TOSHIBA Field Effect Transistor Silicon P Channel MOS Type

# 2SJ201

#### High Power Amplifier Application

- High breakdown voltage  $V_{DSS} = -200 V$ 
  - High forward transfer admittance  $|Y_{fs}| = 5.0 \text{ S}$  (typ.)
- Complementary to 2SK1530

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### Maximum Ratings (Tc = 25°C)

Characteristics	Symbol	Rating	Unit
Drain-source voltage	V <sub>DSS</sub>	-200	V
Gate-source voltage	V <sub>GSS</sub>	±20	V
Drain current (Note 1)	I <sub>D</sub>	-12	А
Drain power dissipation	PD	150	W
Channel temperature	T <sub>ch</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-55~150	°C

#### Marking



#### ¢3.3±0.2 20.5 max 2.50 $20.0\pm0.6$ 2.5 3.0 1.0 $5.45 \pm 0.15$ $5.45 \pm 0.15$ +0.25-0.10 ma x 5.2 0.6-1 2 3 1.GATE 2.DRAIN (HEAT SINK) 3.SOURCE JEDEC JEITA \_\_\_\_ TOSHIBA 2-21F1B

Weight: 9.75 g (typ.)

# **Electrical Characteristics (Tc = 25°C)**

Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Drain cut-off current	I <sub>DSS</sub>	$V_{DS}$ = -200 V, $V_{GS}$ = 0	_	_	-1.0	mA
Gate leakage current	I <sub>GSS</sub>	V <sub>DS</sub> = 0, V <sub>GS</sub> = ±20 V	_	_	±0.5	μA
Drain-source breakdown voltage	V (BR) DSS	I <sub>D</sub> = -10 mA, V <sub>GS</sub> = 0	-200	—	_	V
Gate-source cut-off voltage (Note 2)	V <sub>GS (OFF)</sub>	V <sub>DS</sub> = -10 V, I <sub>D</sub> = -0.1 A	-0.8	_	-2.8	V
Drain-source saturation voltage	V <sub>DS (ON)</sub>	$I_D = -8 \text{ A}, \text{ V}_{GS} = -10 \text{ V}$	—	-2.0	-5.0	V
Forward transfer admittance	Y <sub>fs</sub>	V <sub>DS</sub> = -10 V, I <sub>D</sub> = -5 A	—	5.0	_	S
Input capacitance	C <sub>iss</sub>	$V_{DS}$ = -30 V, $V_{GS}$ = 0, f = 1 MHz	—	1500	_	
Output capacitance	C <sub>oss</sub>	$V_{DS}$ = -30 V, $V_{GS}$ = 0, f = 1 MHz	_	430	_	pF
Reverse transfer capacitance	C <sub>rss</sub>	$V_{DS}$ = -30 V, $V_{GS}$ = 0, f = 1 MHz	—	230	_	

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

Note 2: V<sub>GS (OFF)</sub> Classification O: -0.8~-1.6, Y: -1.4~-2.8

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

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Unit: mm



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# **Switching Time Test Circuit**



#### Waveforms



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