

TOSHIBA Field Effect Transistor Silicon P Channel MOS Type(π -MOS V)

2SJ618

High-Power Amplifier Applications

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

Absolute Maximum Ratings (Ta = 25°C)

Characteristics		Symbol	Rating	Unit
Drain-source voltage		V_{DSS}	-180	V
Gate-source voltage		V_{GSS}	± 12	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

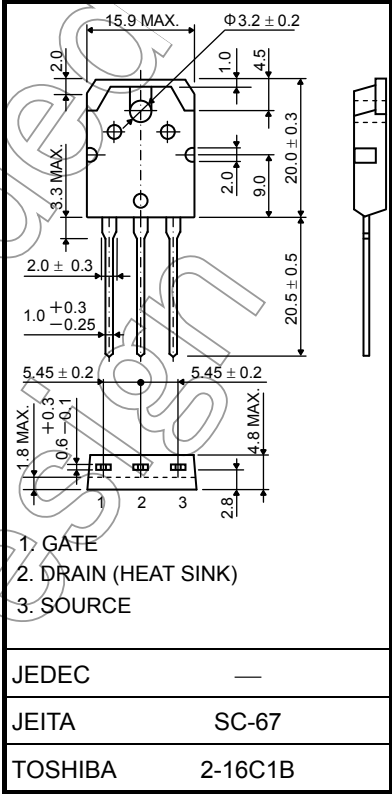
Note 1: Ensure that the channel temperature does not exceed 150°C.

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).

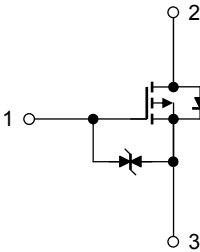
Thermal Characteristics

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

Unit: mm



Weight: 4.6 g (typ.)

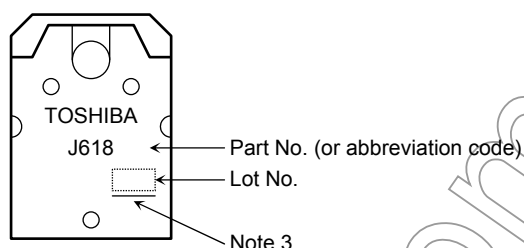


Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Drain cut-off current	I_{DSS}	$V_{DS} = -180\text{ V}, V_{GS} = 0\text{ V}$	—	—	-100	μA
Gate leakage current	I_{GSS}	$V_{DS} = 0\text{ V}, V_{GS} = \pm 12\text{ V}$	—	—	± 10	μA
Drain-source breakdown voltage	$V_{(BR)DSS}$	$I_D = -10\text{ mA}, V_{GS} = 0\text{ V}$	-180	—	—	V
Drain-source ON-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}	$V_{DS} = -10\text{ V}, V_{GS} = 0\text{ V}, f = 1\text{ MHz}$	—	2000	—	pF
Output capacitance	C_{oss}		—	750	—	
Reverse transfer capacitance	C_{rss}		—	200	—	

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

Marking

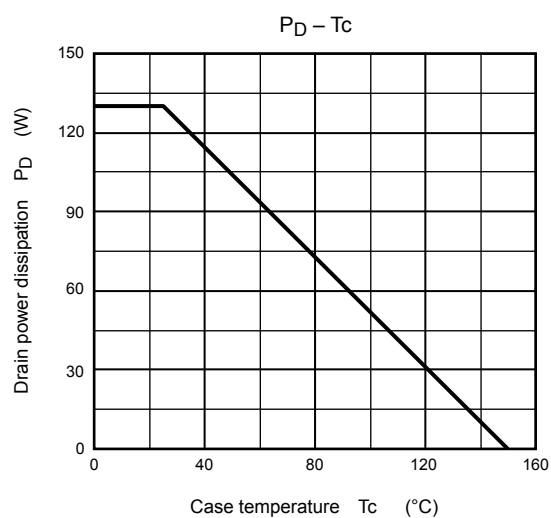
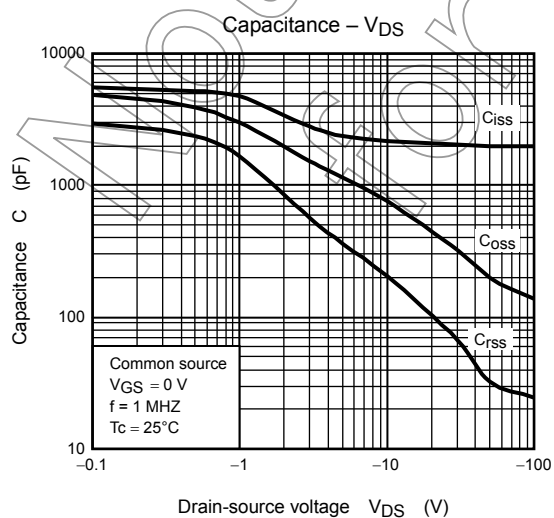
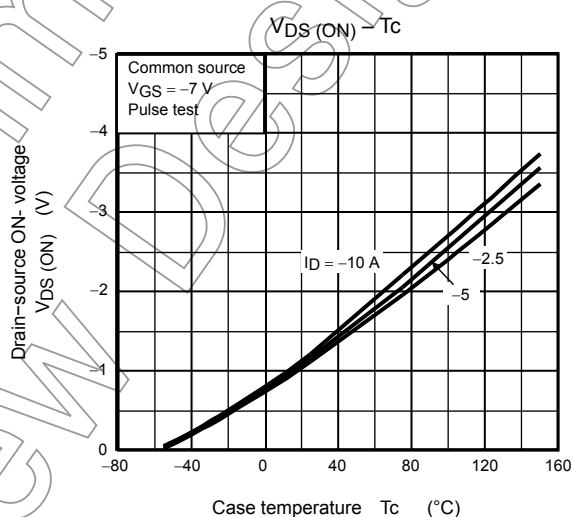
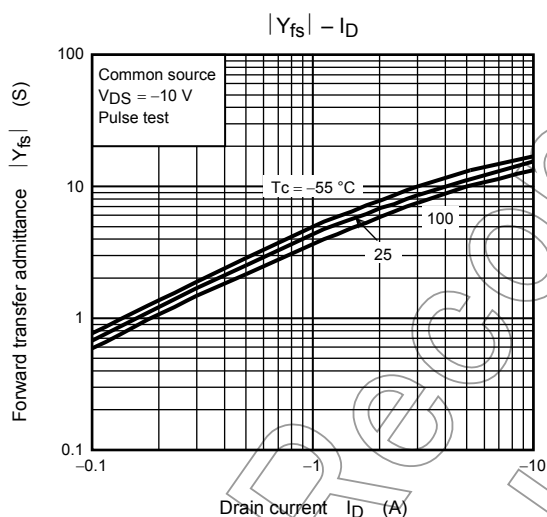
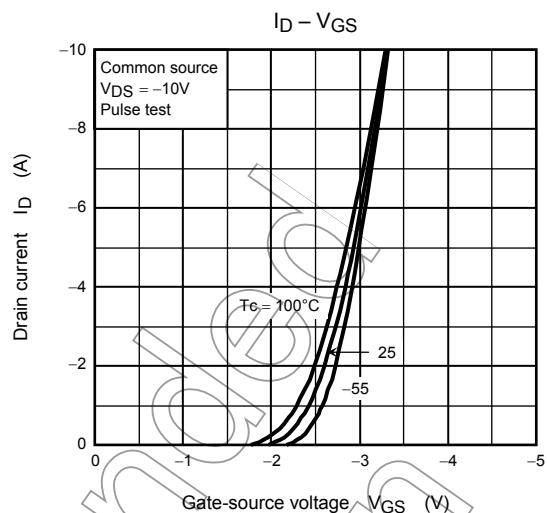
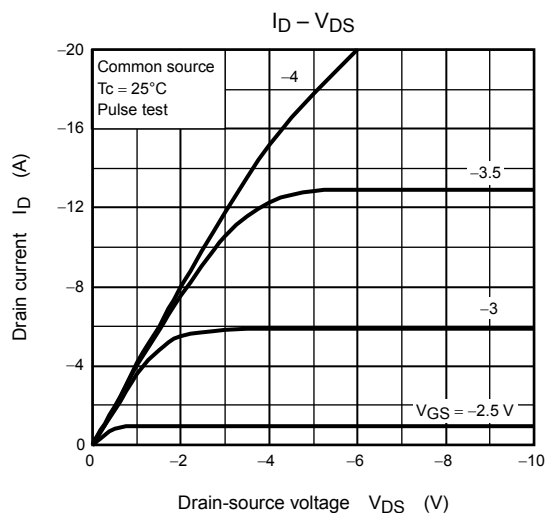


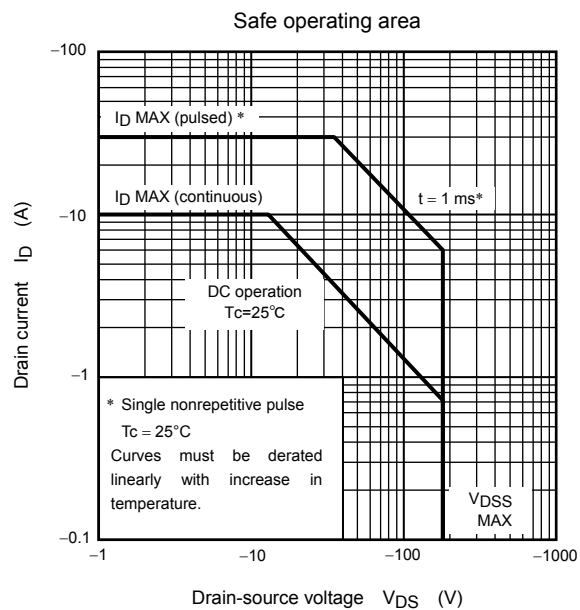
Note 3: A line under a Lot No. identifies the indication of product Labels.

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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