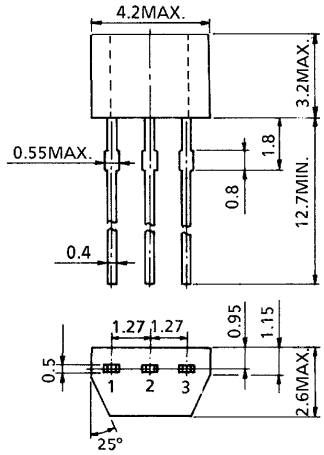
TOSHIBA FIELD EFFECT TRANSISTOR SILICON P CHANNEL JUNCTION TYPE

2SJ105

FOR AUDIO AMPLIFIER, ANALOG SWITCH, CONSTANT CURRENT AND IMPEDANCE CONVERTER APPLICATIONS

Unit in mm



1. SOURCE
2. GATE
3. DRAIN

JEDEC	—
EIAJ	—
TOSHIBA	2-4E1B

Weight : 0.13g

- High Breakdown Voltage : V_{GDS} = 50V
- High Input Impedance : I_{GSS} = 1.0nA (Max.) (V_{GS} = 30V)
- Low $R_{DS\,(ON)}$: $R_{DS\,(ON)}$ = 270Ω (Typ.) (I_{DSS} = −5mA)
- Complimentary to 2SK330
- Small Package

MAXIMUM RATINGS (Ta = 25°C)

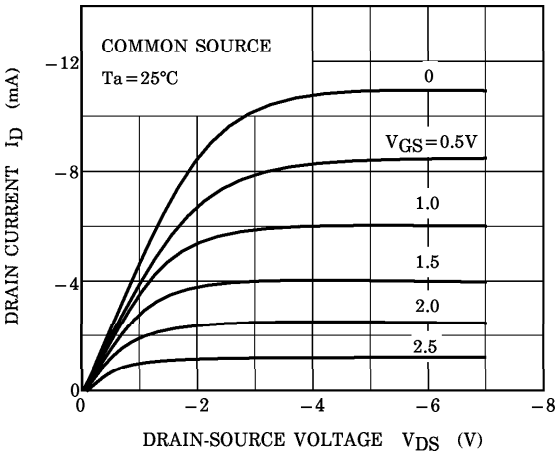
CHARACTERISTIC	SYMBOL	RATING	UNIT
Gate-Drain Voltage	V_{GDS}	50	V
Gate Current	I_G	−10	mA
Drain Power Dissipation	P_D	200	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	−55~125	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

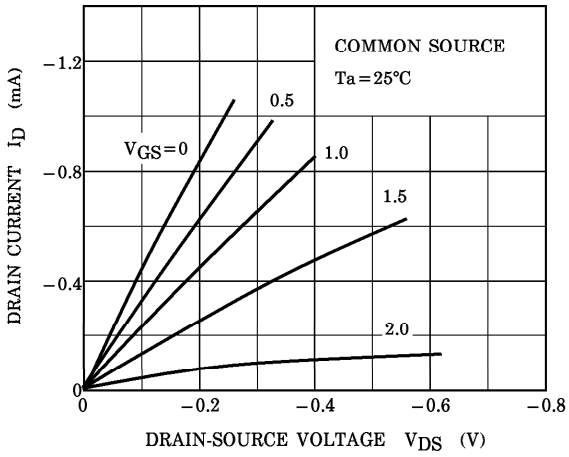
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Cut-off Current	I_{GSS}	V_{GS} = 30V, V_{DS} = 0	—	—	1.0	nA
Gate-Drain Breakdown Voltage	$V_{(BR)\,GDS}$	V_{DS} = 0, I_G = 100μA	50	—	—	V
Drain Current	I_{DSS} (Note)	V_{DS} = −10V, V_{GS} = 0	−1.2	—	−14	mA
Gate-Source Cut-off Voltage	$V_{GS\,(OFF)}$	V_{DS} = −10V, I_D = −0.1μA	0.3	—	6.0	V
Forward Transfer Admittance	$\|Y_{fs}\|$	V_{DS} = −10V, V_{GS} = 0, f = 1kHz	1.0	4.0	—	mS
Drain-Source ON Resistance	$R_{DS\,(ON)}$	V_{DS} = −10mV, V_{GS} = 0 I_{DSS} = −5mA	—	270	—	Ω
Input Capacitance	C_{iss}	V_{DS} = −10V, V_{GS} = 0, f = 1MHz	—	18	—	pF
Reverse Transfer Capacitance	C_{rss}	V_{DG} = −10V, I_D = 0, f = 1MHz	—	3.6	—	pF

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

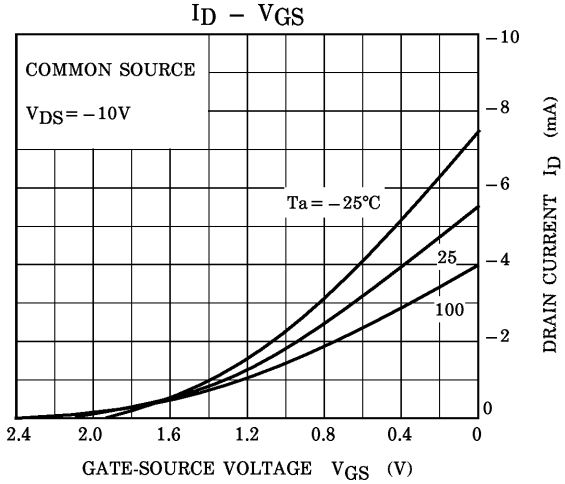
$I_D - V_{DS}$



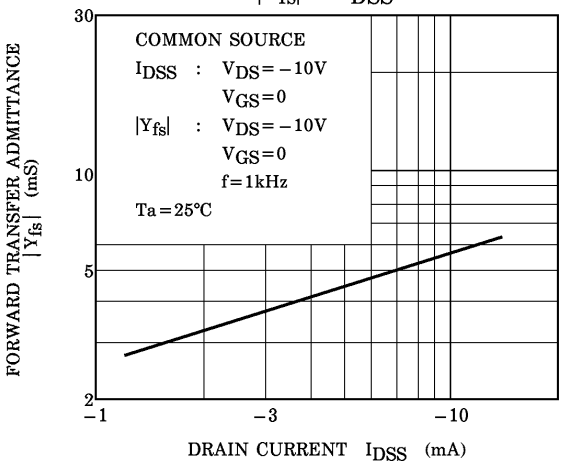
$I_D - V_{DS}$ (LOW VOLTAGE REGION)



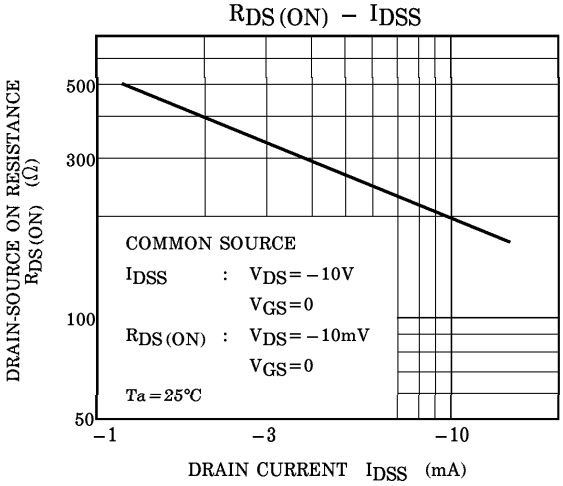
$I_D - V_{GS}$



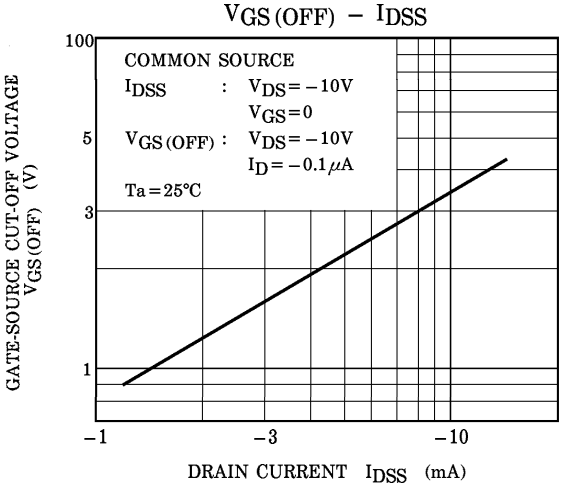
$|Y_{fs}| - I_{DSS}$



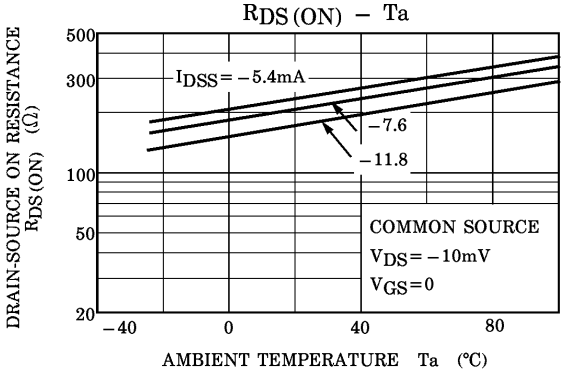
$R_{DS(ON)} - I_{DSS}$



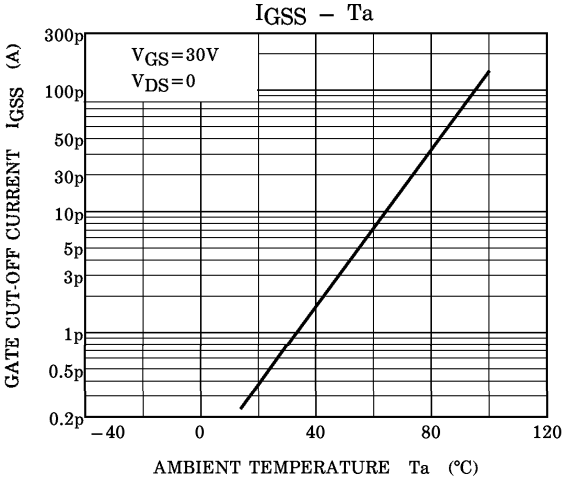
$V_{GS(OFF)} - I_{DSS}$



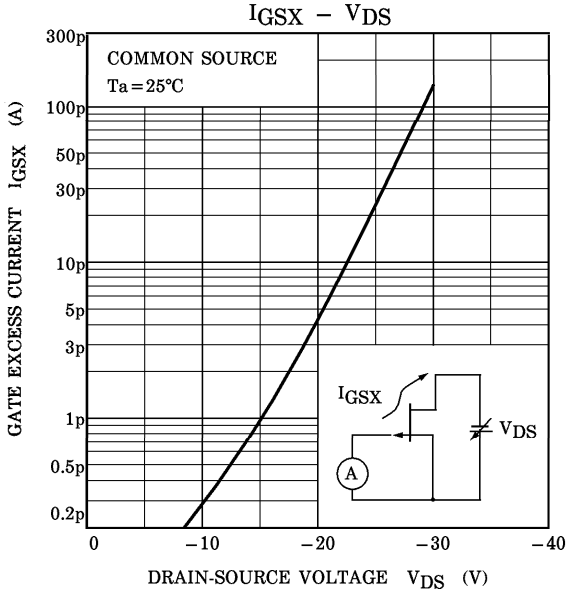
$R_{DS\,(ON)}$ – Ta



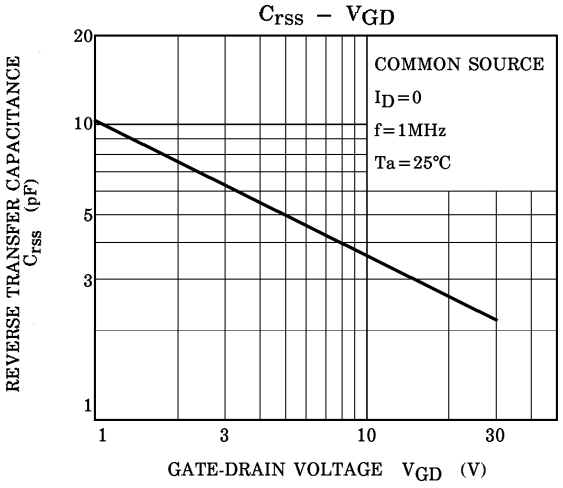
I_{GSS} – Ta



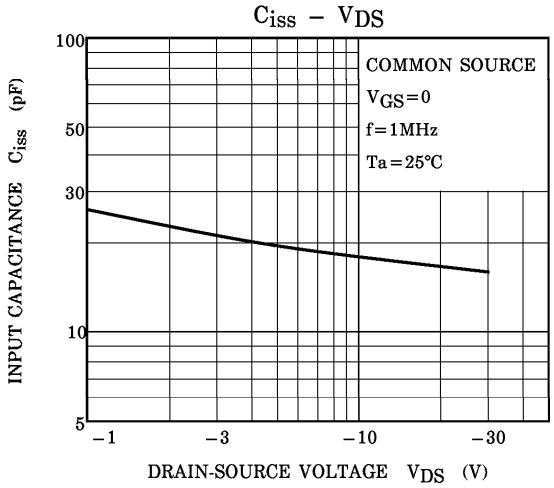
I_{GSX} – V_{DS}



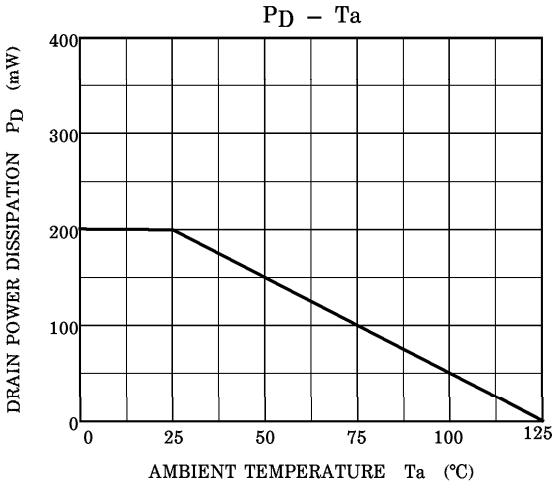
C_{rss} – V_{GD}



C_{iss} – V_{DS}



P_D – Ta



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