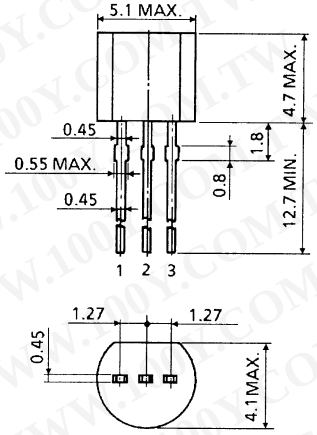
TOSHIBA Field Effect Transistor Silicon P Channel Junction Type

2SJ103

For Audio Amplifier, Analog Switch, Constant Current and Impedance Converter Applications

- High breakdown voltage: V_{GDS} = 50 V
- High input impedance: I_{GSS} = 1.0 nA (max) (V_{GS} = 30 V)
- Low $R_{DS\ (ON)}$: $R_{DS\ (ON)}$ = 270 Ω (typ.) (I_{DSS} = −5 mA)
- Complimentary to 2SK246

Unit: mm



JEDEC	TO-92
JEITA	SC-43
TOSHIBA	2-5F1C

Weight: 0.21 g (typ.)

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	300	mW
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	−55~125	°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).

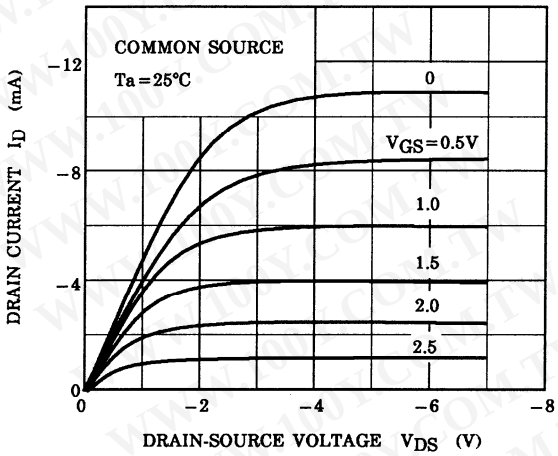
Electrical Characteristics (Ta = 25°C)

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 μA	50	—	—	V
Drain current	I_{DSS} (Note)	V_{DS} = −10 V, V_{GS} = 0	−1.2	—	−14	mA
Gate-source cut-off voltage	$V_{GS\ (OFF)}$	V_{DS} = −10 V, I_D = −0.1 μA	0.3	—	6.0	V
Forward transfer admittance	$\|Y_{fs}\|$	V_{DS} = −10 V, V_{GS} = 0, f = 1 kHz	1.0	4.0	—	mS
Drain-source ON resistance	$R_{DS\ (ON)}$	V_{DS} = −10 mV, V_{GS} = 0, I_{DSS} = −5 mA	—	270	—	Ω
Input capacitance	C_{iss}	V_{DS} = −10 V, V_{GS} = 0, f = 1 MHz	—	18	—	pF
Reverse transfer capacitance	C_{rss}	V_{DG} = −10 V, I_D = 0, f = 1 MHz	—	3.6	—	pF

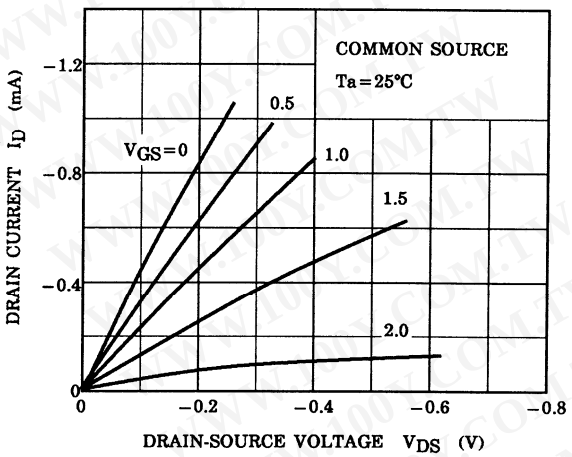
Note: I_{DSS} classification Y: −1.2~−3.0 mA, GR: −2.6~−6.5 mA, BL: −6~−14 mA

勝 特 力 材 料 886-3-5753170
胜特力电子(上海) 86-21-34970699
胜特力电子(深圳) 86-755-83298787
Http://www.100y.com.tw

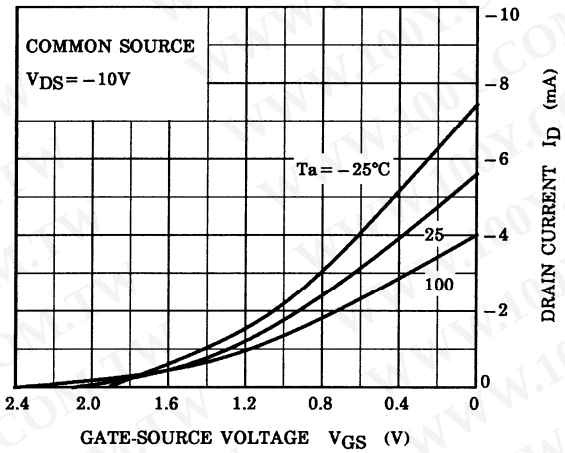
$I_D - V_{DS}$



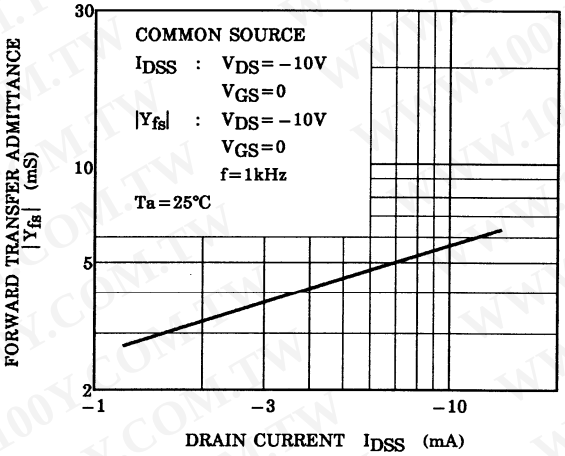
$I_D - V_{DS}$ (LOW VOLTAGE REGION)



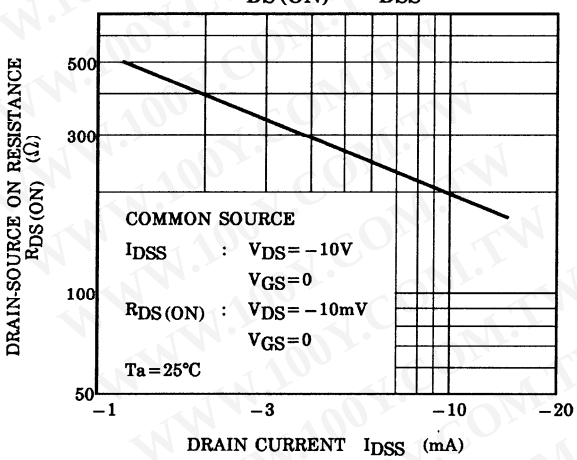
$I_D - I_{GS}$



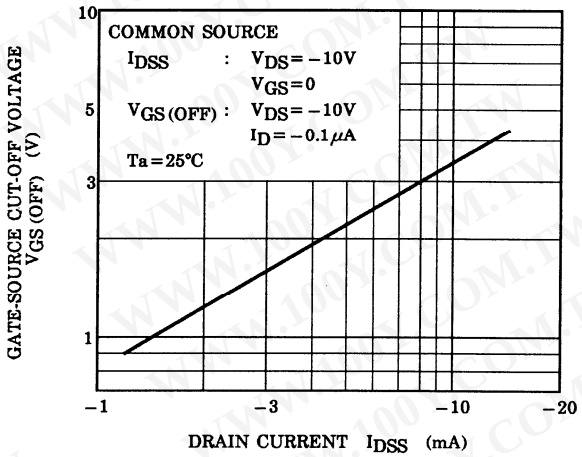
$|Y_{fs}| - I_{DSS}$



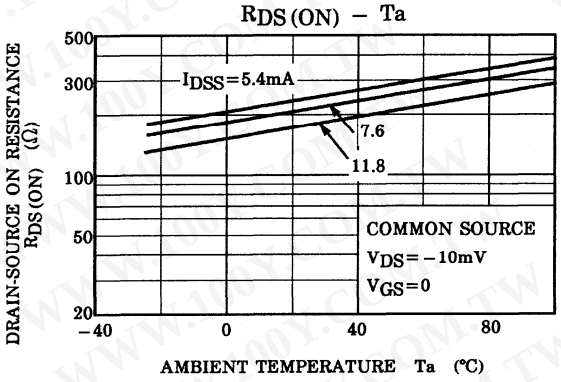
$R_{DS(ON)} - I_{DSS}$



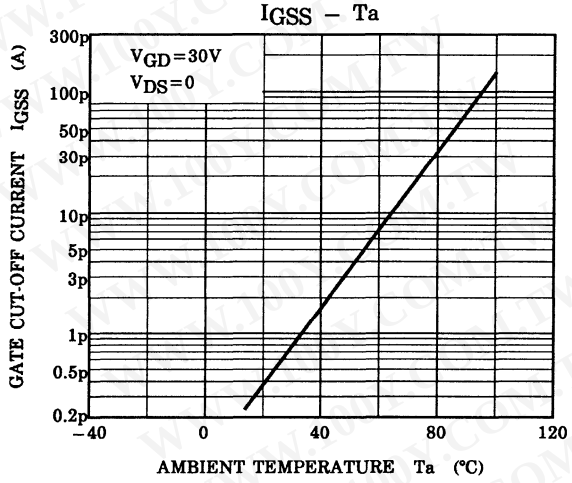
$V_{GS(OFF)} - I_{DSS}$



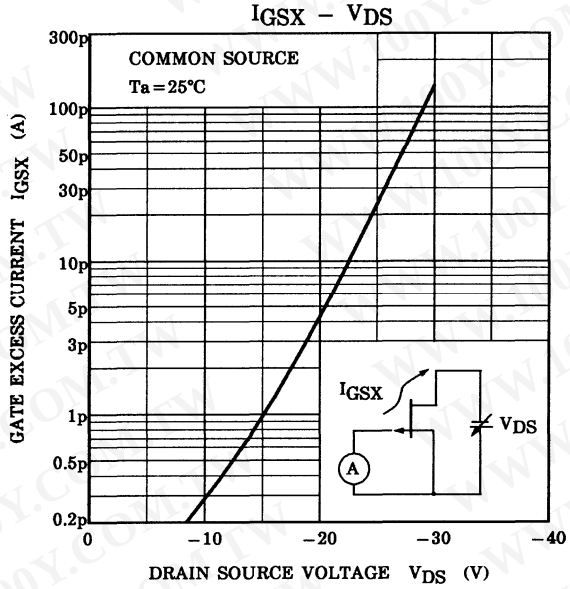
$R_{DS(ON)}$ – Ta



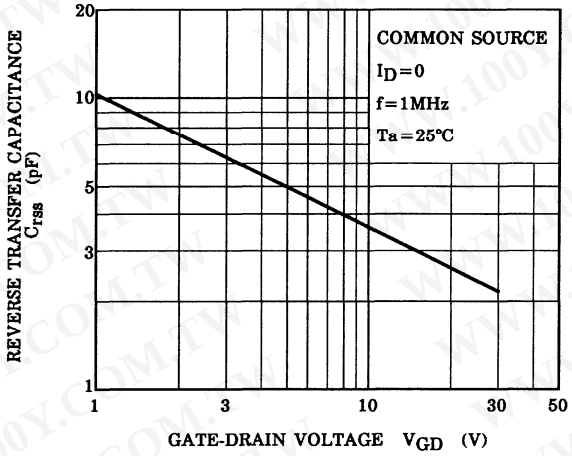
I_{GSS} – Ta



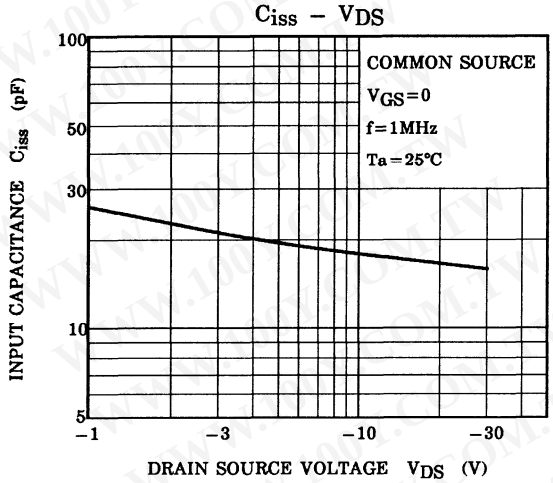
I_{GSX} – V_{DS}



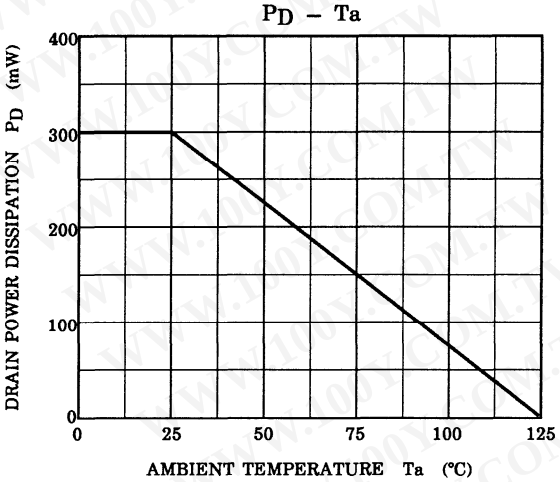
C_{rss} – V_{GD}



C_{iss} – V_{DS}



P_D – Ta



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