
2SK291

Silicon N-Channel Junction FET

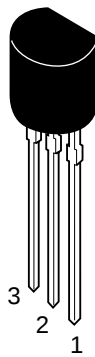
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Application

Low frequency low noise amplifier

Outline

TO-92 (2)



- 1. Drain
- 2. Source
- 3. Gate

Absolute Maximum Ratings (Ta = 25°C)

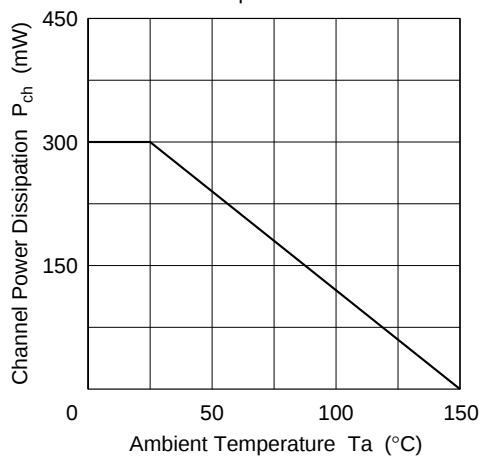
Item	Symbol	Ratings	Unit
Gate to drain voltage	V_{GDO}	-15	V
Gate to source voltage	V_{GSO}	-15	V
Drain current	I_D	50	mA
Gate current	I_G	5	mA
Channel power dissipation	Pch	300	mW
Channel temperature	Tch	150	°C
Storage temperature	Tstg	-55 to +150	°C

Electrical Characteristics (Ta = 25°C)

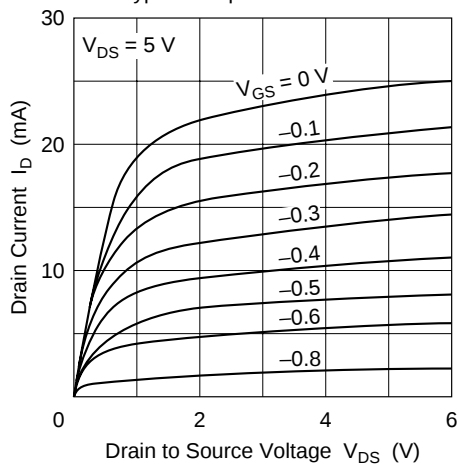
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Gate to drain breakdown voltage	$V_{(BR)GDO}$	-15	—	—	V	$I_G = -100\text{ }\mu\text{A}$
Gate to source breakdown voltage	$V_{(BR)GSO}$	-15	—	—	V	$I_G = -100\text{ }\mu\text{A}$
Gate cutoff current	I_{GSS}	—	—	10	nA	$V_{GS} = -7\text{ V}, V_{DS} = 0$
Drain current	I_{DSS}^{*1}	5	—	50	mA	$V_{DS} = 5\text{ V}, V_{GS} = 0$
Gate to source cutoff voltage	$V_{GS(off)}$	—	—	-3.0	V	$V_{DS} = 5\text{ V}, I_D = 100\text{ }\mu\text{A}$
Forward transfer admittance	$ y_{fs} $	25	45	—	mS	$V_{DS} = 5\text{ V}, V_{GS} = 0, f = 1\text{ kHz}$
Input capacitance	Ciss	—	8.5	—	pF	$V_{DS} = 5\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$
Noise voltage referred to input	e_n	—	1.2	—	nV/ $\sqrt{\text{Hz}}$	$V_{DS} = 5\text{ V}, I_D = 5\text{ mA}, R_g = 0, f = 100\text{ kHz}$

Note: 1. The 2SK291 is grouped by I_{DSS} as follows.

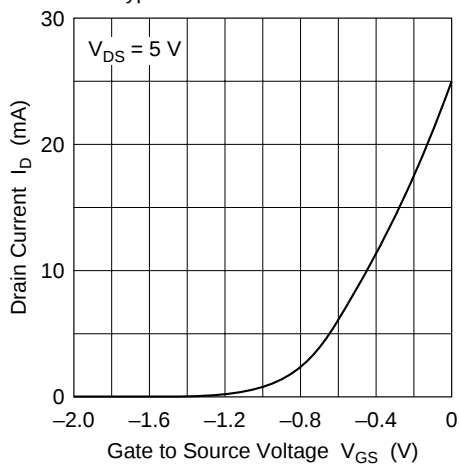
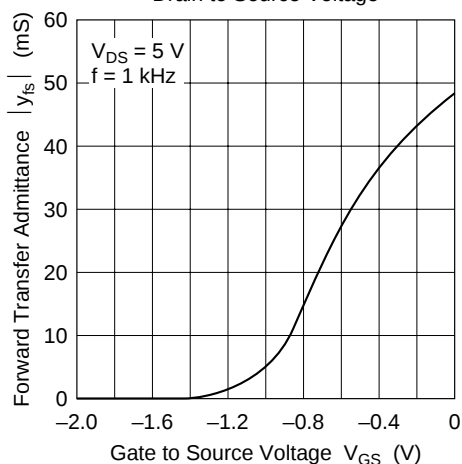
Grade	P	Q	R	S	T
I_{DSS}	5 to 16	14 to 24	20 to 32	28 to 42	36 to 50

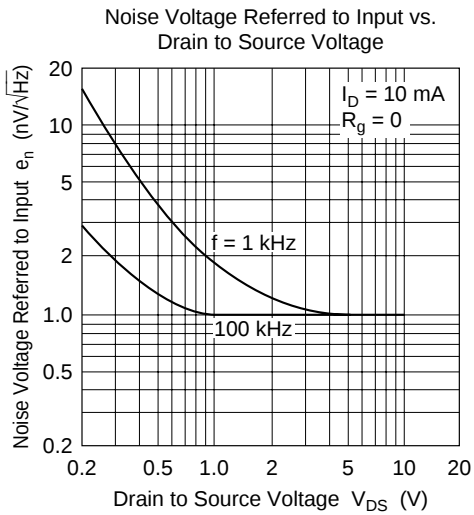
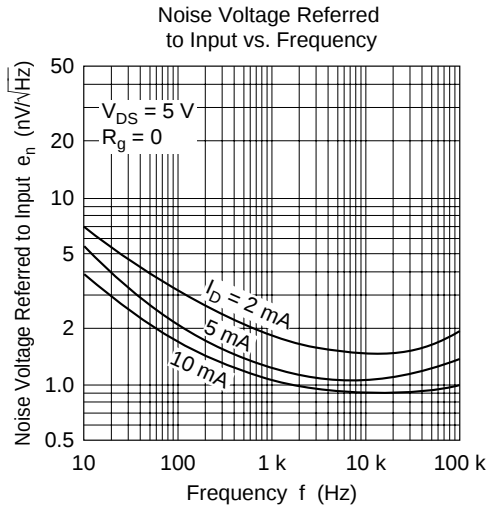
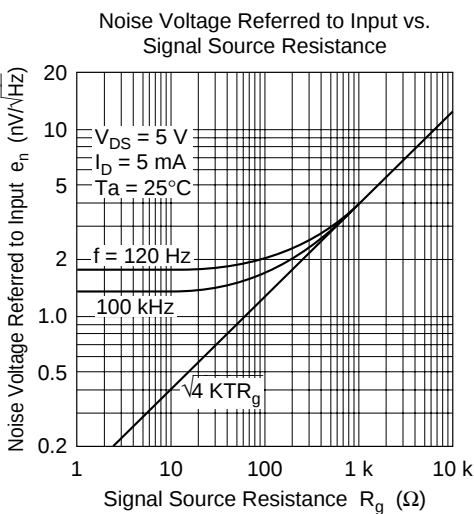
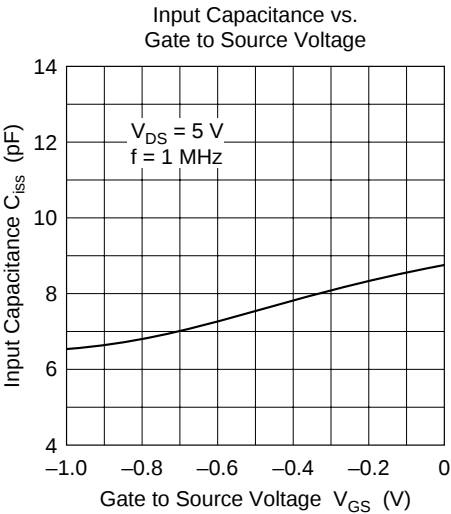
Maximum Channel Power
Dissipation Curve

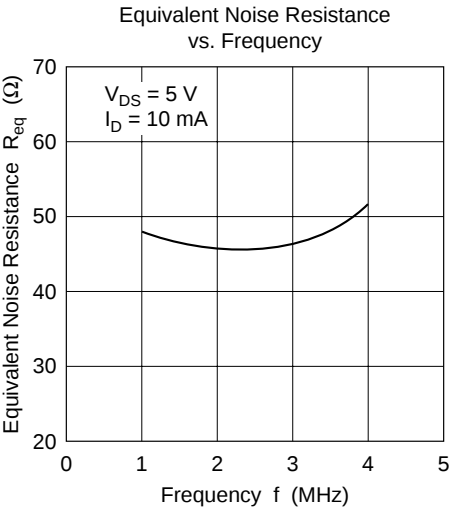
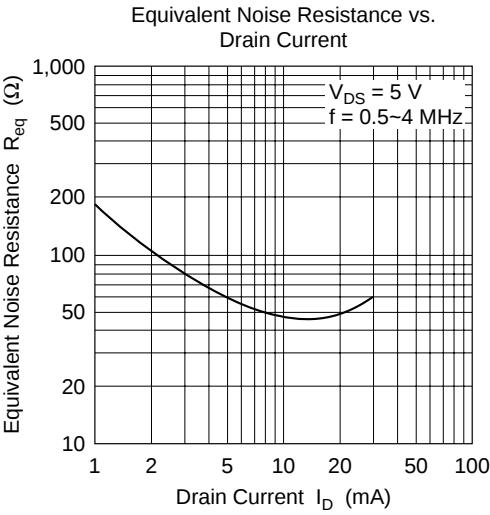
Typical Output Characteristics

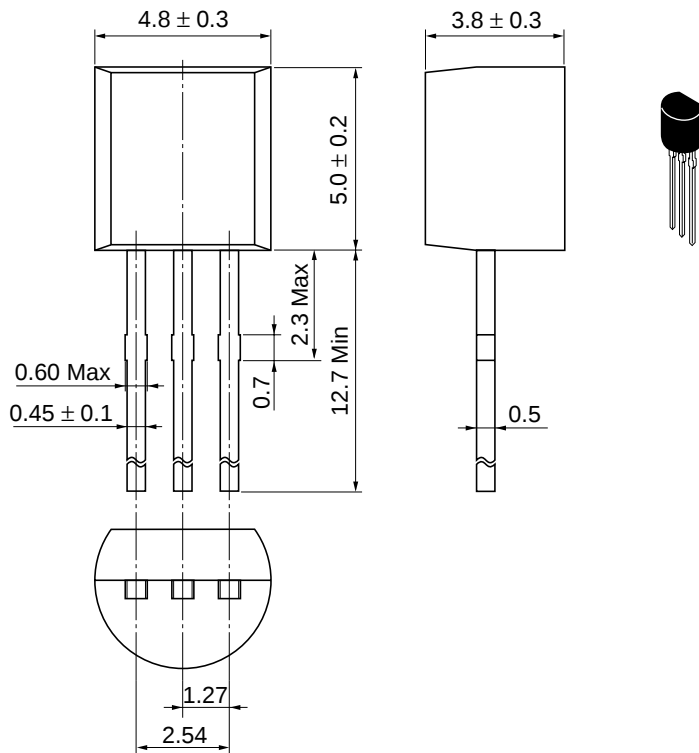


Typical Transfer Characteristics

Forward Transfer Admittance vs.
Drain to Source Voltage







Hitachi Code	TO-92 (2)
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	0.25 g

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