

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

# 2SK2013

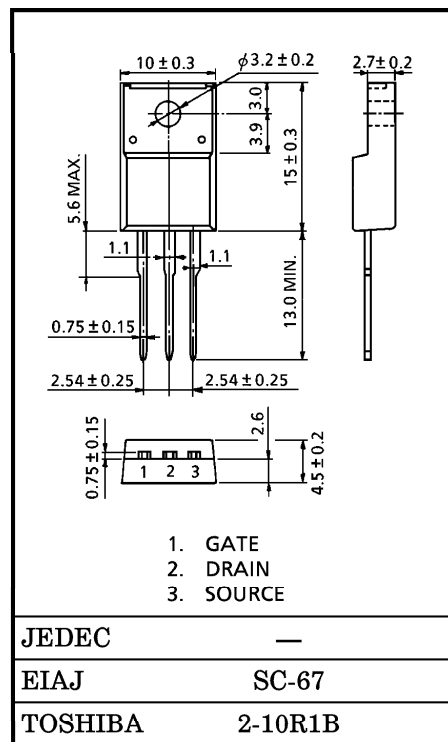
AUDIO FREQUENCY POWER AMPLIFIER APPLICATION

Unit in mm

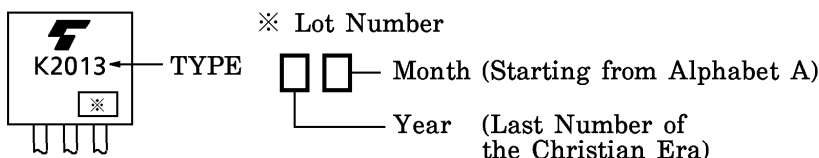
- High Breakdown Voltage :  $V_{DSS}=180V$
- High Forward Transfer Admittance :  $|Y_{fs}|=0.7S$  (Typ.)
- Complementary to 2SJ313

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

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



MARKING



Weight : 1.9g

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

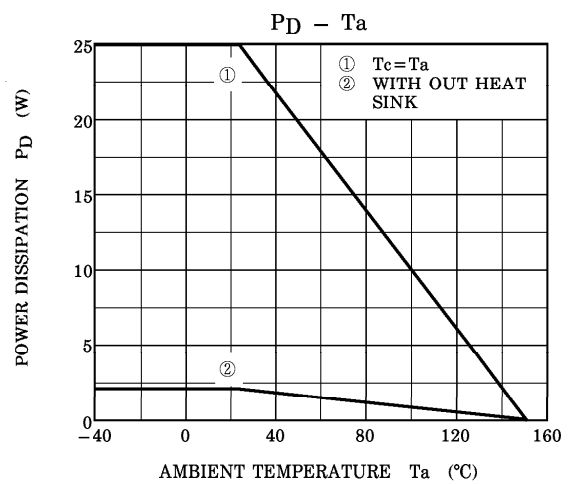
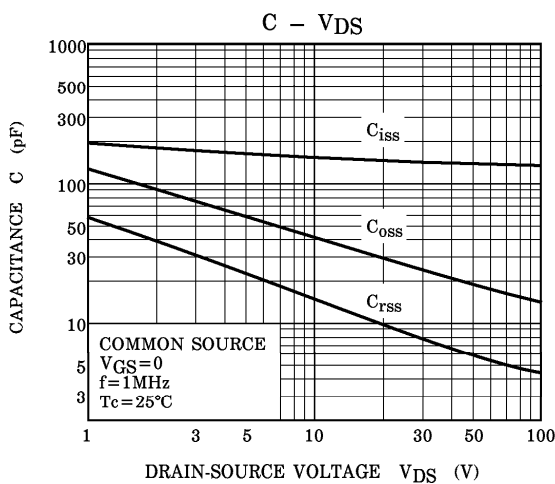
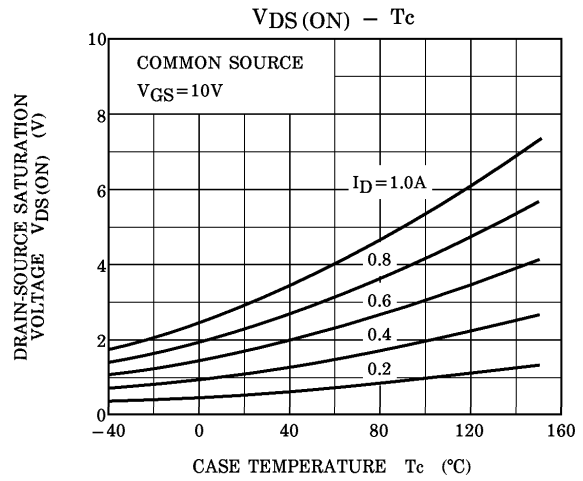
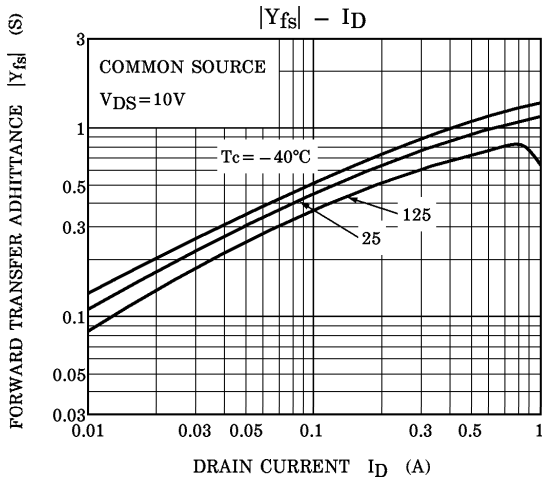
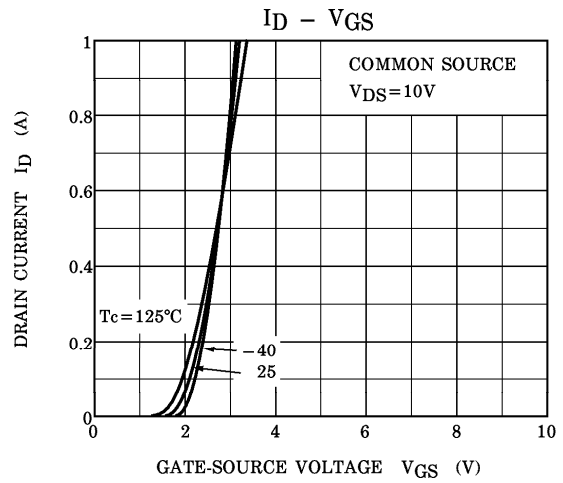
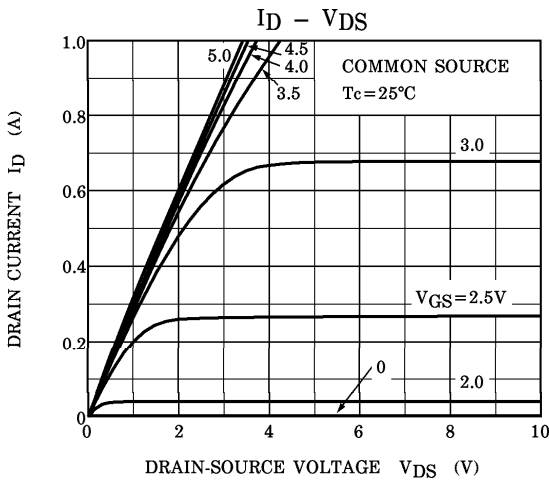
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	$I_{GSS}$	$V_{DS}=0, V_{GS}=\pm 20V$	—	—	$\pm 100$	nA
Drain-Source Breakdown Voltage	$V_{(BR) DSS}$	$I_D=10mA, V_{GS}=0$	180	—	—	V
Gate-Source Cut-off Current	$V_{GS(OFF)}$ (Note)	$V_{DS}=10V, I_D=10mA$	0.8	—	2.8	V
Drain-Source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

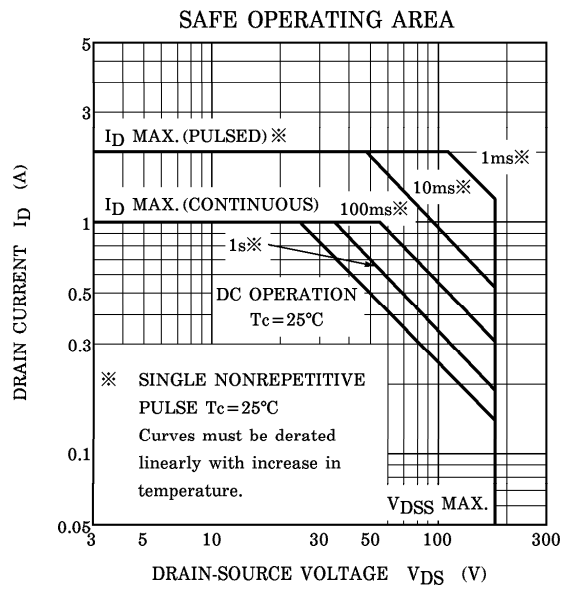
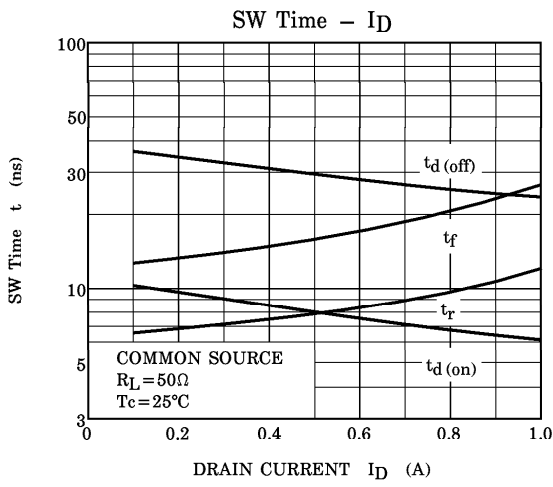
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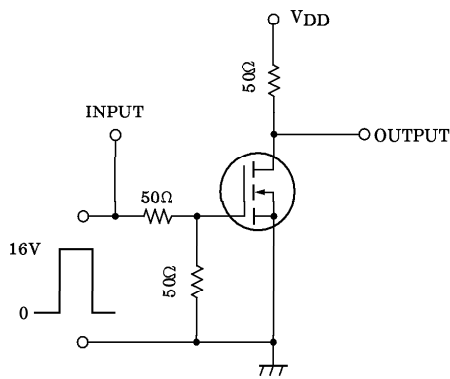


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TEST CIRCUIT



WAVEFORMS

