

# 2SK0301 (2SK301)

## Silicon N-Channel Junction FET

For low-frequency amplification

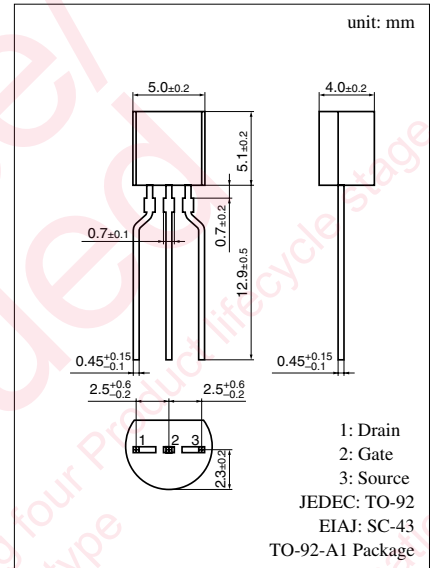
For switching

### ■ Features

- Low noise, high gain
- High gate to drain voltage  $V_{GDO}$

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

Parameter	Symbol	Ratings	Unit
Drain to Source voltage	$V_{DSX}$	55	V
Gate to Drain voltage	$V_{GDO}$	-55	V
Gate to Source voltage	$V_{GSO}$	-55	V
Drain current	$I_D$	$\pm 30$	mA
Gate current	$I_G$	10	mA
Allowable power dissipation	$P_D$	250	mW
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$



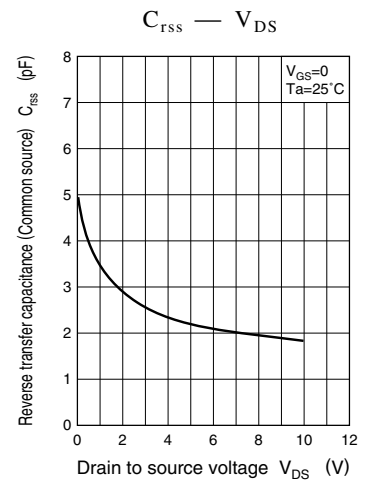
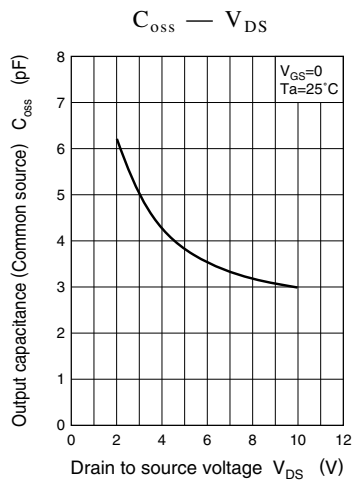
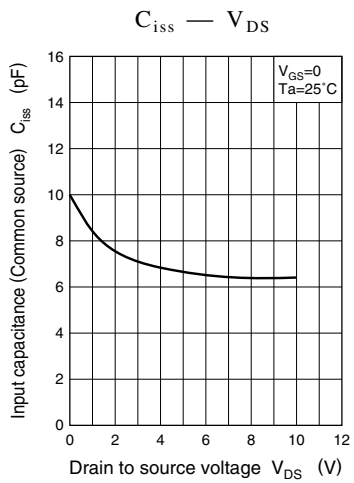
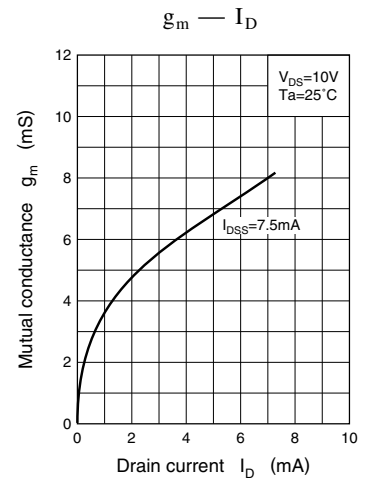
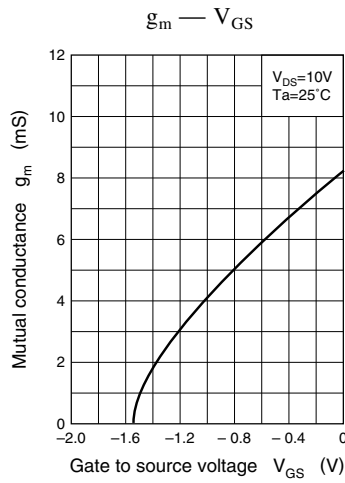
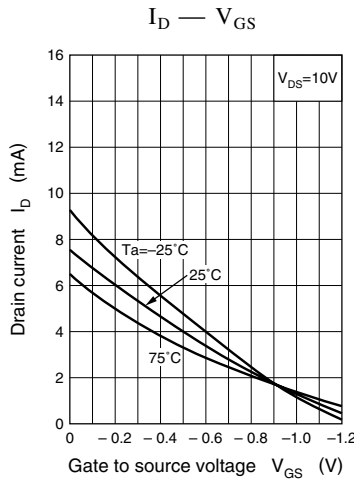
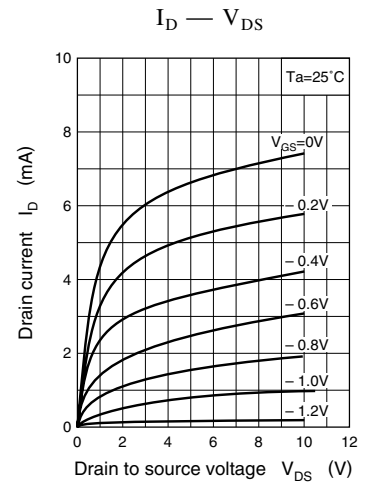
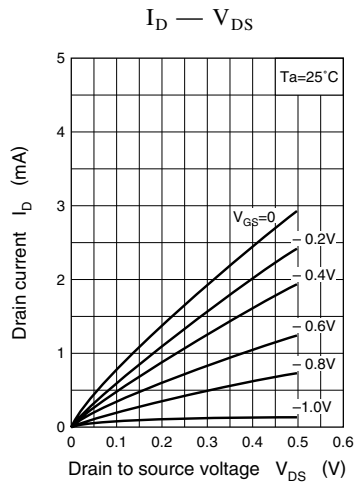
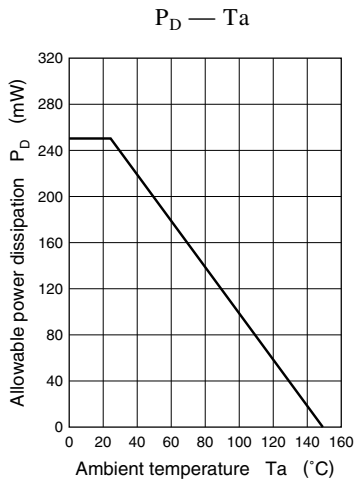
### ■ Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Conditions	min	typ	max	Unit
Drain to Source cut-off current	$I_{DSS}^*$	$V_{DS} = 10\text{V}, V_{GS} = 0$	1		20	mA
Gate to Source leakage current	$I_{GSS}$	$V_{GS} = -30\text{V}, V_{DS} = 0$			-10	nA
Gate to Drain voltage	$V_{GDC}$	$I_G = -100\mu\text{A}, V_{DS} = 0$	-55	-80		V
Gate to Source cut-off voltage	$V_{GSC}$	$V_{DS} = 10\text{V}, I_D = 10\mu\text{A}$			-5	V
Mutual conductance	$g_m$	$V_{DS} = 10\text{V}, V_{GS} = 0, f = 1\text{kHz}$	2.5	7.5		mS
Input capacitance (Common Source)	$C_{iss}$	$V_{DS} = 10\text{V}, V_{GS} = 0, f = 1\text{MHz}$		6.5		pF
Reverse transfer capacitance (Common Source)	$C_{rss}$			1.9		pF
Noise figure	NF	$V_{DS} = 10\text{V}, V_{GS} = 0, R_g = 100\text{k}\Omega$ $f = 100\text{Hz}$		0.5		dB

\*  $I_{DSS}$  rank classification

Runk	P	Q	R	S
$I_{DSS}$ (mA)	1 to 3	2 to 6.5	5 to 12	10 to 20

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



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