

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

2SK2013

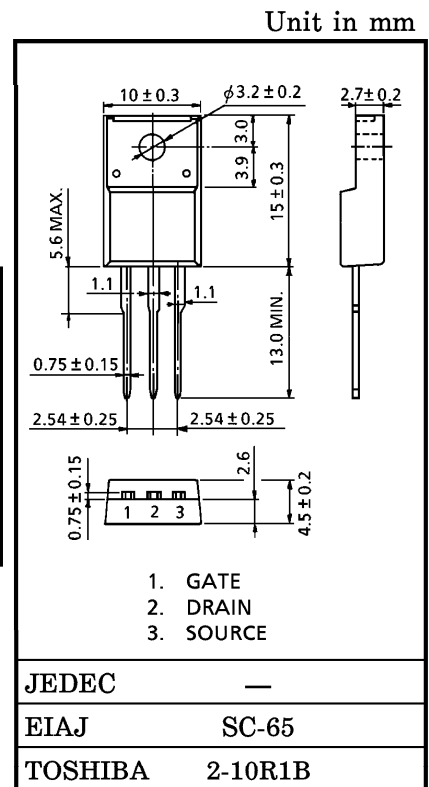
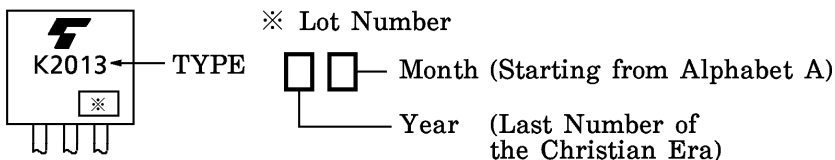
AUDIO FREQUENCY POWER AMPLIFIER APPLICATION

- High Breakdown Voltage : $V_{DSS} = 180\text{ V}$
- High Forward Transfer Admittance : $|Y_{fs}| = 0.7\text{ S (Typ.)}$
- Complementary to 2SJ313

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DSS}	180	V
Gate-Source Voltage	V_{GSS}	± 20	V
Drain Current	I_D	1	A
Power Dissipation ($T_c = 25^\circ\text{C}$)	P_D	25	W
Channel Temperature	T_{ch}	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-55 \sim 150$	$^\circ\text{C}$

MARKING



Weight : 1.9 g

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

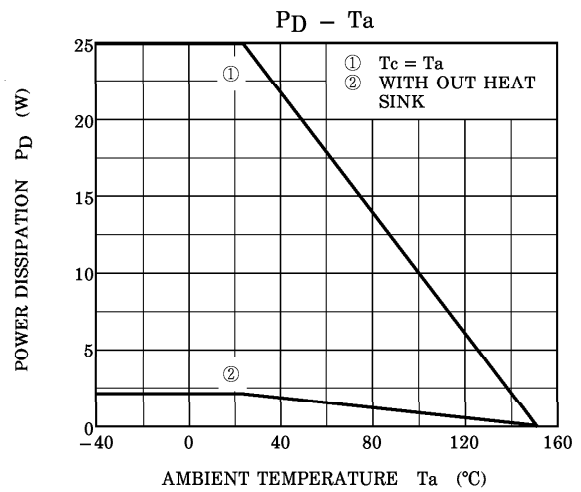
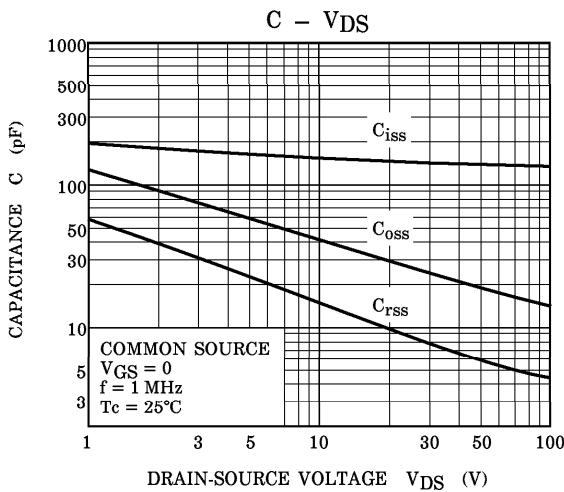
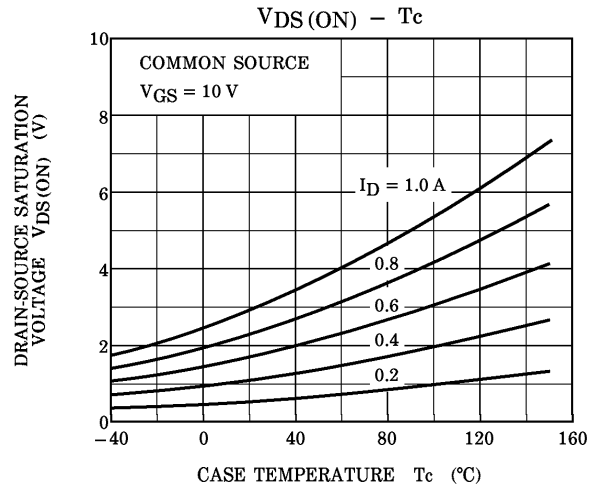
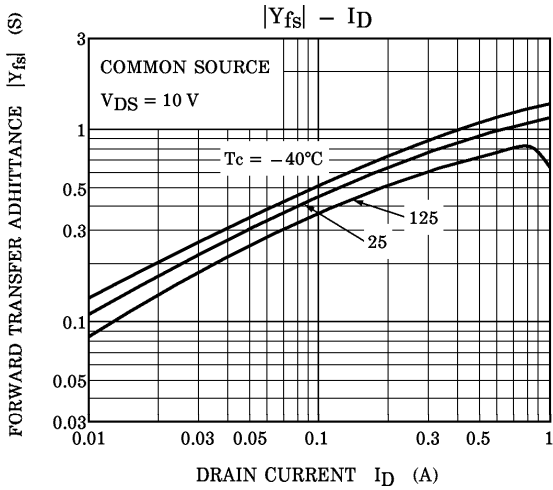
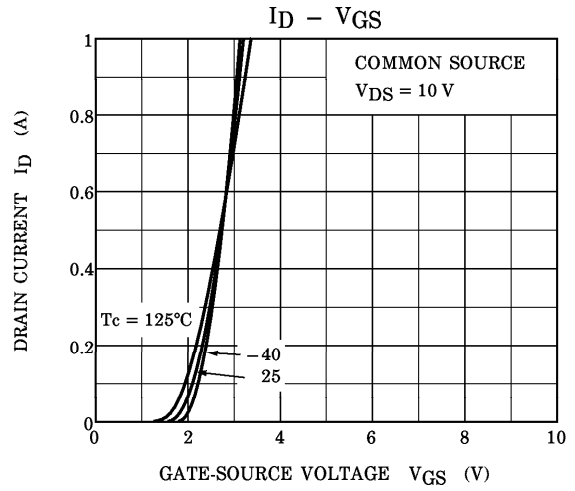
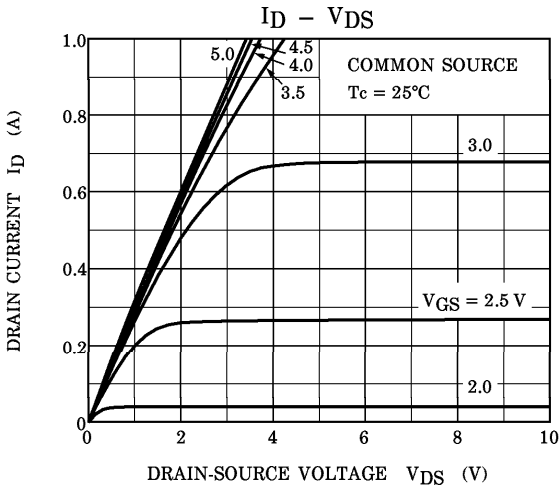
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I_{GSS}	$V_{DS} = 0, V_{GS} = \pm 20\text{ V}$	—	—	± 100	nA
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 10\text{ mA}, V_{GS} = 0$	180	—	—	V
Gate-Source Cut-off Current	$V_{GS(OFF)}$ (Note)	$V_{DS} = 10\text{ V}, I_D = 10\text{ mA}$	0.8	—	2.8	V
Drain-Source Saturation Voltage	$V_{DS(ON)}$	$I_D = 0.6\text{ A}, V_{GS} = 10\text{ V}$	—	1.7	3.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10\text{ V}, I_D = 0.3\text{ A}$	—	0.7	—	S
Input Capacitance	C_{iss}	$V_{DS} = 10\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$	—	170	—	pF
Output Capacitance	C_{oss}	$V_{DS} = 10\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$	—	45	—	pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 10\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$	—	17	—	pF

(Note) : $V_{GS(OFF)}$ Classification O : 0.8~1.6, Y : 1.4~2.8

**This transistor is the electrostatic sensitive device.
Please handle with caution.**

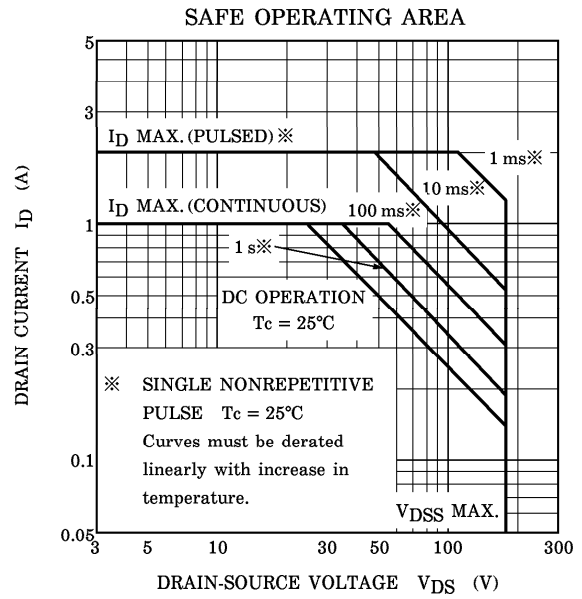
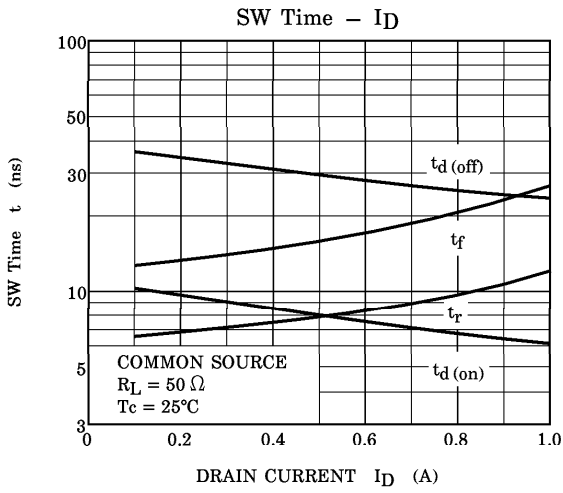
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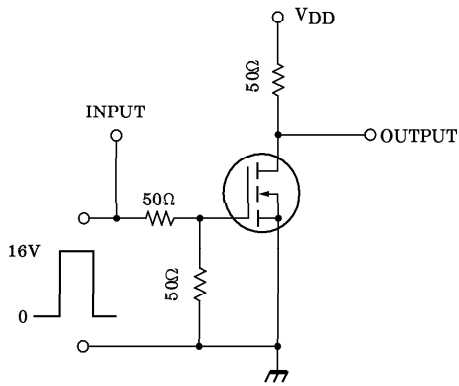


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TEST CIRCUIT



WAVEFORMS

