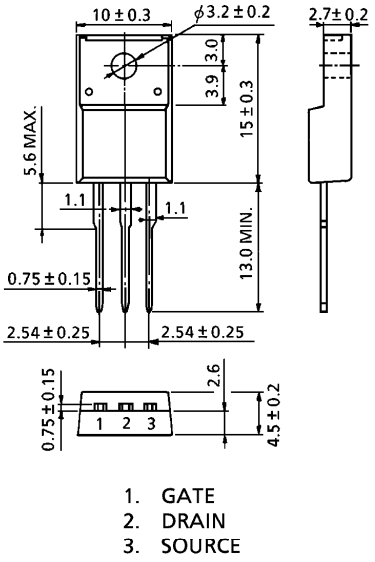
TOSHIBA FIELD EFFECT TRANSISTOR SILICON P CHANNEL MOS TYPE

2SJ313

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 2SK2013



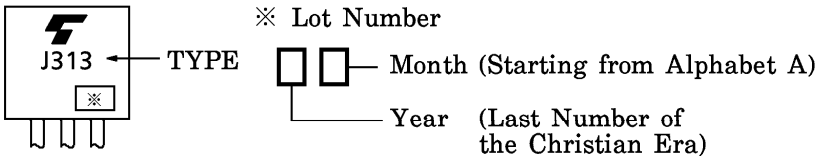
JEDEC	—
EIAJ	SC-67
TOSHIBA	2-10R1B

Weight : 1.9g

MAXIMUM RATINGS (Ta = 25°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 (Tc = 25°C)	P_D	25	W
Channel Temperature	T_{ch}	150	°C
Storage Temperature Range	T_{stg}	−55~150	°C

MARKING



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I_{GSS}	$V_{DS} = 0$, $V_{GS} = \pm 20V$	—	—	±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	$V_{DS(ON)}$	$I_D = -0.6A$, $V_{GS} = -10V$	—	−1.2	−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	—	210	—	pF
Output Capacitance	C_{oss}		—	90	—	pF
Reverse Transfer Capacitance	C_{rss}		—	45	—	pF

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

This transistor is the electrostatic sensitive device.
Plese handle with caution.

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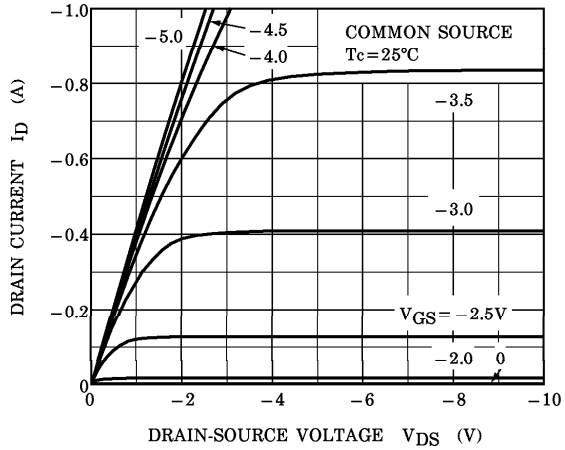
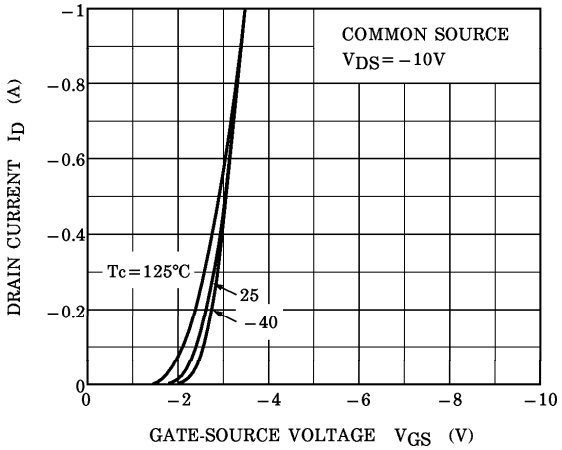
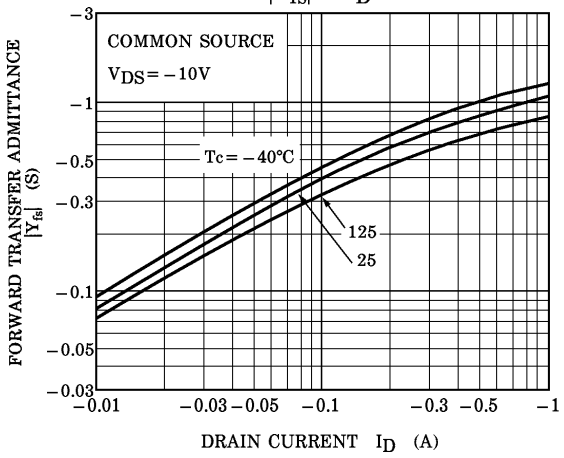
I_D – V_{DS}



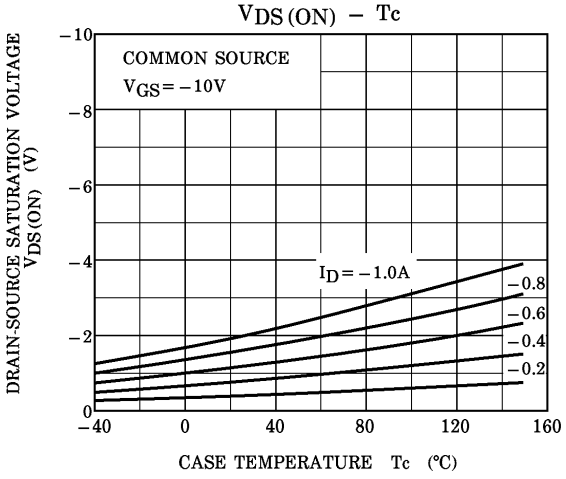
I_D – V_{GS}



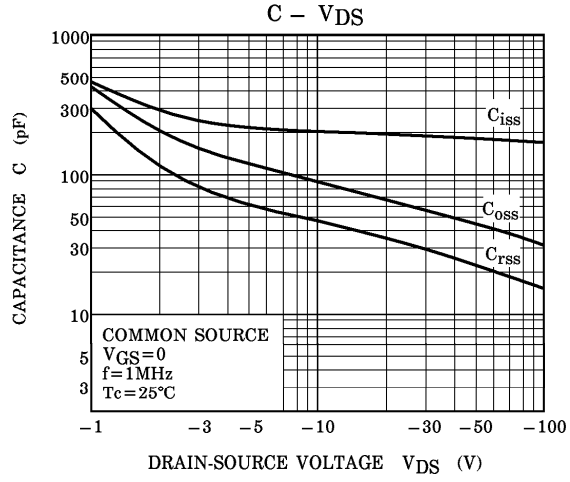
$|Y_{fs}|$ – I_D



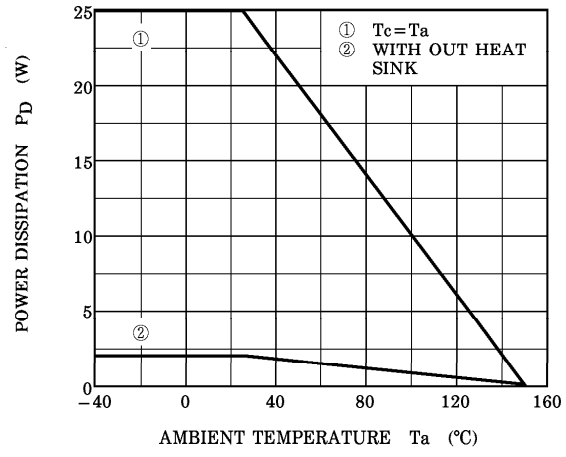
$V_{DS(ON)}$ – Tc



C – V_{DS}



P_D – Ta



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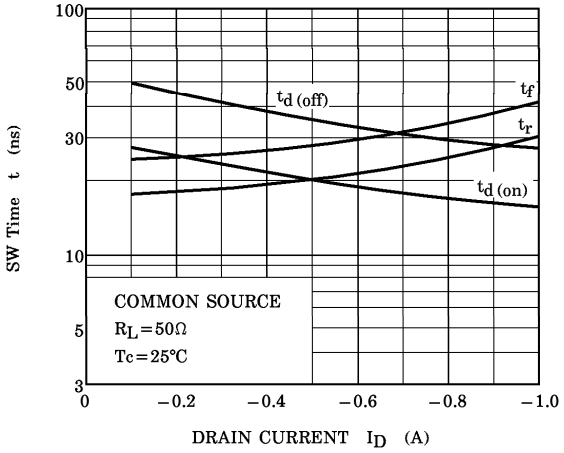
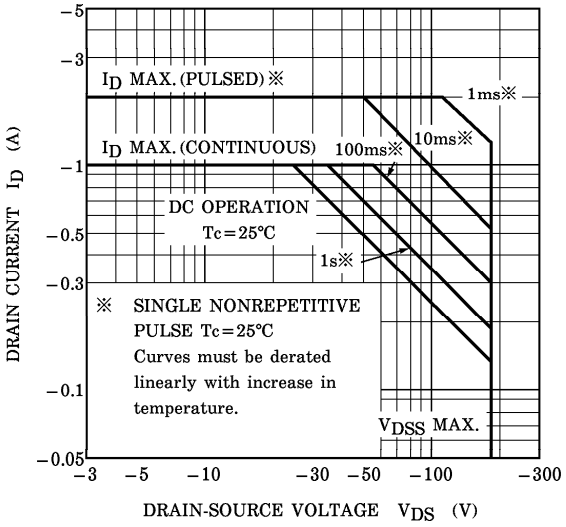
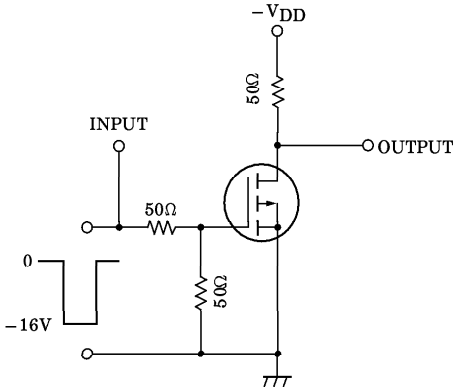
SW Time – I_D



SAFE OPERATING AREA



TEST CIRCUIT



WAVEFORMS