

TOSHIBA Field Effect Transistor Silicon N Channel Junction Type

2SK364

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

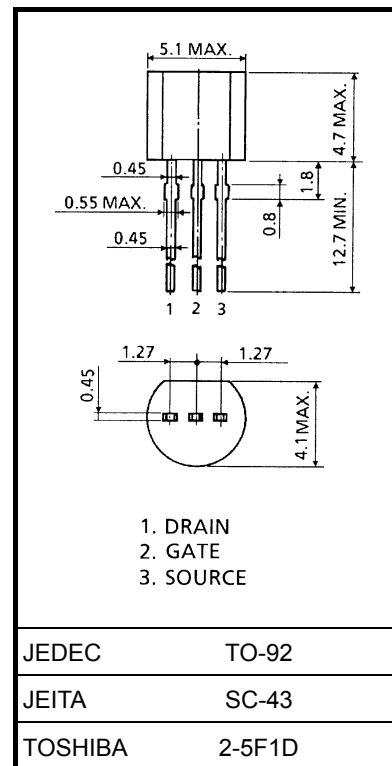
Unit: mm

- High breakdown voltage: $V_{GDS} = -40$ V
- High input impedance: $I_{GSS} = -1.0$ nA (max) ($V_{GS} = -30$ V)
- Low $R_{DS(ON)}$: $R_{DS(ON)} = 50$ Ω (typ.) ($I_{DSS} = 5$ mA)
- Complementary to 2SJ104

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Rating	Unit
Gate-drain voltage	V_{GDS}	-40	V
Gate current	I_G	10	mA
Drain power dissipation	P_D	400	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55~125	$^\circ\text{C}$

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).

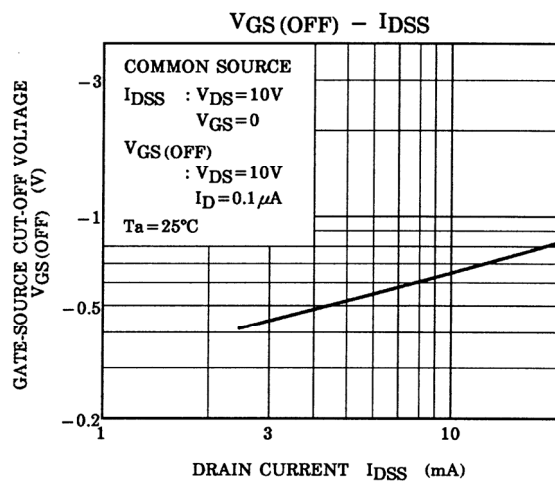
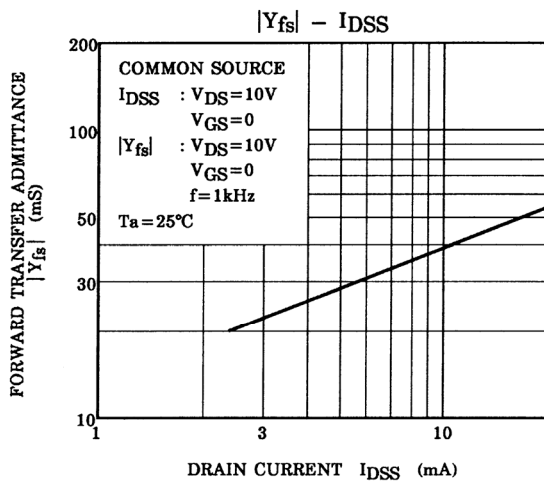
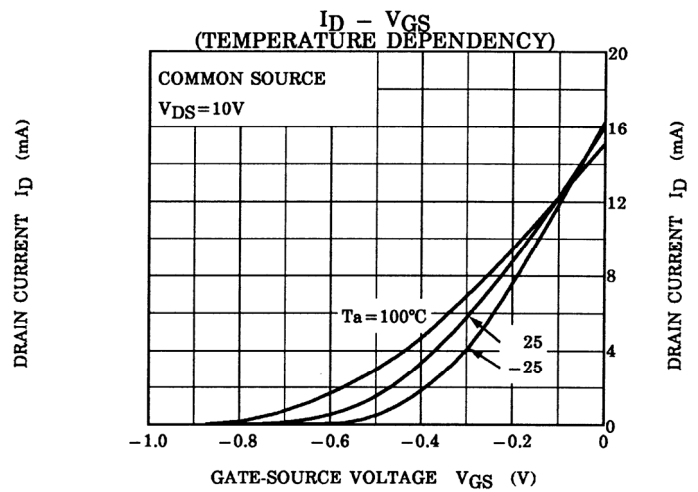
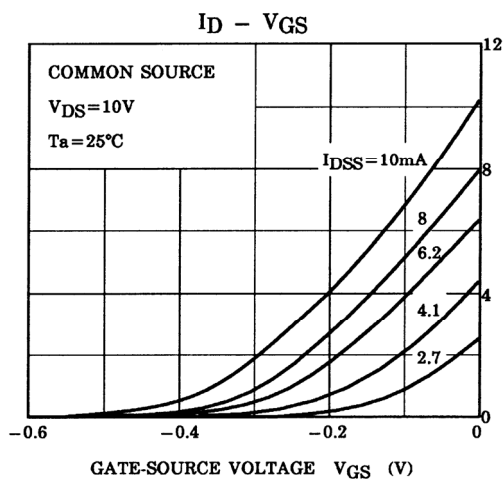
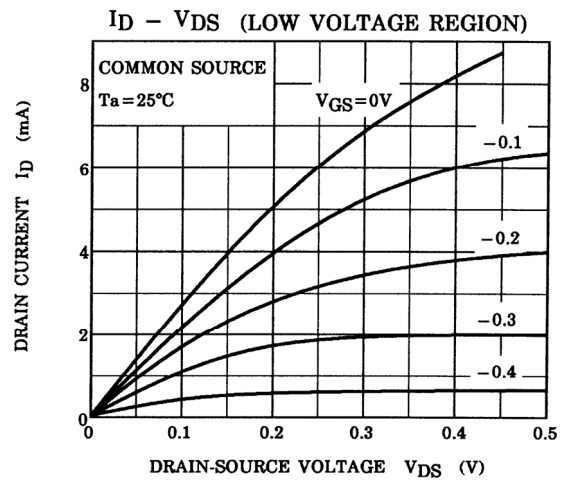
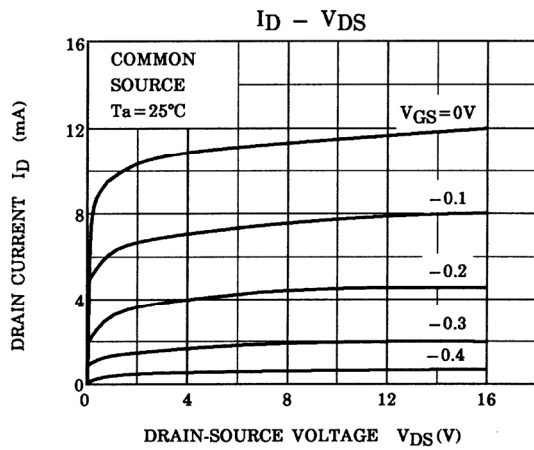


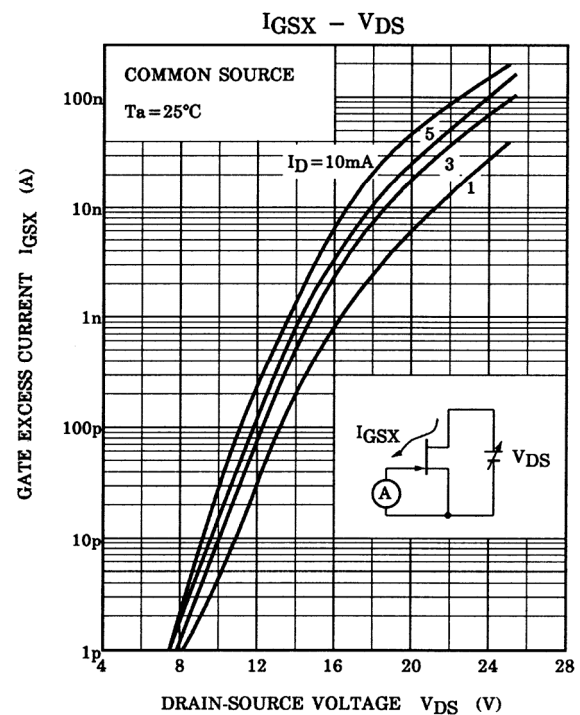
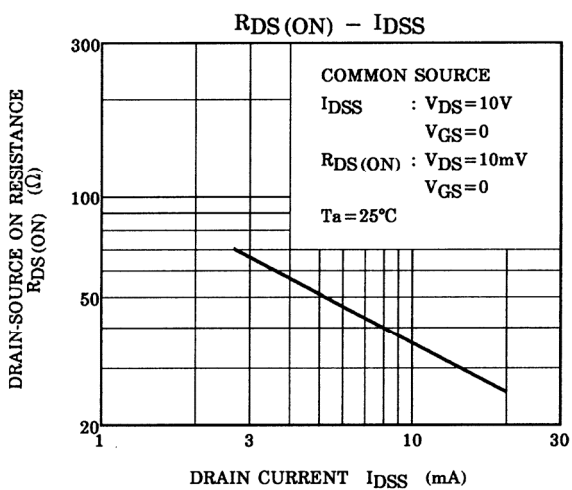
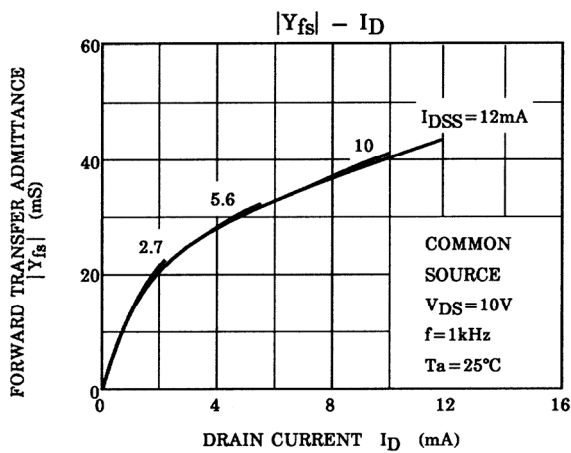
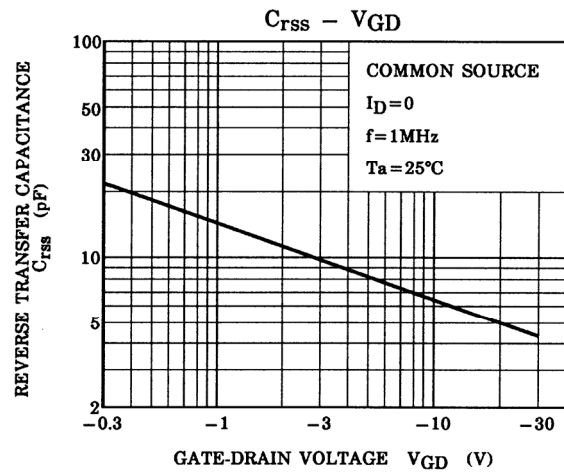
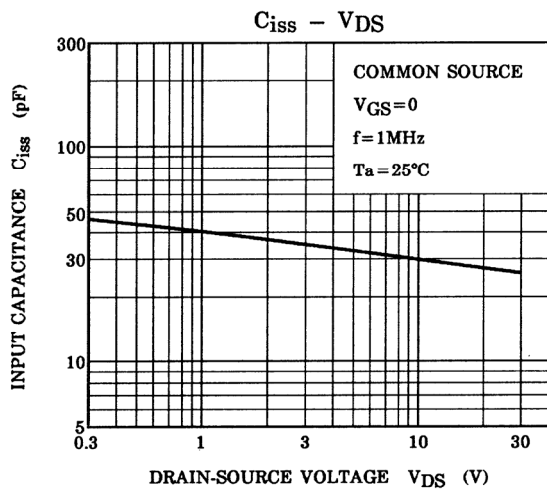
Weight: 0.21 g (typ.)

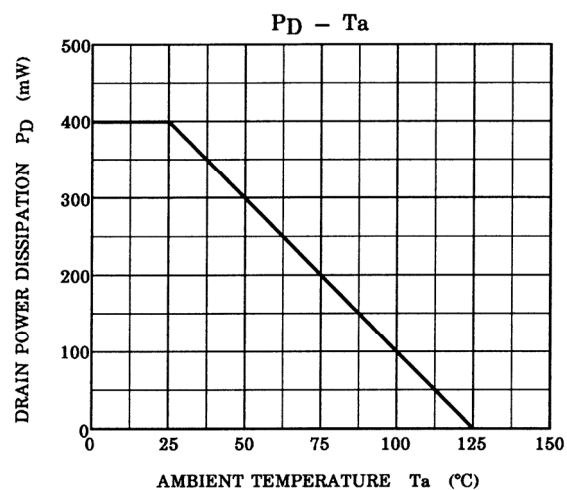
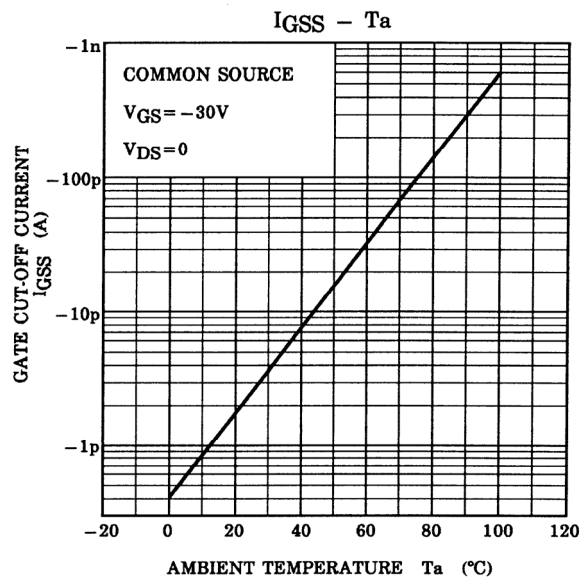
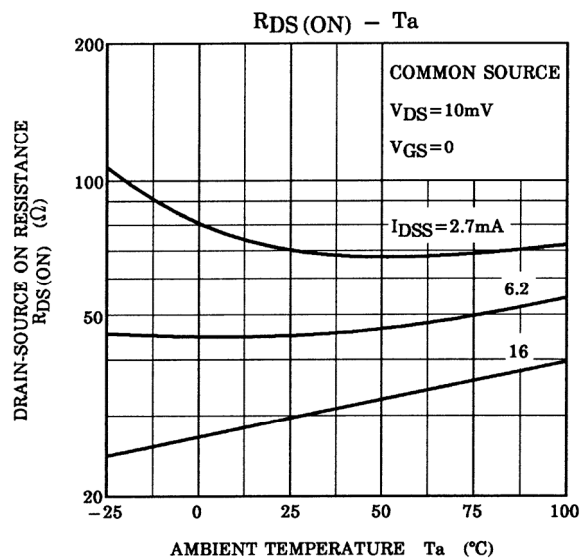
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

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	-40	—	—	V
Drain current	I_{DSS} (Note 1)	$V_{DS} = 10$ V, $V_{GS} = 0$	2.6	—	20	mA
Gate-source cut-off voltage	$V_{GS(OFF)}$	$V_{DS} = 10$ V, $I_D = 0.1$ μA	-0.2	—	-1.5	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 10$ V, $V_{GS} = 0$, $f = 1$ kHz (Note 2)	12	28	—	mS
Input capacitance	C_{iss}	$V_{DS} = 10$ V, $V_{GS} = 0$, $f = 1$ MHz	—	30	—	pF
Reverse transfer capacitance	C_{rss}	$V_{DG} = 10$ V, $I_D = 0$, $f = 1$ MHz	—	6	—	pF
Drain-source ON resistance	$R_{DS(ON)}$	$V_{DS} = 10$ mV, $V_{GS} = 0$ (Note 2)	—	50	—	Ω

Note 1: I_{DSS} classification GR: 2.6~6.5 mA, BL: 6~12 mA, V: 10~20 mANote 2: Condition of the typical value $I_{DSS} = 5$ mA







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20070701-EN GENERAL

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