

2SJ200

High Power Amplifier Application

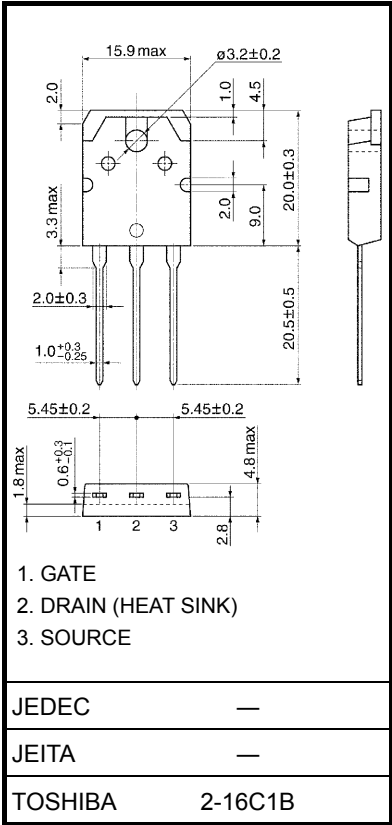
- High breakdown voltage : $V_{DSS} = -180\text{ V}$
- High forward transfer admittance : $|Y_{fs}| = 4.0\text{ S (typ.)}$
- Complementary to 2SK1529

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Drain-source voltage	V_{DSS}	-180	V
Gate-source voltage	V_{GSS}	±20	V
Drain current (Note 1)	I_D	-10	A
Drain power dissipation (Tc = 25°C)	P_D	120	W
Channel temperature	T_{ch}	150	°C
Storage temperature range	T_{stg}	-55~150	°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).

Unit: mm



Weight: 4.6 g (typ.)

Electrical Characteristics (Ta = 25°C)

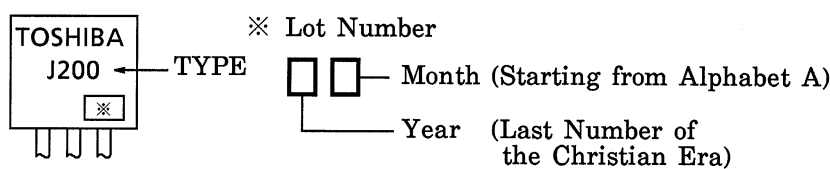
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Drain cut-off current	I_{DSS}	$V_{DS} = -180\text{ V}, V_{GS} = 0$	—	—	-1.0	mA
Gate leakage current	I_{GSS}	$V_{DS} = 0, V_{GS} = \pm 20\text{ V}$	—	—	± 0.5	μA
Drain-source breakdown voltage	$V_{(BR) DSS}$	$I_D = -10\text{ mA}, V_{GS} = 0$	-180	—	—	V
Gate-source cut-off voltage (Note 2)	$V_{GS (OFF)}$	$V_{DS} = -10\text{ V}, I_D = -0.1\text{ A}$	-0.8	—	-2.8	V
Drain-source saturation voltage	$V_{DS (ON)}$	$I_D = -6\text{ A}, V_{GS} = -10\text{ V}$	—	-1.5	-5.0	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = -10\text{ V}, I_D = -3\text{ A}$	—	4.0	—	S
Input capacitance	C_{iss}	$V_{DS} = -30\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$	—	1300	—	pF
Output capacitance	C_{oss}	$V_{DS} = -30\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$	—	350	—	
Reverse transfer capacitance	C_{rss}	$V_{DS} = -30\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$	—	200	—	

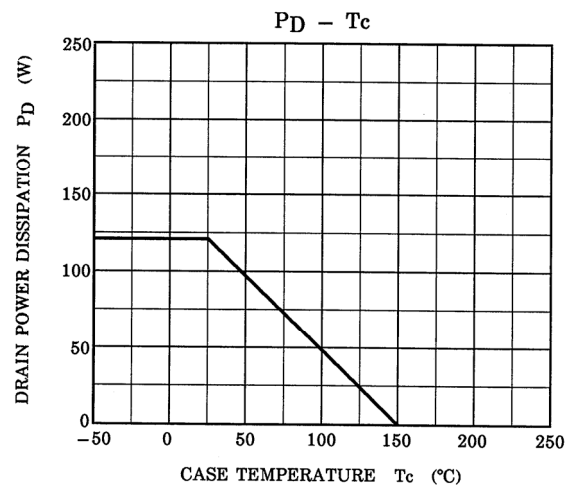
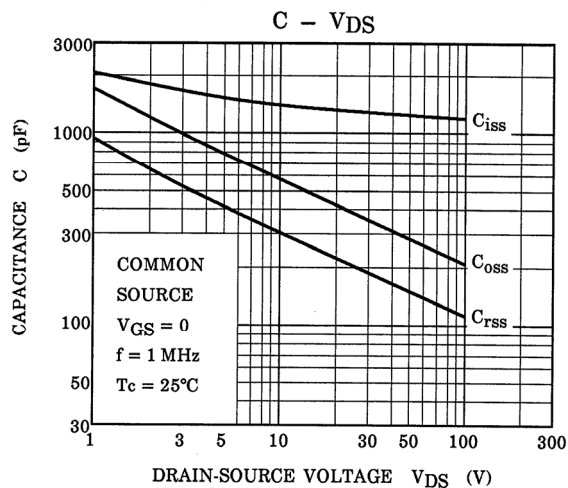
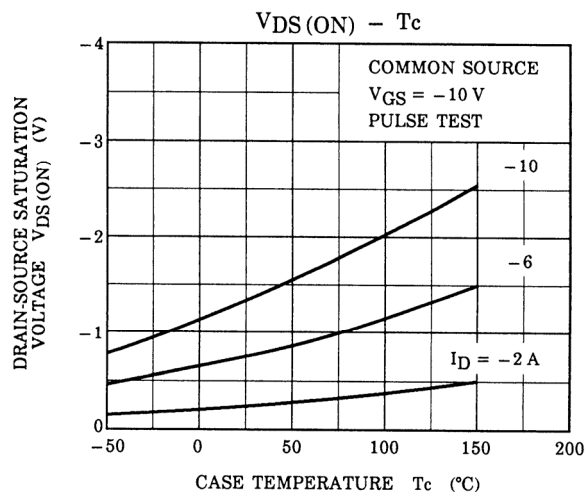
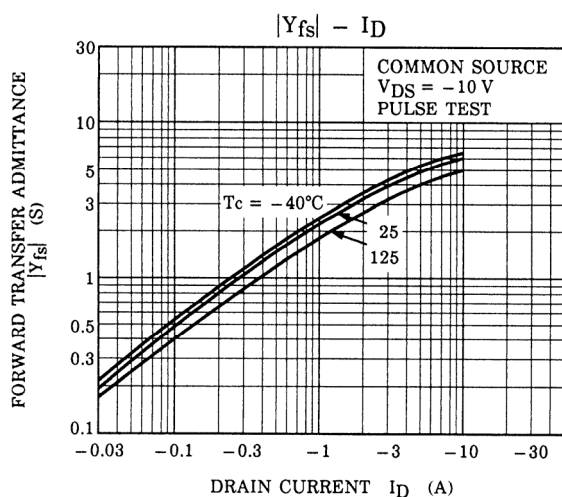
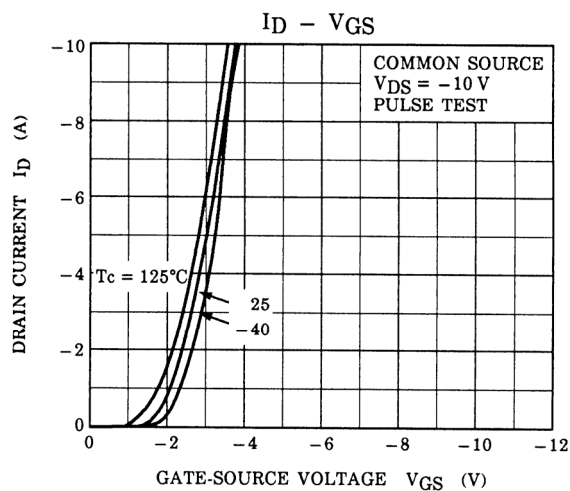
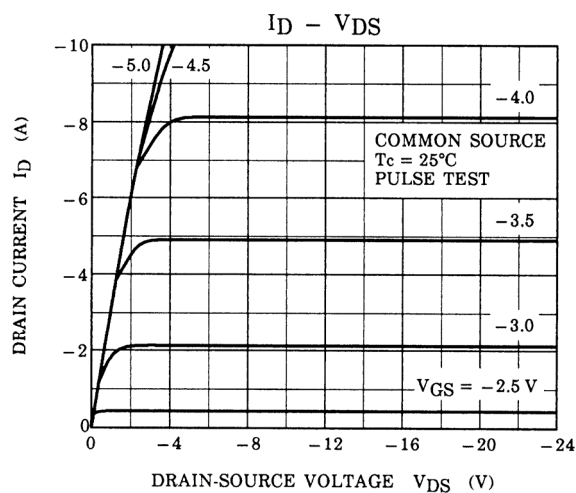
Note 1: Please use devices on condition that the channel temperature is below 150°C.

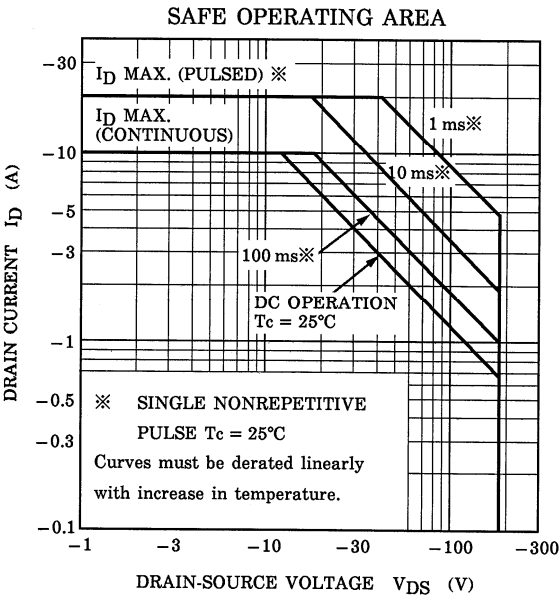
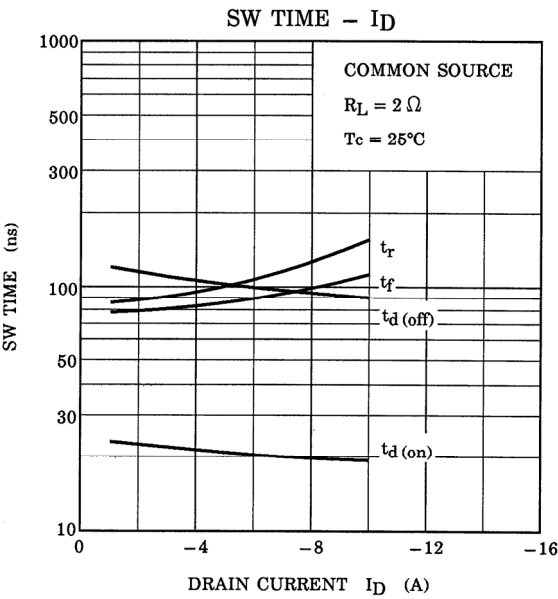
Note 2: $V_{GS (OFF)}$ Classification O: -0.8~-1.6, Y: -1.4~-2.8

This transistor is an electrostatic sensitive device. Please handle with caution.

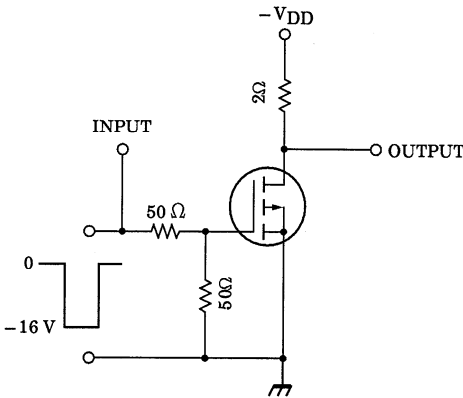
Marking



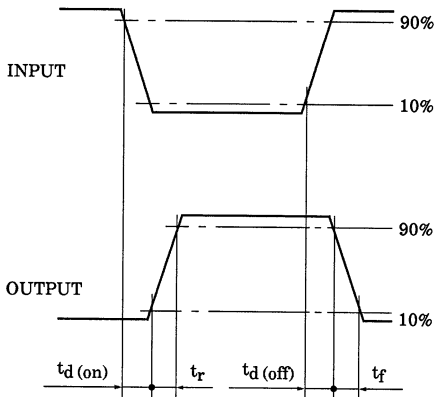




Switching Time Test Circuit



Waveforms



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20070701-EN

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