TOSHIBA Field Effect Transistor Silicon N Channel MOS Type

2SK1530

High-Power Amplifier Application

High breakdown voltage : V_{DSS} = 200 V
 High forward transfer admittance : |Y_{fS}| = 5.0 S (typ.)

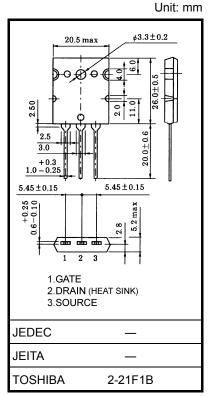
Complementary to 2SJ201

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit	
Drain-source voltage	V_{DSS}	200	٧	
Gate-source voltage	V_{GSS}	±20	٧	
Drain current (Note 1)	ΙD	12	Α	
Drain power dissipation (Tc = 25°C)	P _D	150	W	
Channel temperature	T _{ch}	150	°C	
Storage temperature range	T _{stg}	-55 to 150	°C	

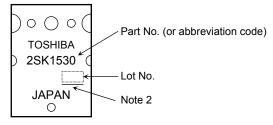
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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).

Note 1: Ensure that the channel temperature does not exceed 150°C.



Weight: 9.75 g (typ.)

Marking



Note 2: A line under a Lot No. identifies the indication of product Labels.

Not underlined: [[Pb]]/INCLUDES > MCV Underlined: [[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]

Please contact your TOSHIBA sales representative for details as to environmental matters such as the RoHS compatibility of Product. The RoHS is the Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Electrical Characteristics (Ta = 25°C)

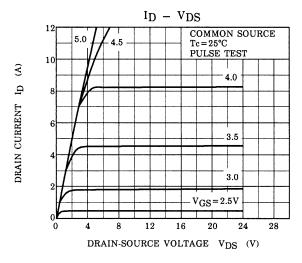
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Drain cut-off current	I _{DSS}	V _{DS} = 200 V, V _{GS} = 0	_	_	1.0	mA
Gate leakage current	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20 V	_	_	±0.5	μΑ
Drain-source breakdown voltage	V (BR) DSS	I _D = 10 mA, V _{GS} = 0	200	_	_	V
Drain-source saturation voltage	V _{DS} (ON)	I _D = 8 A, V _{GS} = 10 V	_	2.5	5.0	V
Gate-source cut-off voltage (Note 3)	V _{GS (OFF)}	V _{DS} = 10 V, I _D = 0.1 A	0.8	_	2.8	٧
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	_	
Output capacitance	C _{oss}	V _{DS} = 30 V, V _{GS} = 0, f = 1 MHz	_	180	_	pF
Reverse transfer capacitance	C _{rss}	V _{DS} = 30 V, V _{GS} = 0, f = 1 MHz	_	100	_	

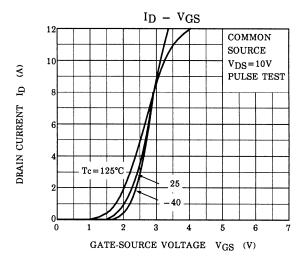
Note 3: V_{GS (OFF)} Classification

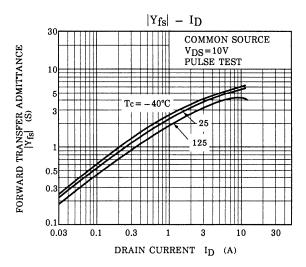
0: 0.8 to 1.6 Y: 1.4 to 2.8

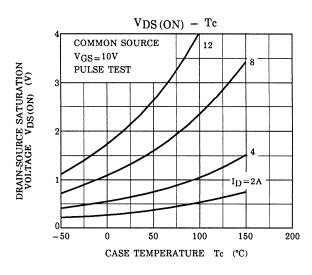
This transistor is an electrostatic-sensitive device.

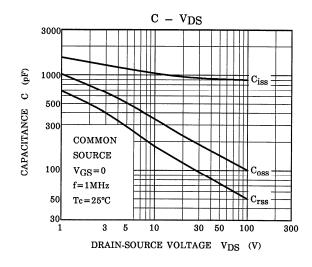
Please handle with caution.

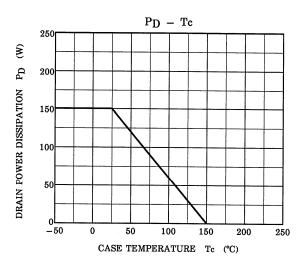


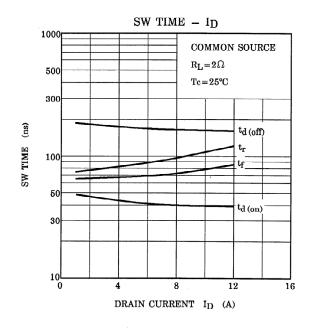


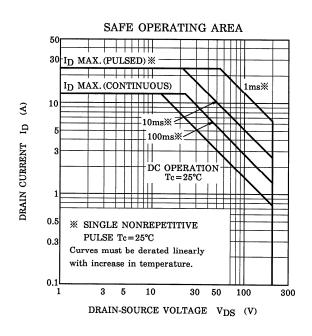




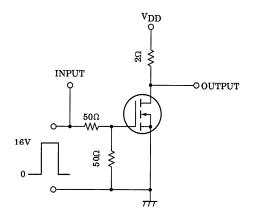




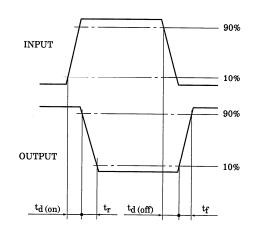




Switching Time Test Circuit



Waveforms



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