

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL JUNCTION TYPE

# 2SK246

FOR CONSTANT CURRENT, IMPEDANCE

Unit in mm

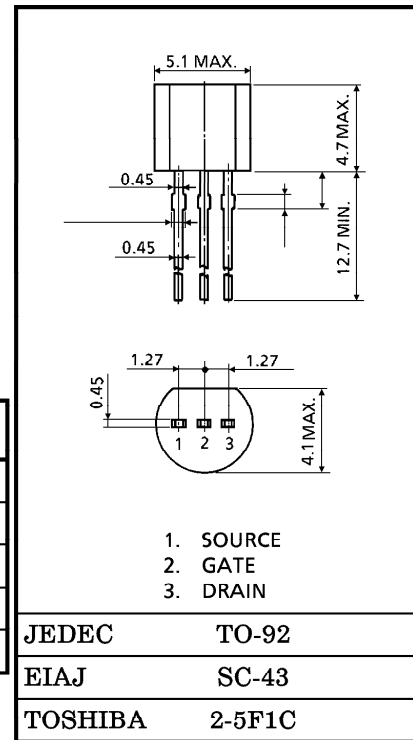
CONVERTER AND DC-AC HIGH INPUT

IMPEDANCE AMPLIFIER CIRCUIT APPLICATIONS

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

MAXIMUM RATINGS ( $T_a = 25^\circ C$ )

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	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~125	$^\circ C$



Weight : 0.21g

ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

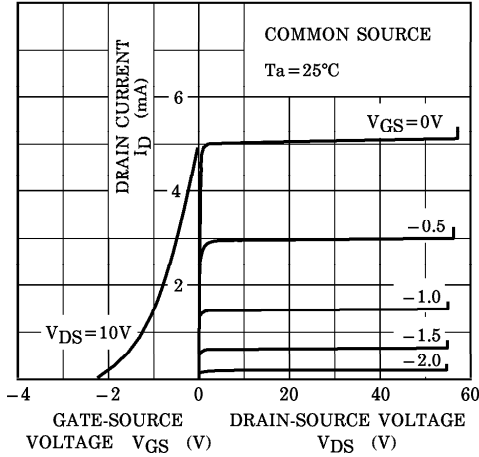
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Cut-off Current	$I_{GSS}$	$V_{GS} = -30V, V_{DS} = 0$	—	—	-1.0	nA
Gate-Drain Breakdown Voltage	$V_{(BR) GDS}$	$V_{DS} = 0, I_G = -100\mu A$	-50	—	—	V
Drain Current	$I_{DSS}$ (Note)	$V_{DS} = 10V, V_{GS} = 0$	1.2	—	14	mA
Gate-Source Cut-off 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

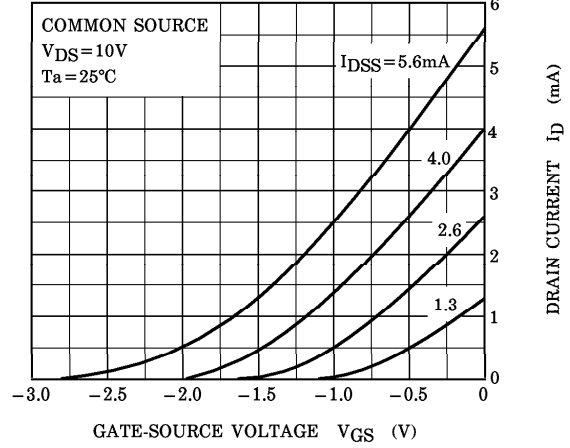
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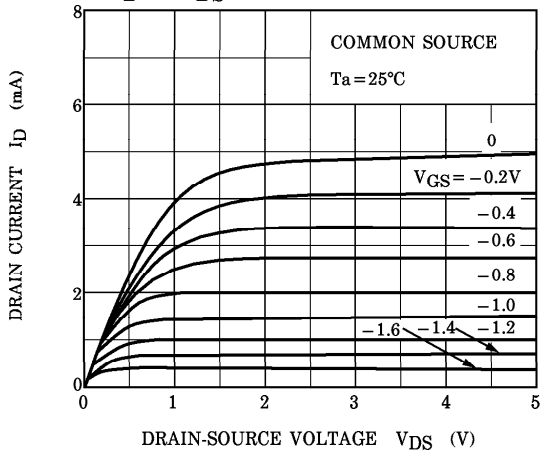
STATIC CHARACTERISTICS



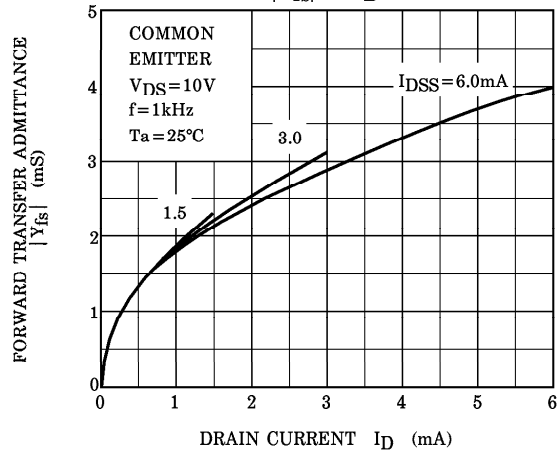
$I_D - V_{GS}$



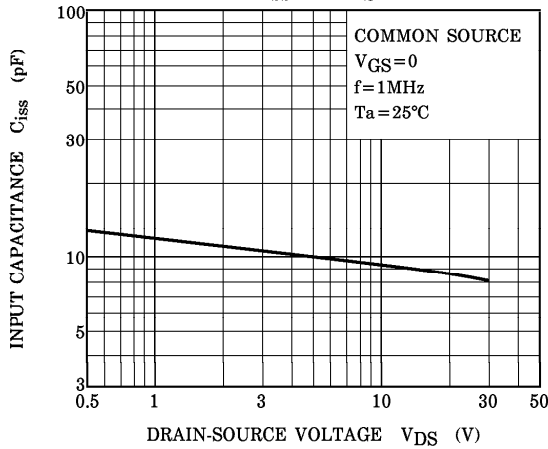
$I_D - V_{DS}$  (LOW VOLTAGE REGION)



$|Y_{fs}| - I_D$



$C_{iss} - V_{DS}$



$C_{rss} - V_{GD}$

