

TOSHIBA Field Effect Transistor Silicon N Channel MOS Type

## 2SK1530

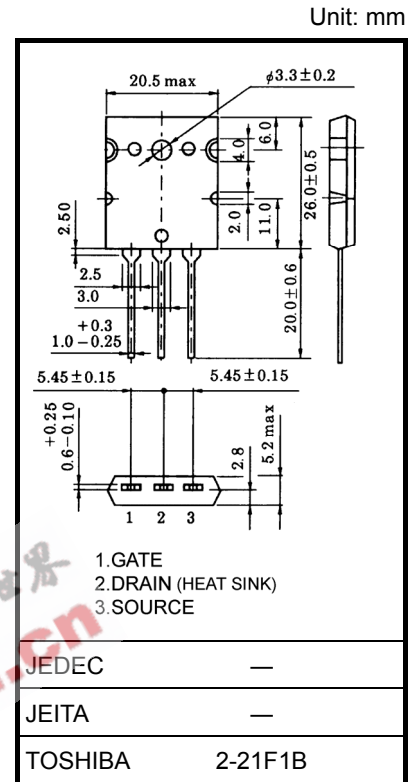
### High-Power Amplifier Application

- High breakdown voltage :  $V_{DSS} = 200V$
- High forward transfer admittance :  $|Y_{fs}| = 5.0 S$  (typ.)
- Complementary to 2SJ201

### Absolute Maximum Ratings ( $T_a = 25^\circ C$ )

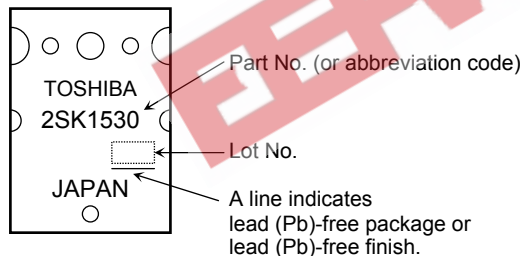
Characteristics	Symbol	Rating	Unit
Drain-source voltage	$V_{DSS}$	200	V
Gate-source voltage	$V_{GSS}$	$\pm 20$	V
Drain current (Note 1)	$I_D$	12	A
Drain power dissipation ( $T_c = 25^\circ C$ )	$P_D$	150	W
Channel temperature	$T_c$	150	$^\circ C$
Storage temperature range	$T_{stg}$	-55~150	$^\circ C$

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).



Weight: 9.75 g (typ.)

### Marking



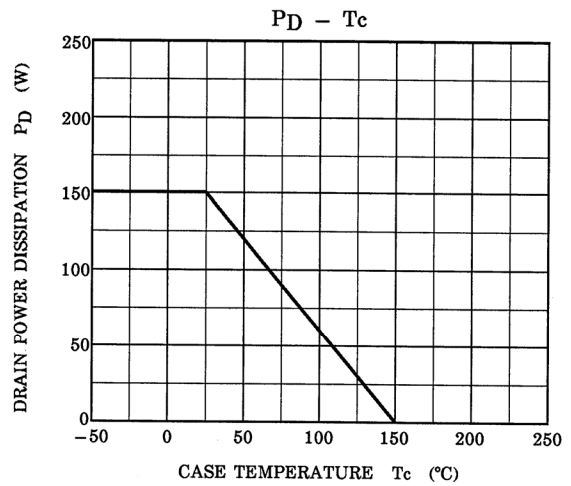
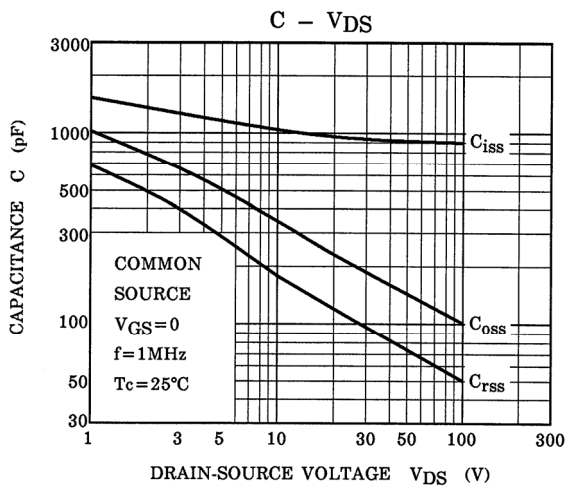
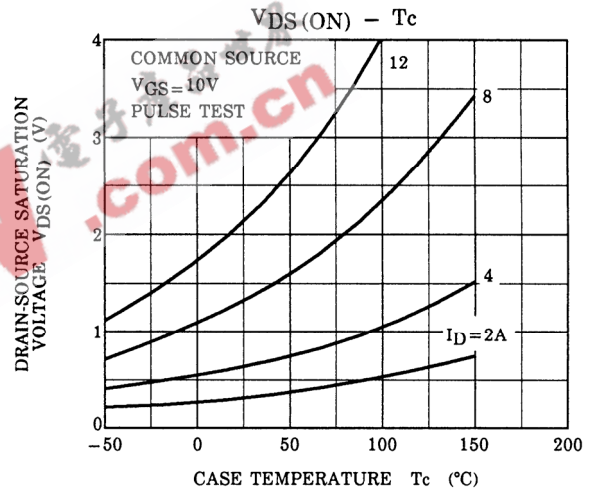
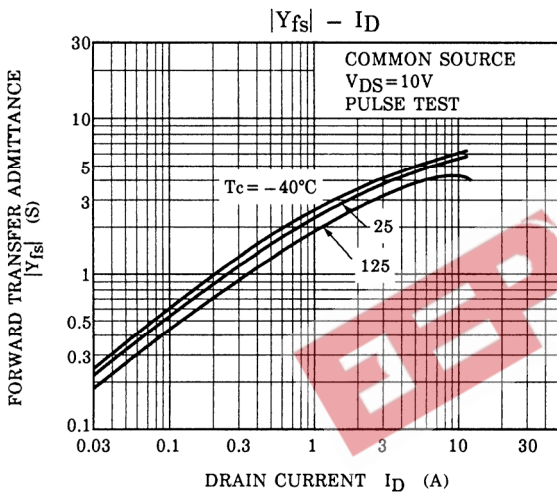
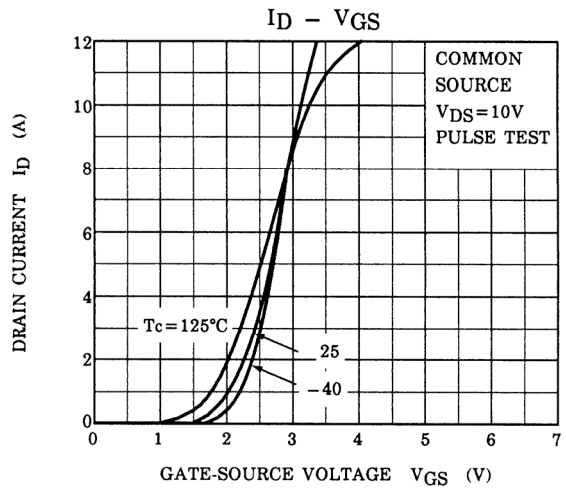
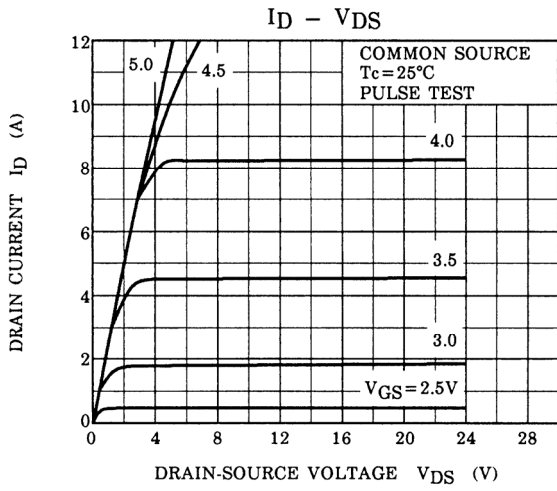
### Electrical Characteristics ( $T_a = 25^\circ C$ )

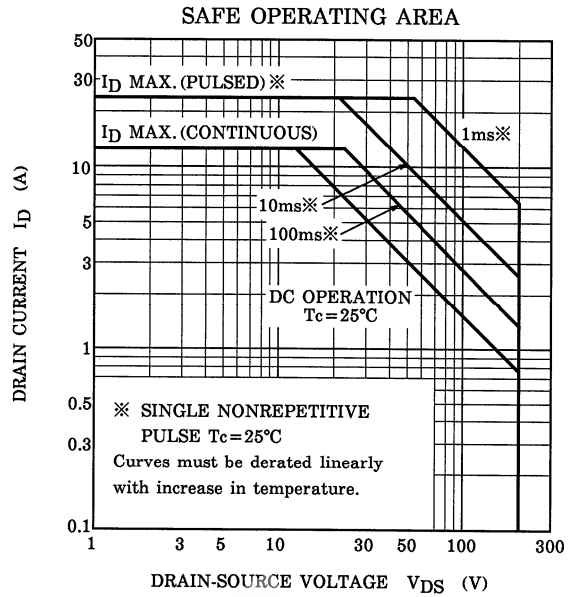
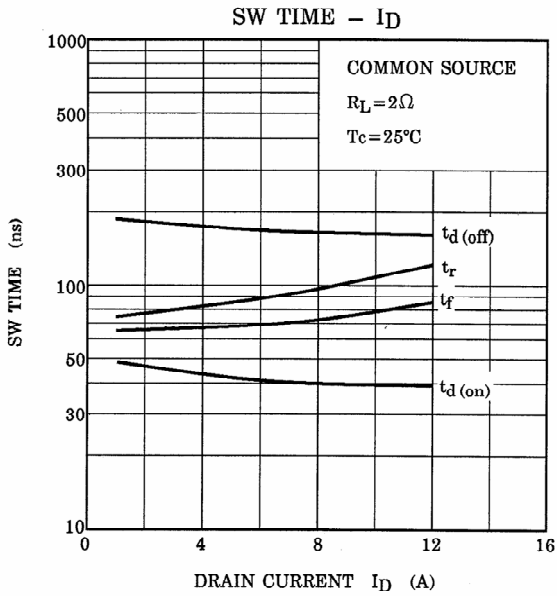
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Drain cut-off current	$I_{DSS}$	$V_{DS} = 200 V, V_{GS} = 0$	—	—	1.0	mA
Gate leakage current	$I_{GSS}$	$V_{DS} = 0V, V_{GS} = \pm 20 V$	—	—	$\pm 0.5$	$\mu A$
Drain-source breakdown voltage	$V_{(BR) DSS}$	$I_D = 10 mA, V_{GS} = 0$	200	—	—	V
Drain-source saturation voltage	$V_{DS (ON)}$	$I_D = 8 A, V_{GS} = 10 V$	—	2.5	5.0	V
Gate-source cut-off voltage (Note 2)	$V_{GS (OFF)}$	$V_{DS} = 10 V, I_D = 0.1 A$	0.8	—	2.8	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 10 V, I_D = 5 A$	—	5.0	—	S
Input capacitance	$C_{iss}$	$V_{DS} = 30 V, V_{GS} = 0, f = 1 MHz$	—	900	—	pF
Output capacitance	$C_{oss}$	$V_{DS} = 30 V, V_{GS} = 0, f = 1 MHz$	—	180	—	
Reverse transfer capacitance	$C_{rss}$	$V_{DD} = 30 V, V_{GS} = 0, f = 1 MHz$	—	100	—	

Note 1: Ensure that the channel temperature does not exceed  $150^\circ C$ .

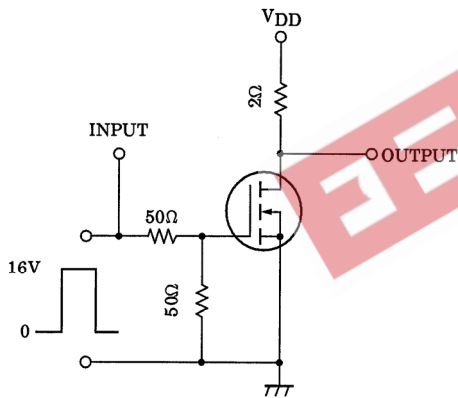
Note 2:  $V_{GS (OFF)}$  Classification 0: 0.8~1.6 Y: 1.4~2.8

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

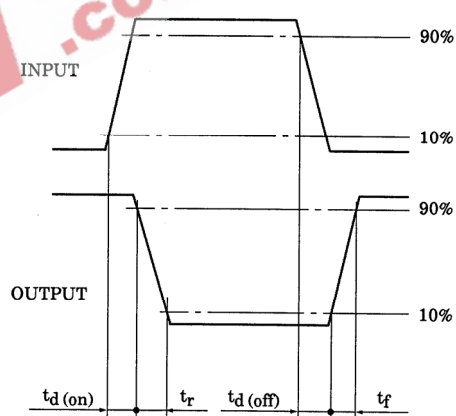




Switching Time Test Circuit



Waveforms



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