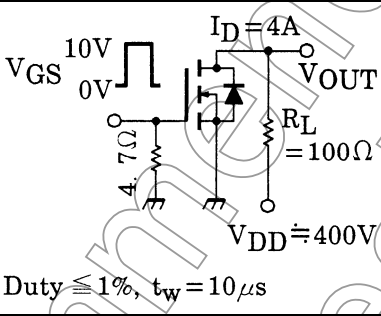


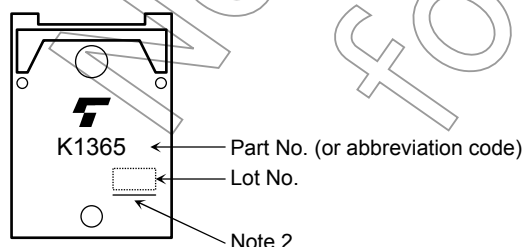
## Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Gate leakage current		$I_{GSS}$	$V_{GS} = \pm 20 \text{ V}, V_{DS} = 0 \text{ V}$	—	—	$\pm 50$	nA
Drain cut-off current		$I_{DSS}$	$V_{DS} = 800 \text{ V}, V_{GS} = 0 \text{ V}$	—	—	300	$\mu\text{A}$
Drain-source breakdown voltage		$V_{(BR) DSS}$	$I_D = 10 \text{ mA}, V_{GS} = 0 \text{ V}$	1000	—	—	V
Gate threshold voltage		$V_{th}$	$V_{DS} = 10 \text{ V}, I_D = 1 \text{ mA}$	1.5	—	3.5	V
Drain-source ON resistance		$R_{DS(ON)}$	$I_D = 4 \text{ A}, V_{GS} = 10 \text{ V}$	—	1.5	1.8	$\Omega$
Forward transfer admittance		$ Y_{fs} $	$V_{DS} = 20 \text{ V}, I_D = 4 \text{ A}$	2.0	4.0	—	S
Input capacitance		$C_{iss}$	$V_{DS} = 25 \text{ V}, V_{GS} = 0 \text{ V}, f = 1 \text{ MHz}$	—	1300	—	pF
Reverse transfer capacitance		$C_{rss}$		—	100	—	
Output capacitance		$C_{oss}$		—	180	—	
Switching time	Rise time	$t_r$		—	25	—	ns
	Turn-on time	$t_{on}$		—	40	—	
	Fall time	$t_f$		—	20	—	
	Turn-off time	$t_{off}$		—	100	—	
Total gate charge (Gate-source plus gate-drain)		$Q_g$	$V_{DD} \approx 400 \text{ V}, V_{GS} = 10 \text{ V}, I_D = 7 \text{ A}$	—	120	—	nC
Gate-source charge		$Q_{gs}$		—	70	—	
Gate-drain ("miller") charge		$Q_{gd}$		—	50	—	

## Source-Drain Ratings and Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Continuous drain reverse current (Note 1)	$I_{DR}$	—	—	—	7	A
Pulse drain reverse current (Note 1)	$I_{DRP}$	—	—	—	21	A
Forward voltage (diode)	$V_{DSF}$	$I_{DR} = 7 \text{ A}, V_{GS} = 0 \text{ V}$	—	—	-1.9	V

## Marking

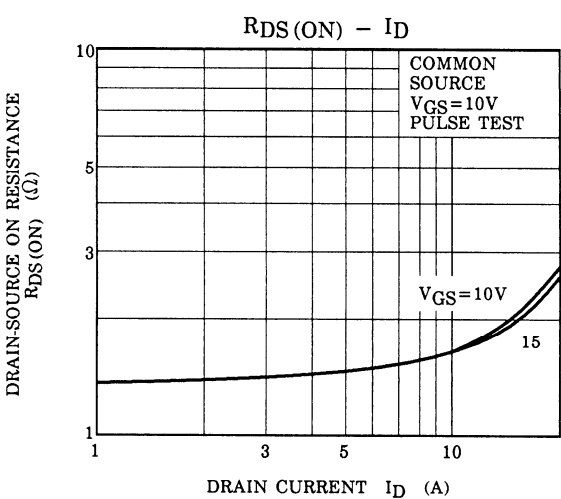
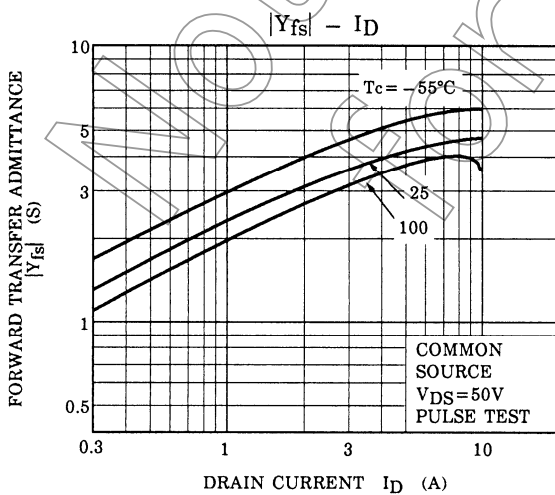
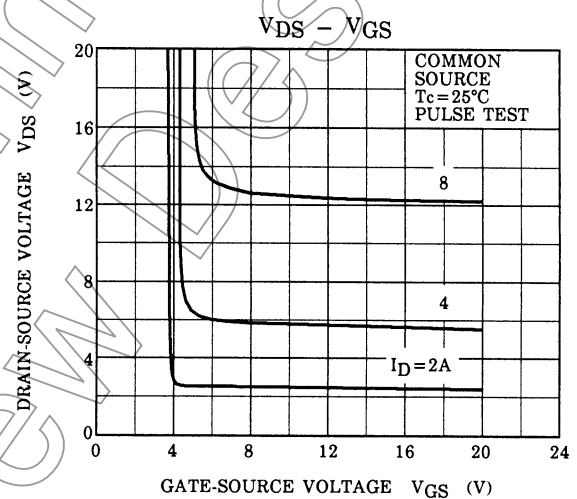
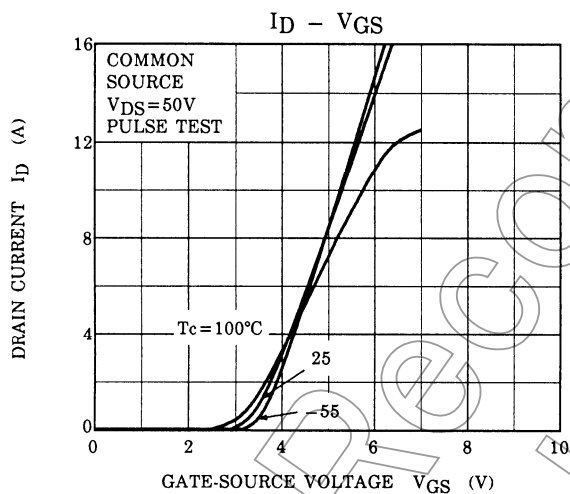
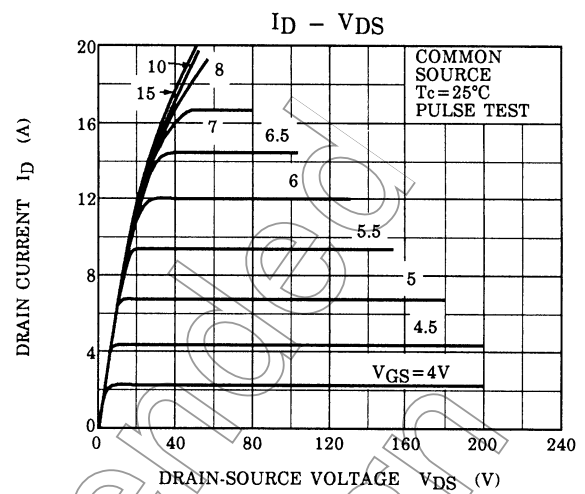
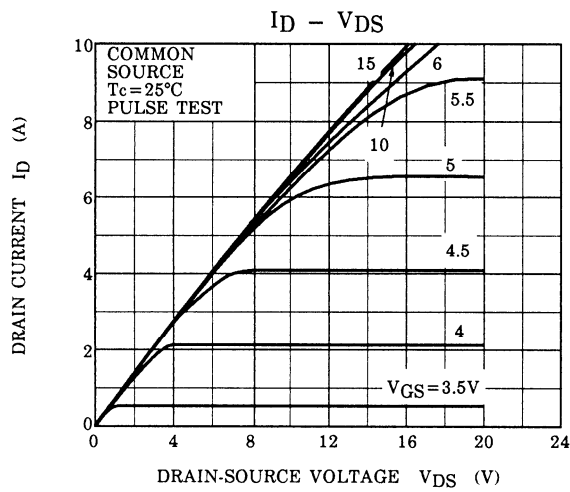


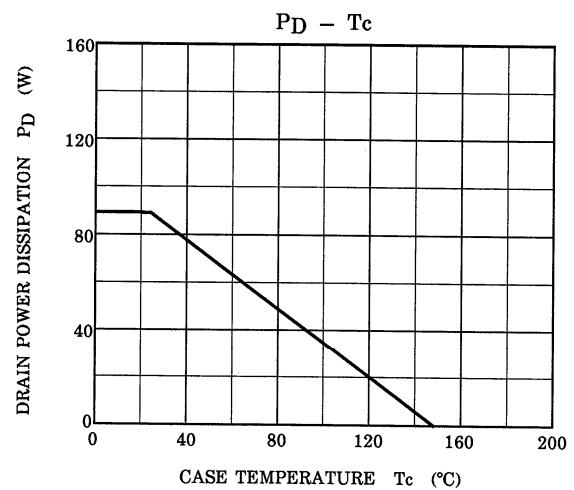
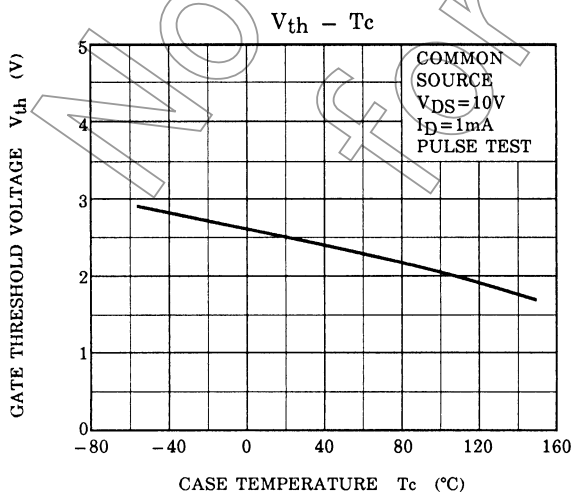
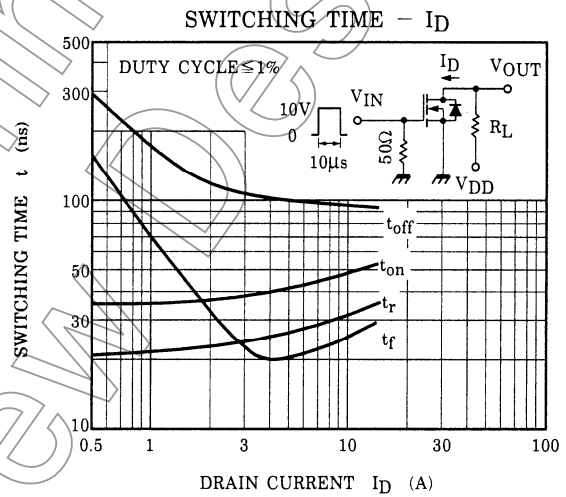
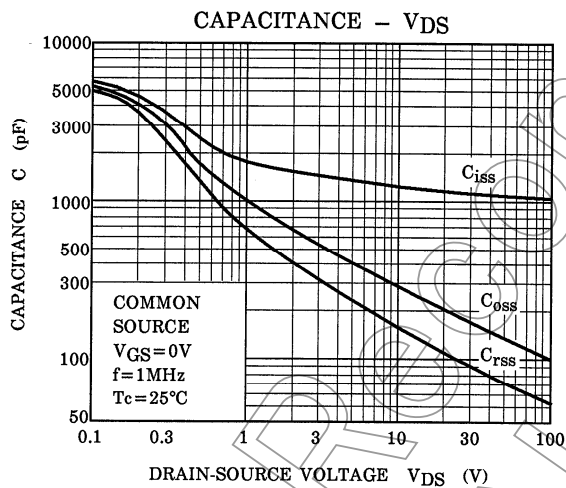
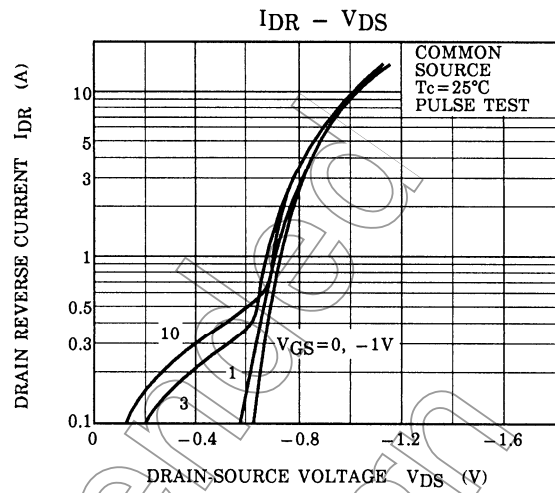
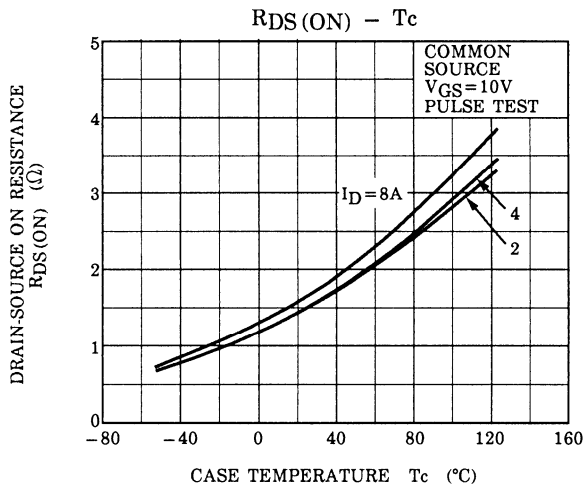
Note 2: A line under a Lot No. identifies the indication of product Labels.

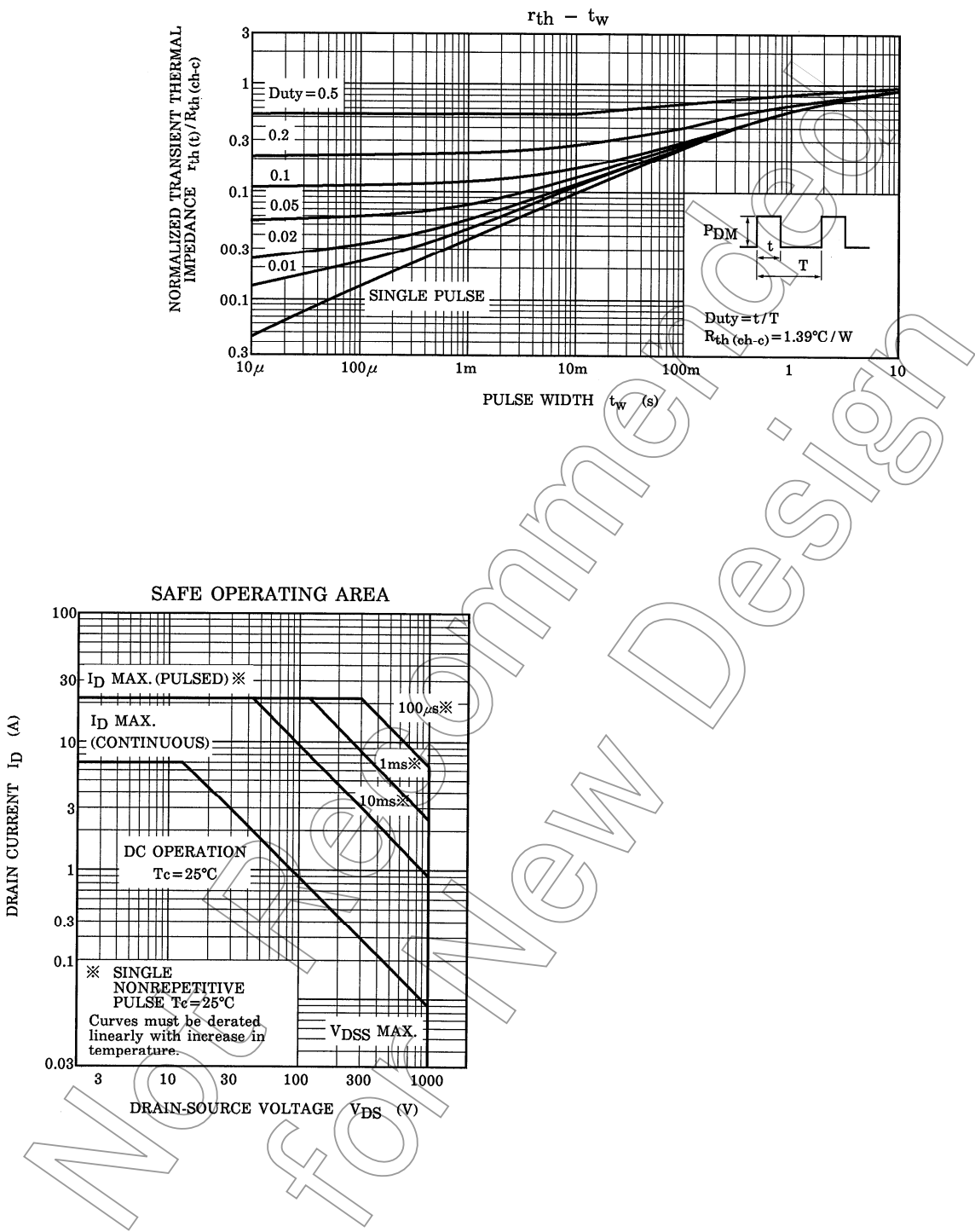
Not underlined:  $[[Pb]]/INCLUDES > MCV$

Underlined:  $[[G]]/RoHS \text{ COMPATIBLE}$  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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