

TENTATIVE TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL JUNCTION TYPE

2SK3321

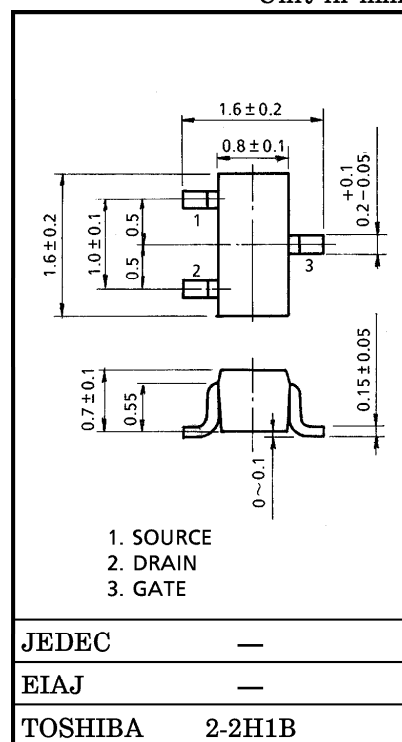
GENERAL PURPOSE AND IMPEDANCE CONVERTER AND CONDENSER MICROPHONE APPLICATIONS

Unit in mm

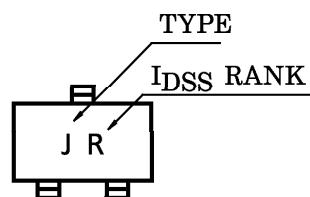
- Small Package
- High Input Impedance : $I_{GSS} = -1 \text{ nA (Max.)}$ ($V_{GS} = -30 \text{ V}$)
- Low Noise : $NF = 0.5 \text{ dB (Typ.)}$ ($R_G = 100 \text{ k}\Omega$, $f = 120 \text{ Hz}$)

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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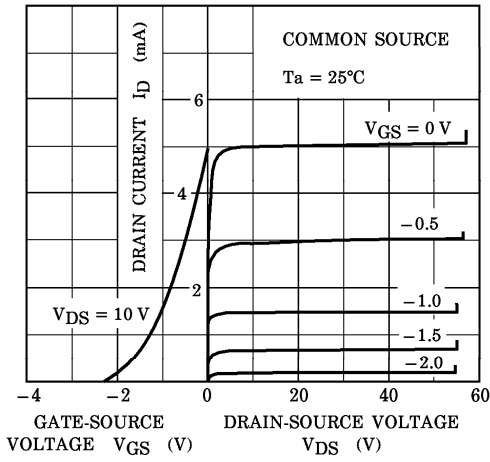
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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

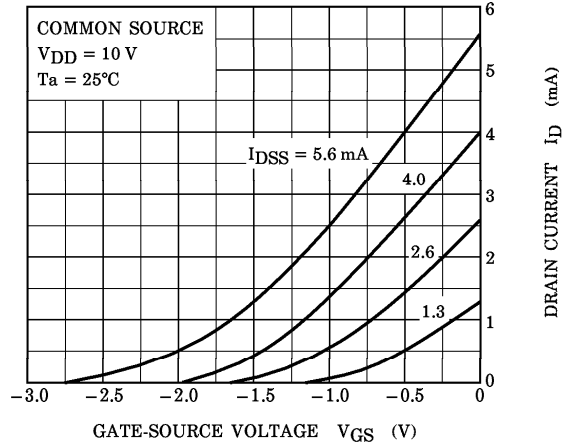
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Cut-off Current	I _{GSS}	V _{GS} = -30 V, V _{DS} = 0	—	—	-1.0	nA
Gate-Drain Breakdown Voltage	V _{(BR)GDS}	V _{DS} = 0, I _G = -100 μ A	-50	—	—	V
Drain Current	I _{DSS} (Note)	V _{DS} = 10 V, V _{GS} = 0	0.3	—	6.5	mA
Gate-Source Cut-off Voltage	V _{GS(OFF)}	V _{DS} = 10 V, I _D = 0.1 μ A	-0.4	—	-5.0	V
Forward Transfer Admittance	Y _{fs}	V _{DS} = 10 V, V _{GS} = 0, f = 1 kHz	1.2	—	—	mS
Input Capacitance	C _{iss}	V _{DS} = 10 V, V _{GS} = 0, f = 1 MHz	—	8.2	—	pF
Reverse Transfer Capacitance	C _{rss}	V _{GD} = -10 V, I _D = 0, f = 1 MHz	—	2.6	—	pF
Noise Figure	NF	V _{DS} = 15 V, V _{GS} = 0, R _G = 100 k Ω , f = 120 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

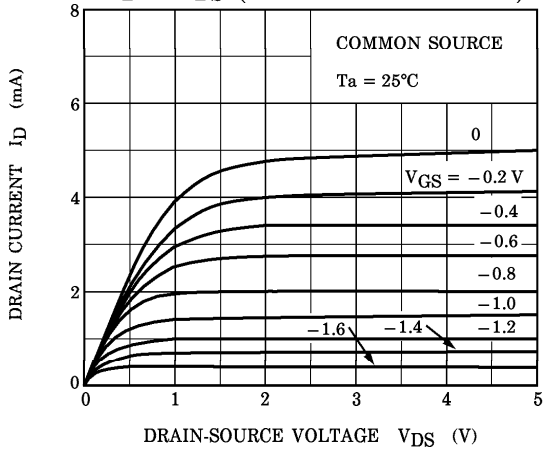
STATIC CHARACTERISTICS



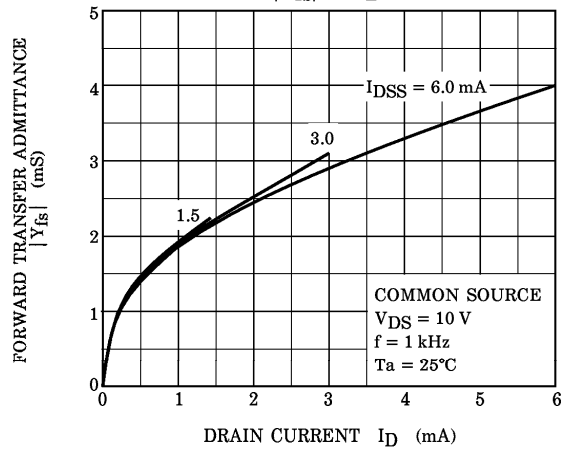
ID - VGS



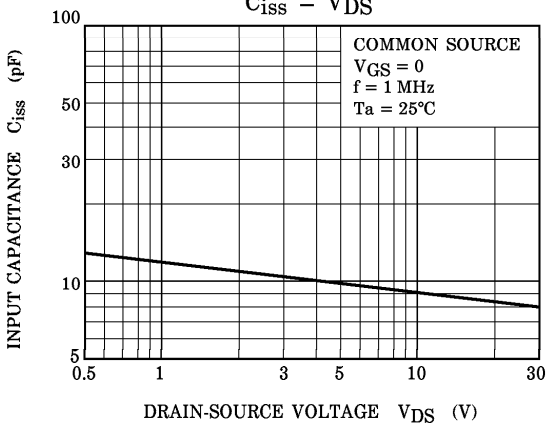
ID - VDS (LOW VOLTAGE REGION)



|Yfs| - ID



Ciss - VDS



Crss - VGD

