

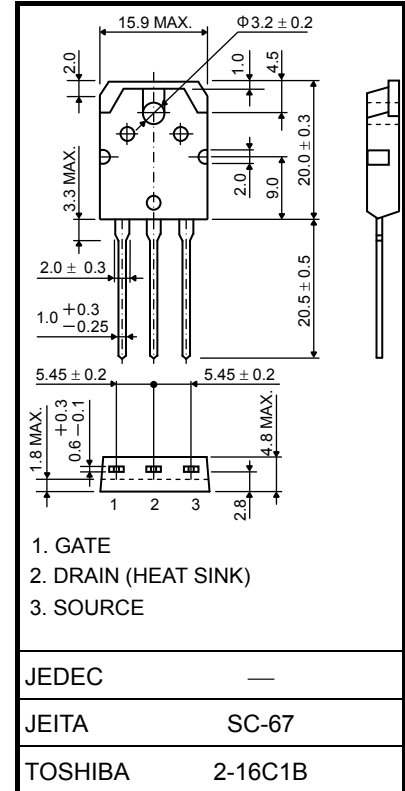
TOSHIBA Field Effect Transistor Silicon P Channel MOS Type( $\pi$ -MOS V)

# 2SJ618

## High-Power Amplifier Applications

- High breakdown voltage:  $V_{DSS} = -180$  V
- Complementary to 2SK3497

Unit: mm



Weight: 4.6 g (typ.)

## Absolute Maximum Ratings (Ta = 25°C)

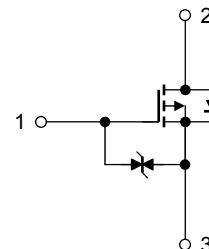
Characteristics	Symbol	Rating	Unit	
Drain-source voltage	$V_{DSS}$	-180	V	
Gate-source voltage	$V_{GSS}$	±20	V	
Drain current	DC (Note 1)	$I_D$	-10	A
	Pulse (Note 1)	$I_{DP}$	-30	A
Power dissipation (Tc = 25°C)	$P_D$	130	W	
Channel temperature	$T_{ch}$	150	°C	
Storage temperature range	$T_{stg}$	-55 to 150	°C	

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

Note 2: 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).

## Thermal Characteristics

Characteristics	Symbol	Max	Unit
Thermal resistance, channel to case	$R_{th(ch-c)}$	0.96	°C / W
Thermal resistance, channel to ambient	$R_{th(ch-a)}$	50	°C / W

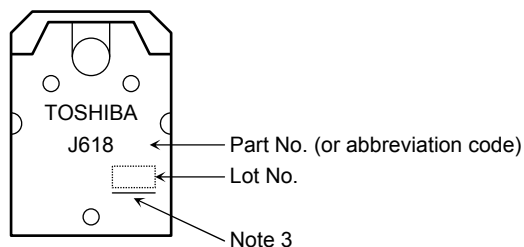


## Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Drain cut-off current	$I_{DSS}$	$V_{DS} = -180\text{ V}, V_{GS} = 0\text{ V}$	—	—	-100	$\mu\text{A}$
Gate leakage current	$I_{GSS}$	$V_{DS} = 0, V_{GS} = \pm 12\text{ V}$	—	—	$\pm 10$	$\mu\text{A}$
Drain-source breakdown voltage	$V_{(BR)DSS}$	$I_D = -10\text{ mA}, V_{GS} = 0$	-180	—	—	V
Drain-source saturation voltage	$V_{DS(ON)}$	$I_D = -5\text{ A}, V_{GS} = -7\text{ V}$	—	—	-1.85	V
Gate threshold voltage	$V_{th}$	$V_{DS} = 10\text{ V}, I_D = 1\text{ mA}$	-1.1	—	-2.1	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = -10\text{ V}, I_D = -5\text{ A}$	6.0	12.0	—	S
Input capacitance	$C_{iss}$	$V_{DS} = -30\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$	—	2300	—	pF
Output capacitance	$C_{oss}$		—	330	—	
Reverse transfer capacitance	$C_{rss}$		—	65	—	

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

## Marking

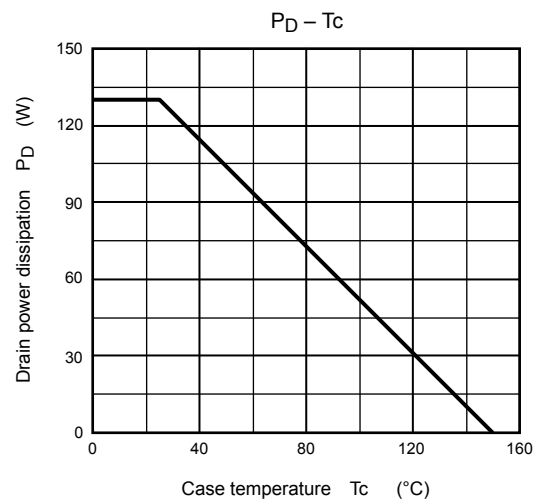
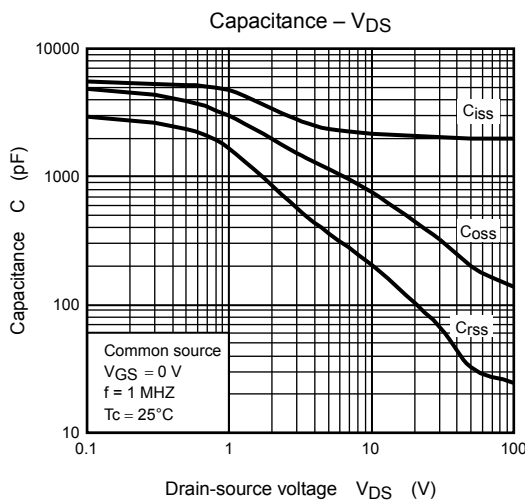
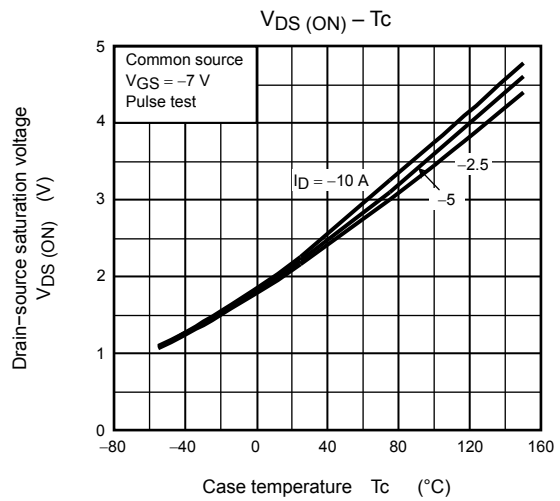
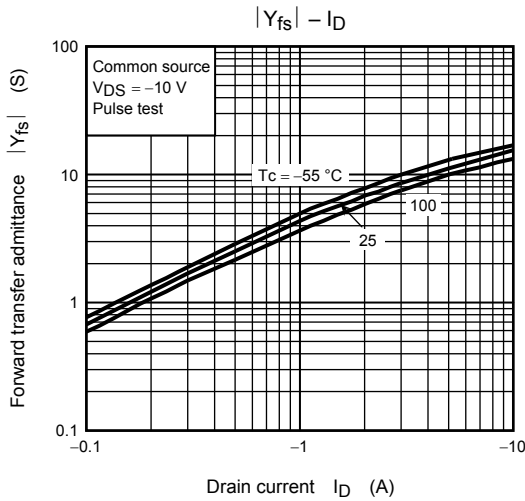
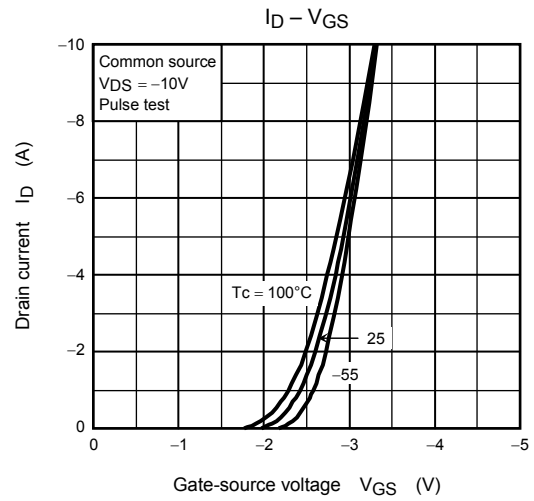
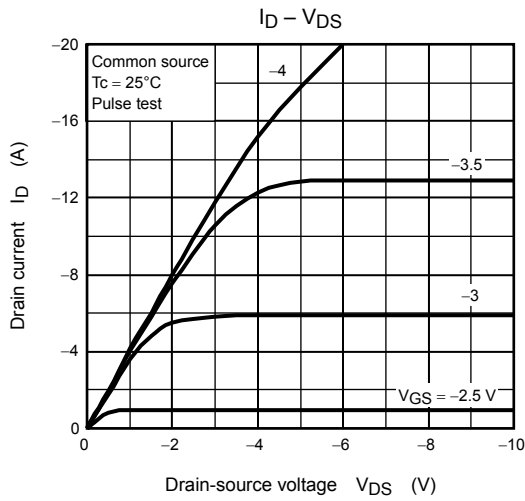


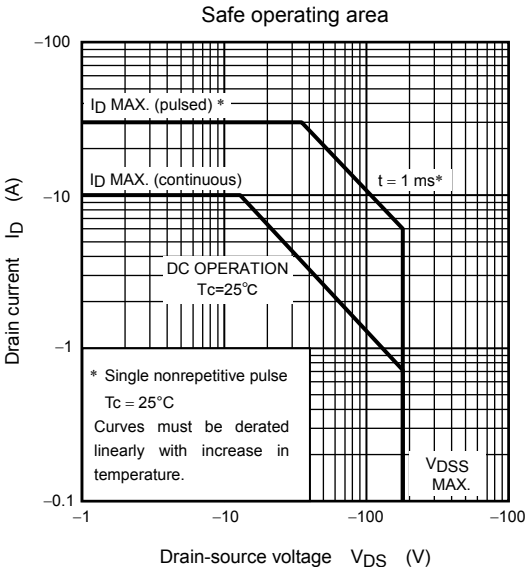
Note 3: A line under a Lot No. identifies the indication of product Labels.

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.





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