

2SK3321

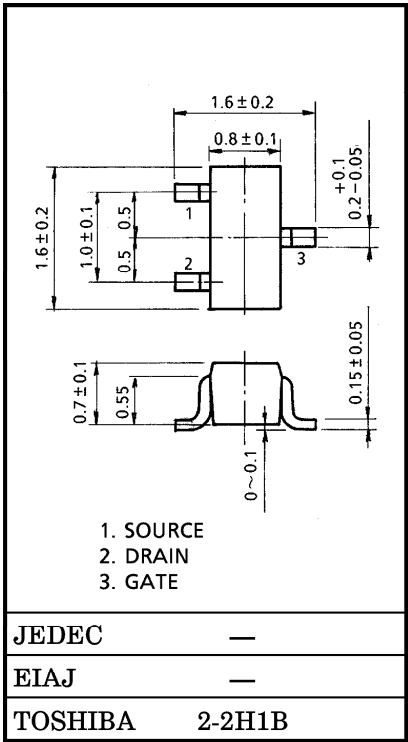
GENERAL PURPOSE AND IMPEDANCE CONVERTER AND CONDENSER
MICROPHONE APPLICATIONS

Unit in mm

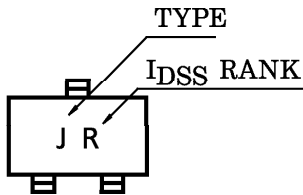
- Small Package
- High Input Impedance : $I_{GSS} = -1 \text{ nA (Max.)}$ ($V_{GS} = -30 \text{ V}$)
- Low Noise : $NF = 0.5 \text{ dB (Typ.)}$ ($R_G = 100 \text{ k}\Omega$, $f = 120 \text{ Hz}$)

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Gate-Drain Voltage	V_{GDS}	-50	V
Gate Current	I_G	10	mA
Drain Power Dissipation	P_D	100	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~125	$^\circ\text{C}$



MARKING



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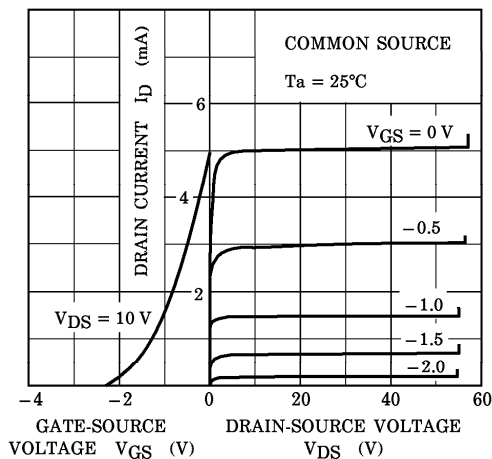
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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

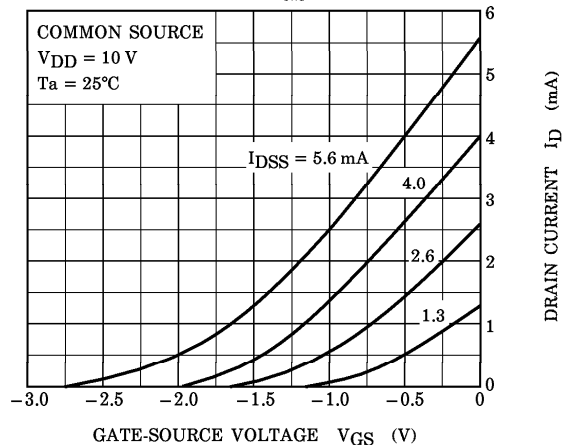
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Cut-off Current	I_{GSS}	$V_{GS} = -30\text{ V}, V_{DS} = 0$	—	—	−1.0	nA
Gate-Drain Breakdown Voltage	$V_{(BR) GDS}$	$V_{DS} = 0, I_G = -100\text{ }\mu\text{A}$	−50	—	—	V
Drain Current	I_{DSS} (Note)	$V_{DS} = 10\text{ V}, V_{GS} = 0$	0.3	—	6.5	mA
Gate-Source Cut-off Voltage	$V_{GS(OFF)}$	$V_{DS} = 10\text{ V}, I_D = 0.1\text{ }\mu\text{A}$	−0.4	—	−5.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10\text{ V}, V_{GS} = 0, f = 1\text{ kHz}$	1.2	—	—	mS
Input Capacitance	C_{iss}	$V_{DS} = 10\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$	—	8.2	—	pF
Reverse Transfer Capacitance	C_{rss}	$V_{GD} = -10\text{ V}, I_D = 0,$ $f = 1\text{ MHz}$	—	2.6	—	pF
Noise Figure	NF	$V_{DS} = 15\text{ V}, V_{GS} = 0,$ $R_G = 100\text{ k}\Omega, f = 120\text{ Hz}$	—	0.5	—	dB

(Note) : I_{DSS} Classification R(R) : 0.30~0.75 mA, O(O) : 0.60~1.40 mA,
Y(Y) : 1.2~3.0 mA, GR(G) : 2.6~6.5 mA
() ∙∙ I_{DSS} Rank Marking

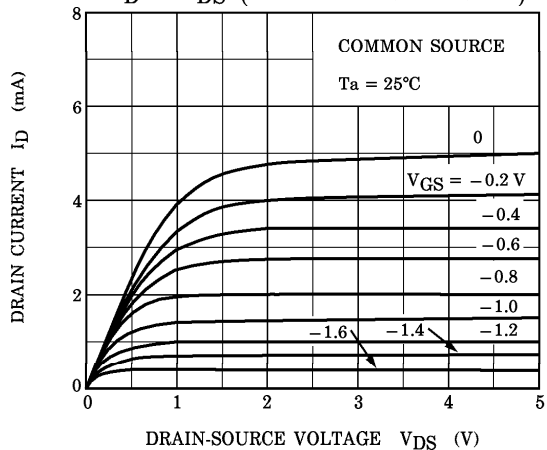
STATIC CHARACTERISTICS



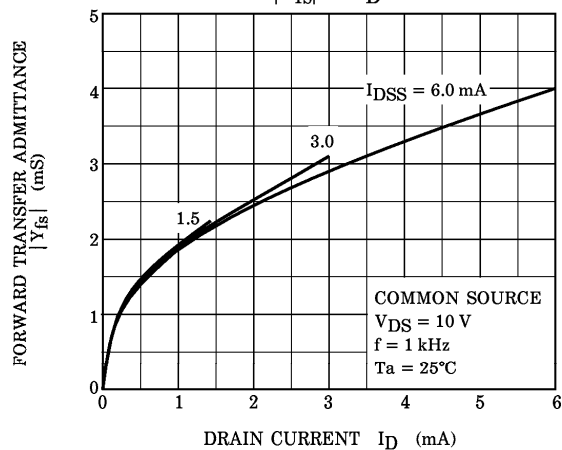
$I_D - V_{GS}$



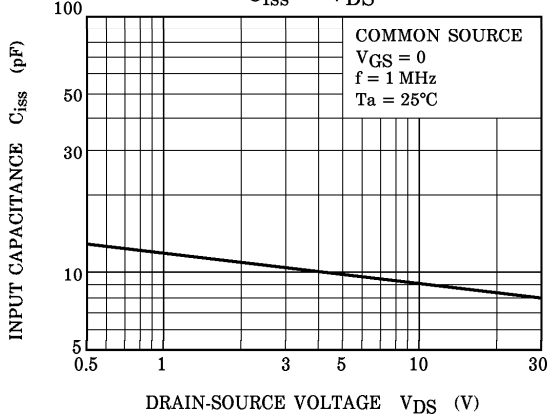
$I_D - V_{DS}$ (LOW VOLTAGE REGION)



$|Y_{fs}| - I_D$



$C_{iss} - V_{DS}$



$C_{rss} - V_{GD}$

