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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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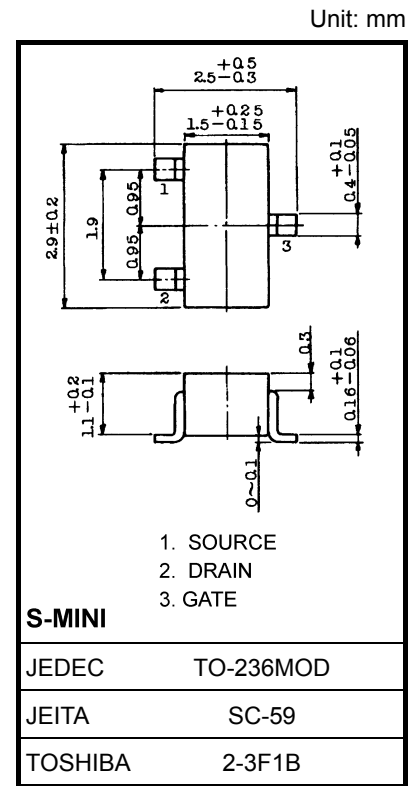
General Purpose and Impedance Converter and Condenser Microphone Applications

- High breakdown voltage: $V_{GDS} = -50$ V
- High input impedance: $I_{GSS} = -1.0$ nA (max) ($V_{GS} = -30$ V)
- Low noise: $NF = 0.5$ dB (typ.) ($R_G = 100$ k Ω , $f = 120$ Hz)
- Small package.

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	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	°C
Storage temperature range	T_{stg}	-55 to 125	°C

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings. Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).



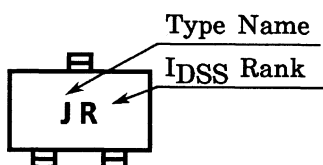
Weight: 0.012 g (typ.)

Electrical Characteristics (Ta = 25°C)

Characteristics	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

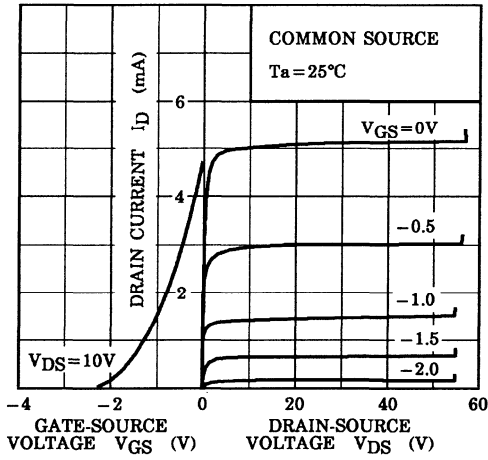
Note: I_{DSS} classification R: 0.30 to 0.75 mA, O: 0.60 to 1.40 mA, Y: 1.2 to 3.0 mA, GR: 2.6 to 6.5 mA

Marking

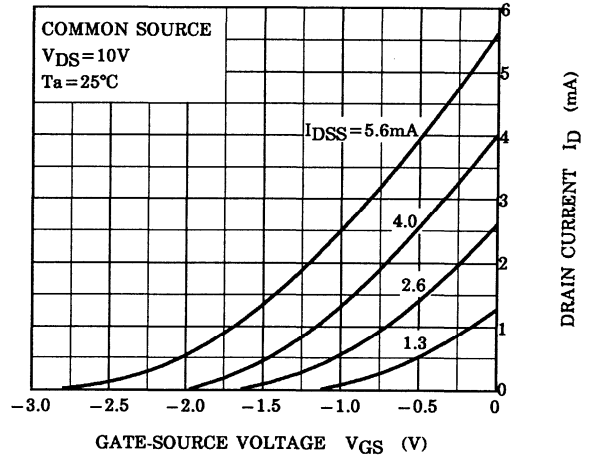


Start of commercial production
1981-06

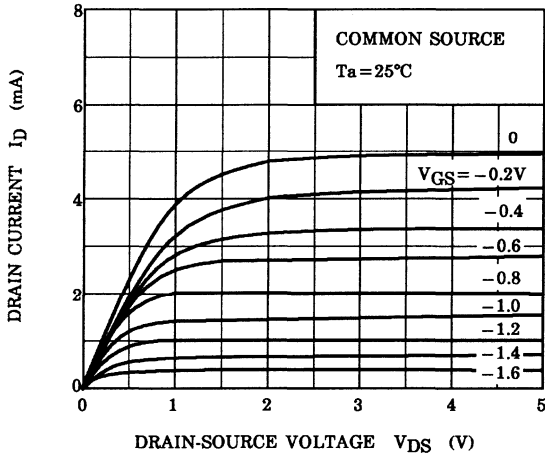
STATIC CHARACTERISTICS



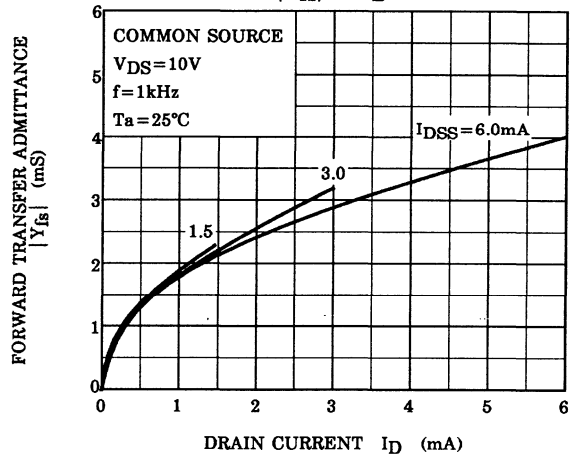
I_D - V_{GS}



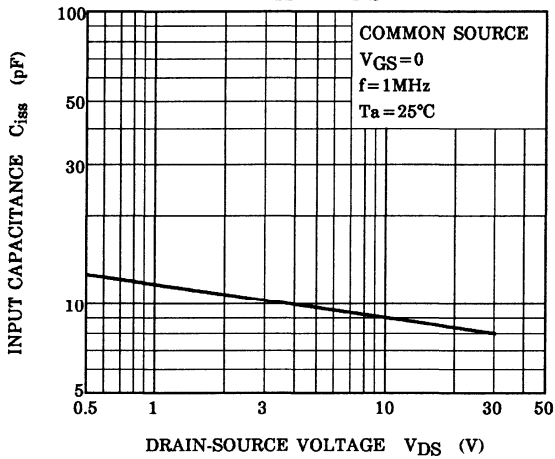
I_D - V_{DS} (LOW VOLTAGE REGION)



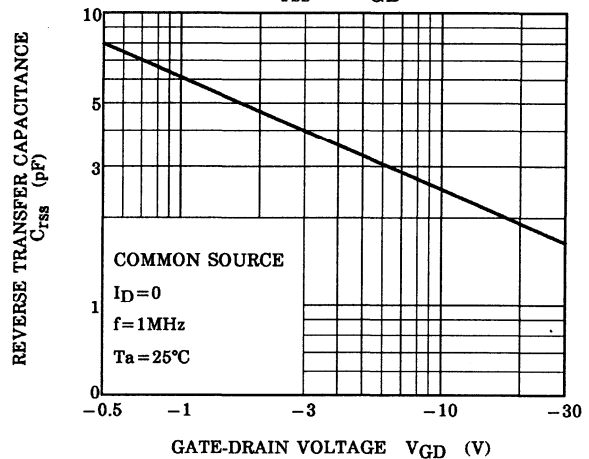
|Y_{fs}| - I_D

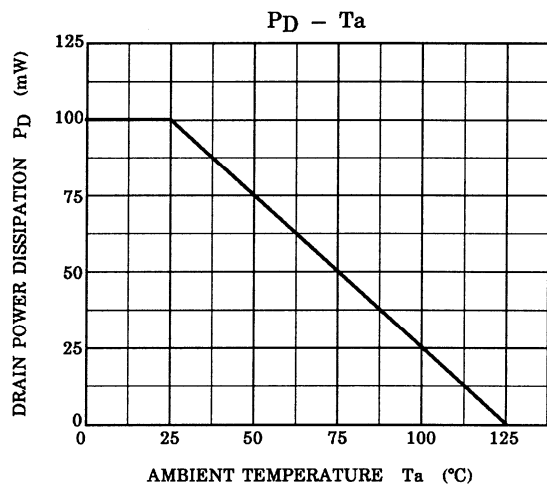
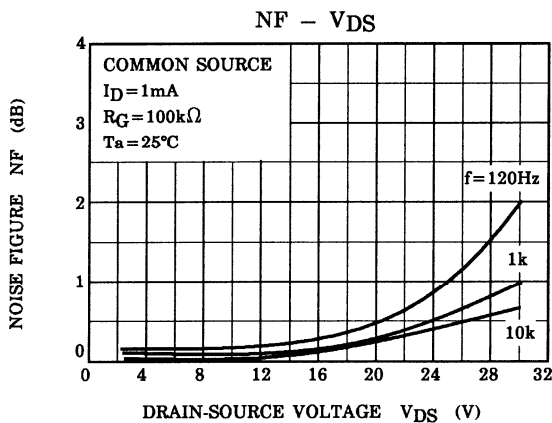
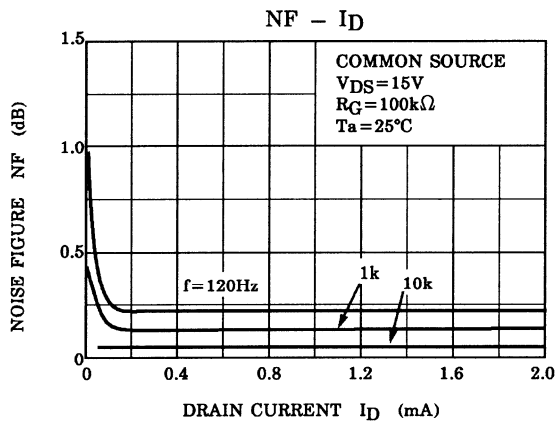
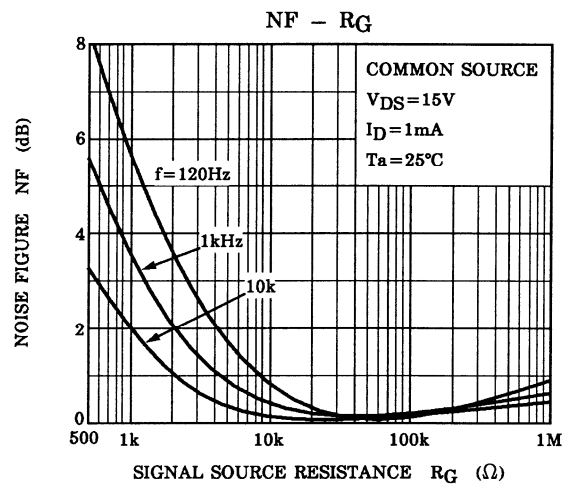
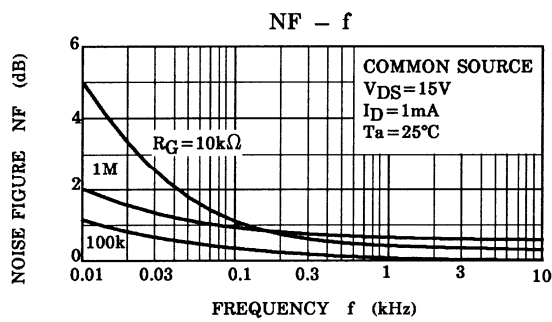
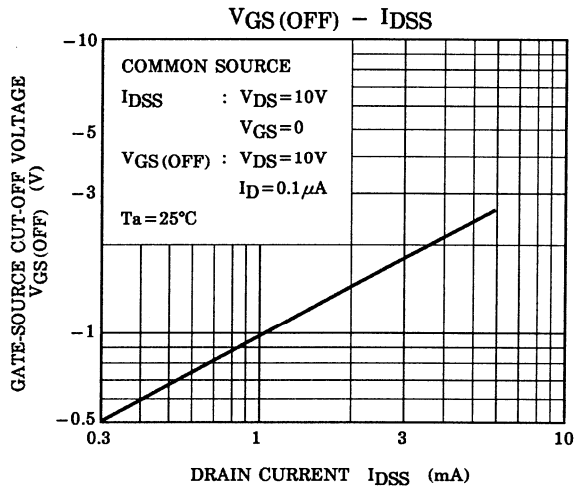
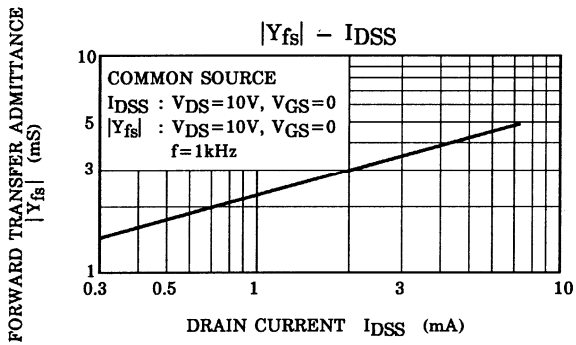


C_{iss} - V_{DS}



C_{rss} - V_{GD}





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