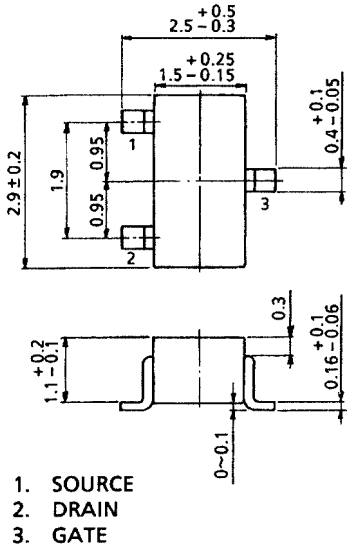
TOSHIBA Field Effect Transistor Silicon N Channel Junction Type

2SK368

Audio Frequency and High Voltage Amplifier Applications
Constant Current Applications

- High breakdown voltage: V_{GDS} = −100 V (min)
- High input impedance: I_{GSS} = −1.0 nA (max) (V_{GS} = −80 V)
- Small package

Unit: mm



JEDEC	TO-236MOD
JEITA	SC-59
TOSHIBA	2-3F1B

Weight: 0.012 g (typ.)

Maximum Ratings (Ta = 25°C)

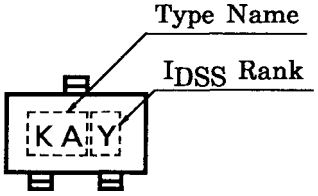
Characteristics	Symbol	Rating	Unit
Gate-drain voltage	V_{GDS}	−100	V
Gate current	I_G	10	mA
Drain power dissipation	P_D	150	mW
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	−55~125	°C

Electrical Characteristics (Ta = 25°C)

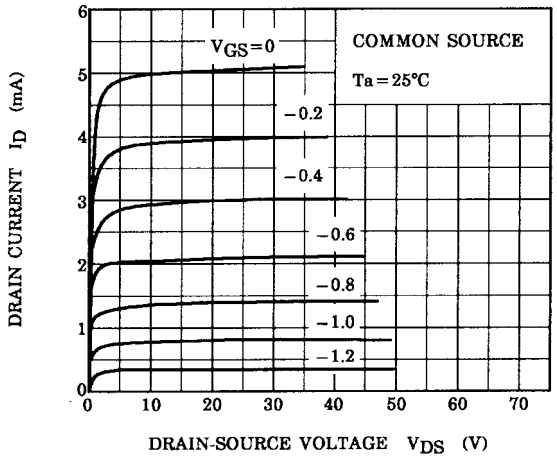
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Gate cut-off current	I_{GSS}	V_{GS} = −80 V, V_{DS} = 0	—	—	−1.0	nA
Gate-drain breakdown voltage	$V_{(BR)\ GDS}$	V_{DS} = 0, I_G = −100 μA	−100	—	—	V
Drain current	I_{DSS} (Note)	V_{DS} = 10 V, V_{GS} = 0	0.6	—	6.5	mA
Gate-source cut-off voltage	$V_{GS\ (OFF)}$	V_{DS} = 10 V, I_D = 0.1 μA	−0.4	—	−3.5	V
Forward transfer admittance	$\|Y_{fs}\|$	V_{DS} = 10 V, V_{GS} = 0, f = 1 kHz	1.5	4.6	—	mS
Input capacitance	C_{iss}	V_{DS} = 10 V, V_{GS} = 0, f = 1 MHz	—	13	—	pF
Reverse transfer capacitance	C_{rss}	V_{DG} = 10 V, I_D = 0, f = 1 MHz	—	3	—	pF
Noise figure	NF	V_{DS} = 10 V, V_{GS} = 0 R_G = 100 kΩ, f = 100 Hz	—	0.5	—	dB

Note: I_{DSS} classification O: 0.6~1.4 mA, Y: 1.2~3.0 mA, GR (G): 2.6~6.5 mA

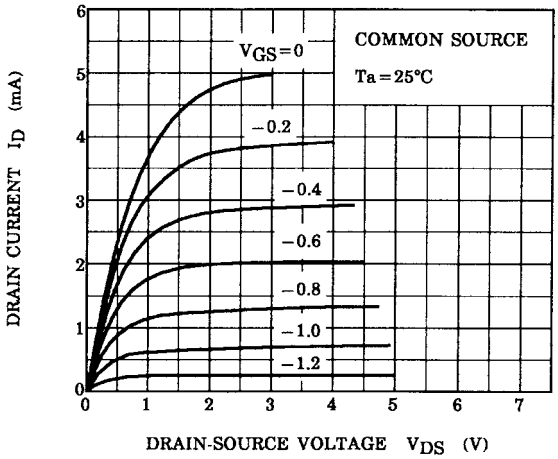
Marking



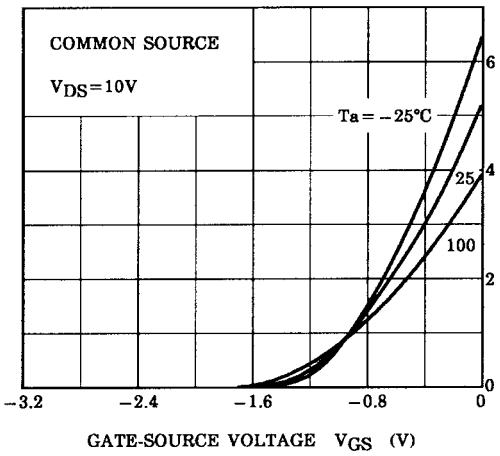
I_D – V_{DS}



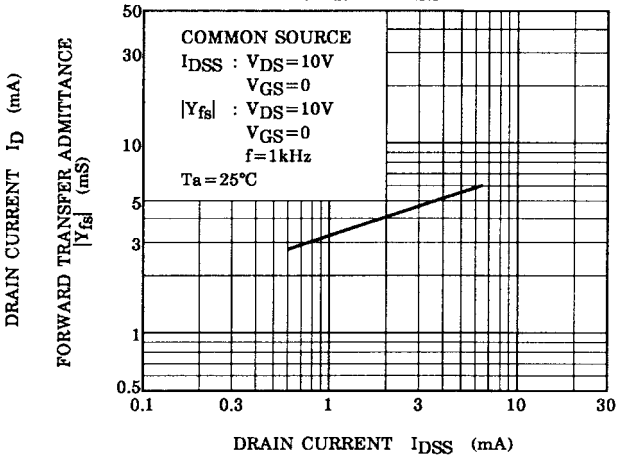
I_D – V_{DS} (LOW VOLTAGE REGION)



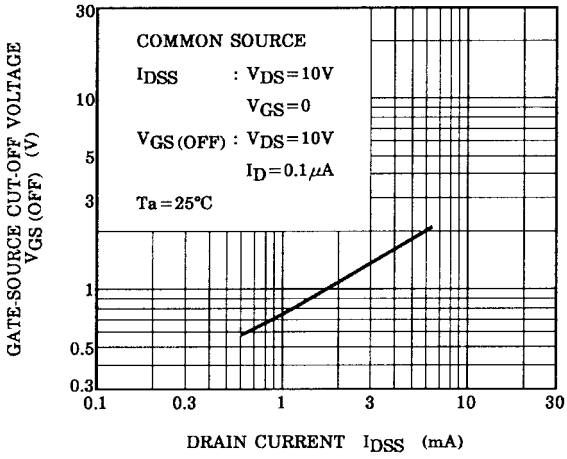
I_D – V_{GS}



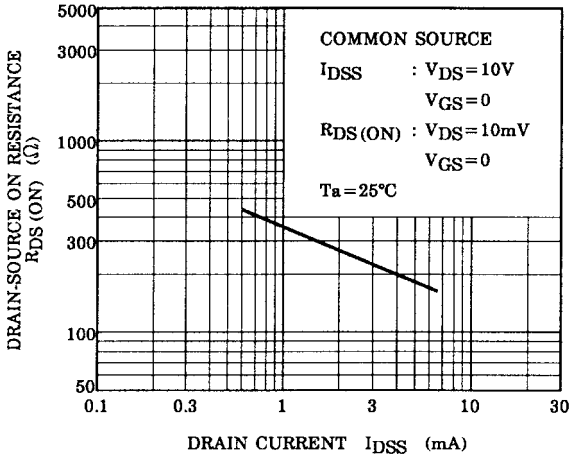
$|Y_{fs}|$ – I_{DSS}



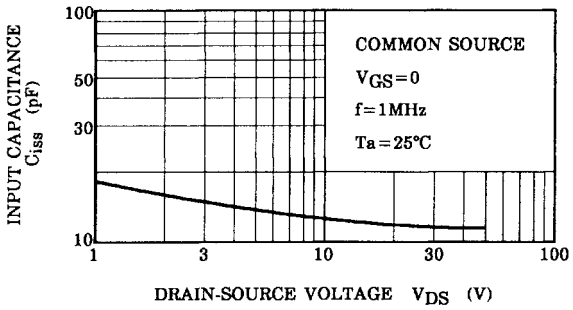
$V_{GS\ (OFF)}$ – I_{DSS}



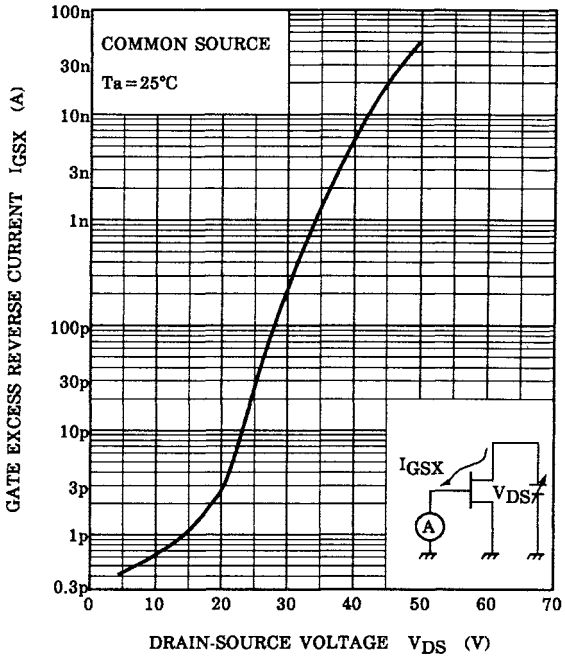
$R_{DS\ (ON)}$ – I_{DSS}



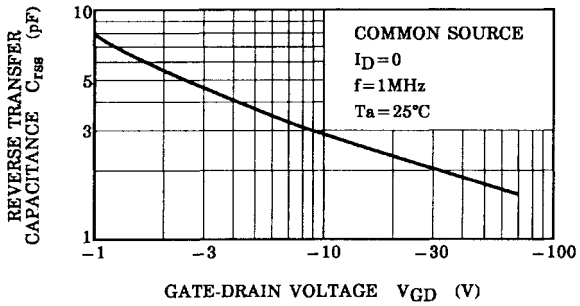
C_{iss} – V_{DS}



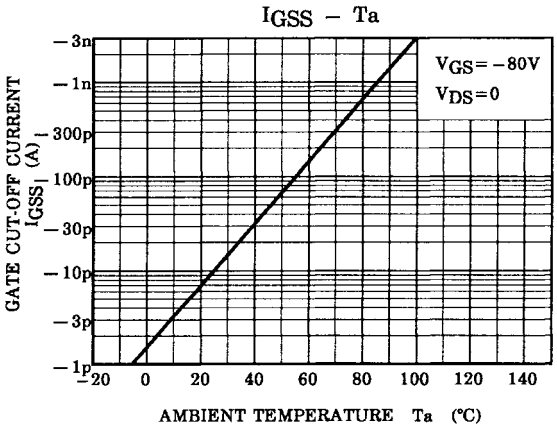
I_{GSX} – V_{DS}



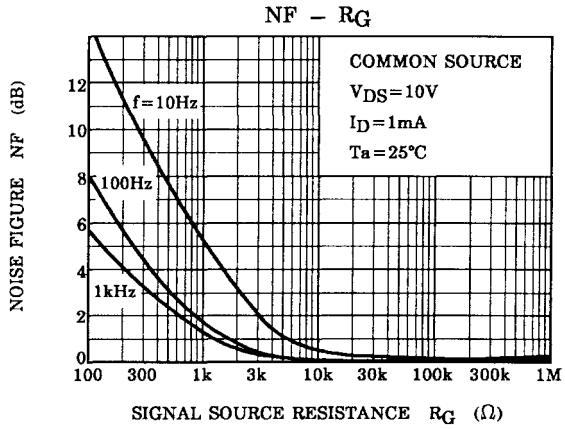
C_{rss} – V_{GD}



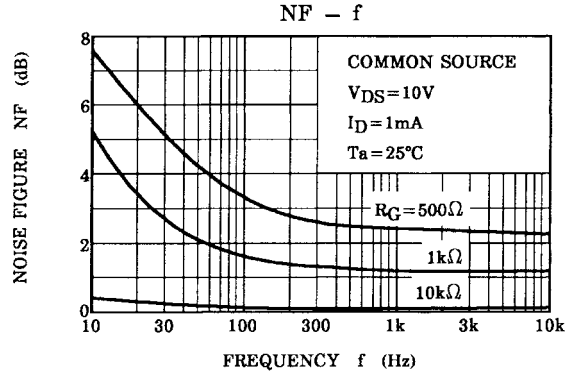
I_{GSS} – Ta



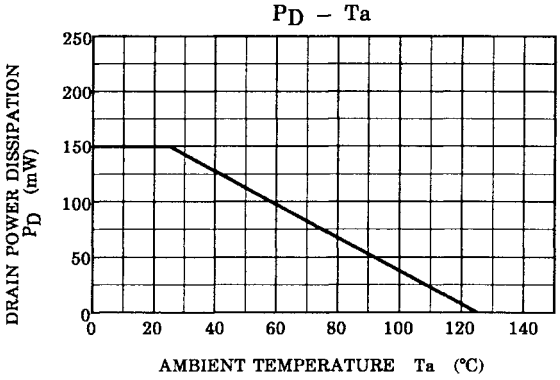
NF – R_G



NF – f



P_D – Ta



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