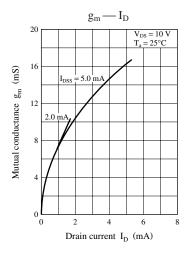
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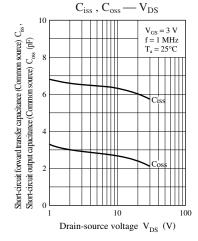


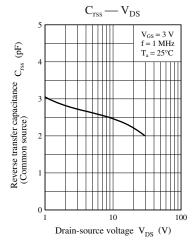


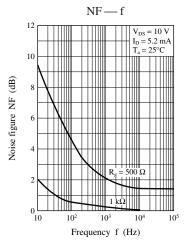












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