

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL JUNCTION TYPE

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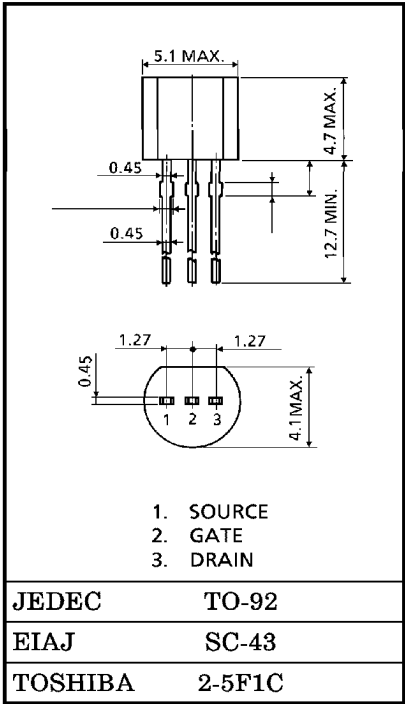
FOR CONSTANT CURRENT, IMPEDANCE
CONVERTER AND DC-AC HIGH INPUT
IMPEDANCE AMPLIFIER CIRCUIT APPLICATIONS

Unit in mm

- High Breakdown Voltage : $V_{GDS} = -50V$
- High Input Impedance : $I_{GSS} = 1nA (Max.) (V_{GS} = -30V)$

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	300	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	-55~125	°C



Weight : 0.21g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

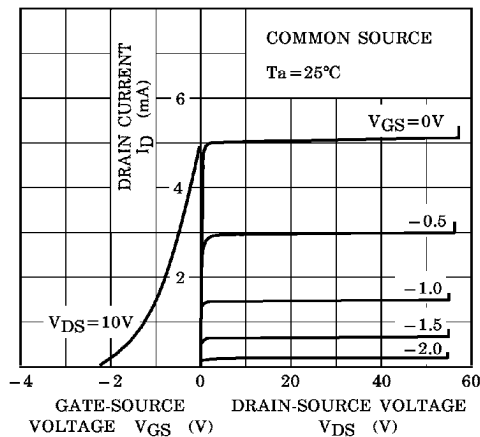
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Cut-off Current	I_{GSS}	$V_{GS} = -30V, V_{DS} = 0$	—	—	-1.0	nA
Gate-Drain Breakdown Voltage	$V_{(BR) GDS}$	$V_{DS} = 0, I_G = -100\mu A$	-50	—	—	V
Drain Current	I_{DSS} (Note)	$V_{DS} = 10V, V_{GS} = 0$	1.2	—	14	mA
Gate-Source Cut-off Voltage	$V_{GS (OFF)}$	$V_{DS} = 10V, I_D = 0.1\mu A$	-0.7	—	-6.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10V, V_{GS} = 0, f = 1kHz$	1.5	—	—	mS
Input Capacitance	C_{iss}	$V_{DS} = 10V, V_{GS} = 0, f = 1MHz$	—	9.0	—	pF
Reverse Transfer Capacitance	C_{rss}	$V_{DG} = 10V, I_D = 0, f = 1MHz$	—	2.5	—	pF

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

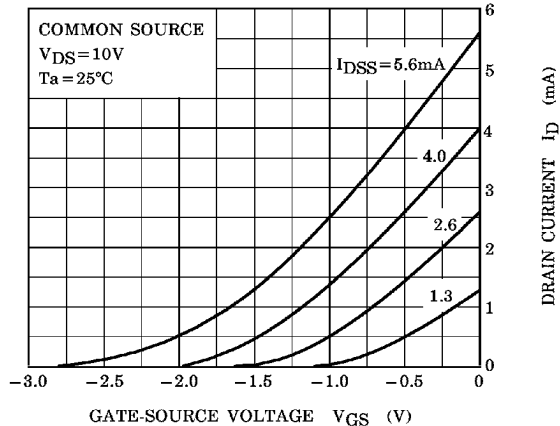
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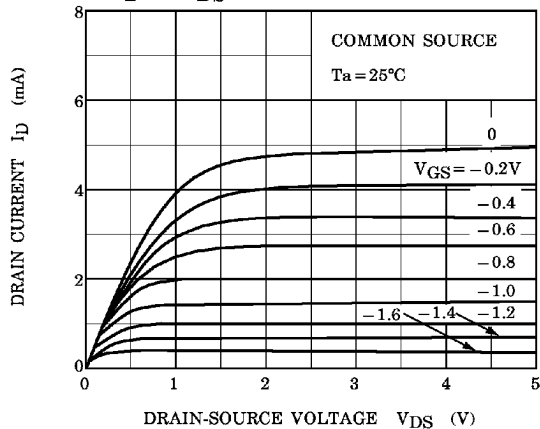
STATIC CHARACTERISTICS



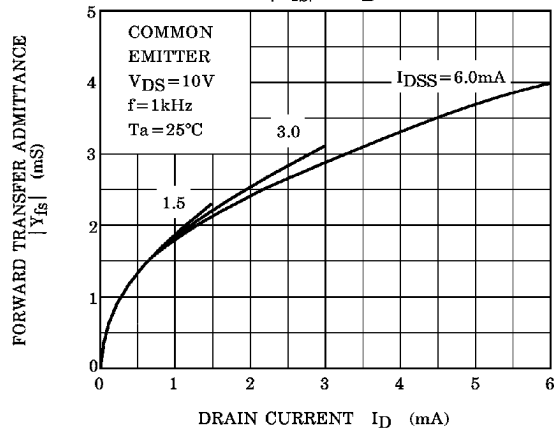
$I_D - V_{GS}$



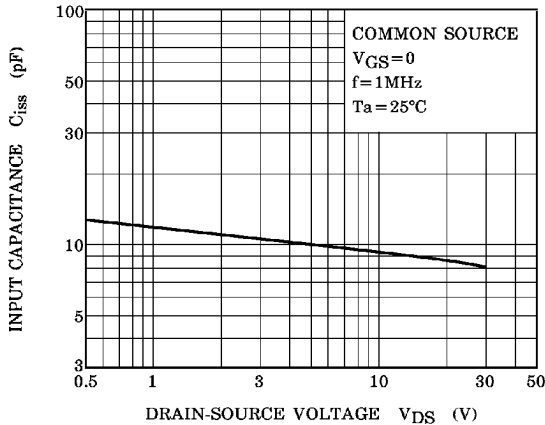
$I_D - V_{DS}$ (LOW VOLTAGE REGION)



$|Y_{fs}| - I_D$



$C_{iss} - V_{DS}$



$C_{rss} - V_{GD}$

