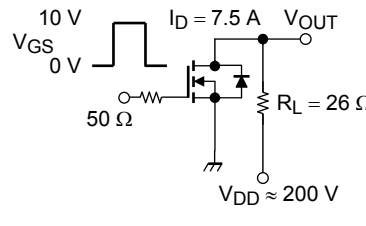


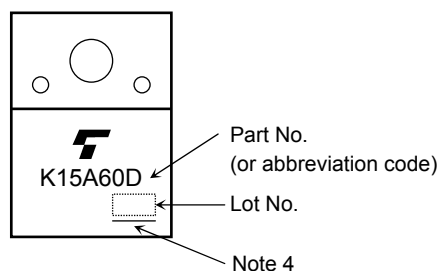
Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Gate leakage current		I_{GSS}	$V_{GS} = \pm 30 \text{ V}, V_{DS} = 0 \text{ V}$	—	—	± 1	μA
Drain cut-off current		I_{DSS}	$V_{DS} = 600 \text{ V}, V_{GS} = 0 \text{ V}$	—	—	10	μA
Drain-source breakdown voltage		$V_{(BR)DSS}$	$I_D = 10 \text{ mA}, V_{GS} = 0 \text{ V}$	600	—	—	V
Gate threshold voltage		V_{th}	$V_{DS} = 10 \text{ V}, I_D = 1 \text{ mA}$	2.0	—	4.0	V
Drain-source ON resistance		$R_{DS(ON)}$	$V_{GS} = 10 \text{ V}, I_D = 7.5 \text{ A}$	—	0.31	0.37	Ω
Forward transfer admittance		$ Y_{fs} $	$V_{DS} = 10 \text{ V}, I_D = 7.5 \text{ A}$	2.4	8.5	—	S
Input capacitance		C_{iss}	$V_{DS} = 25 \text{ V}, V_{GS} = 0 \text{ V}, f = 1 \text{ MHz}$	—	2600	—	pF
Reverse transfer capacitance		C_{rss}		—	11	—	
Output capacitance		C_{oss}		—	280	—	
Switching time	Rise time	t_r	 <p>$I_D = 7.5 \text{ A}$ $V_{GS} = 10 \text{ V}$ $V_{DS} = 10 \text{ V}$ $V_{DD} \approx 200 \text{ V}$ $R_L = 26 \Omega$ 50Ω</p>	—	50	—	ns
	Turn-on time	t_{on}		—	100	—	
	Fall time	t_f		—	25	—	
	Turn-off time	t_{off}		—	150	—	
Total gate charge		Q_g	$V_{DD} \approx 400 \text{ V}, V_{GS} = 10 \text{ V}, I_D = 15 \text{ A}$	—	45	—	nC
Gate-source charge		Q_{gs}		—	28	—	
Gate-drain charge		Q_{gd}		—	17	—	

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

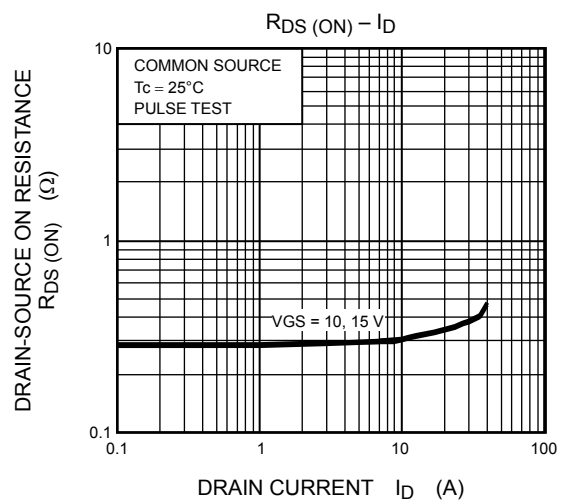
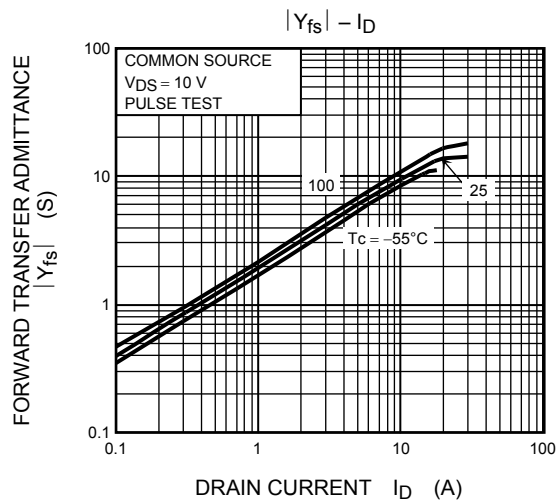
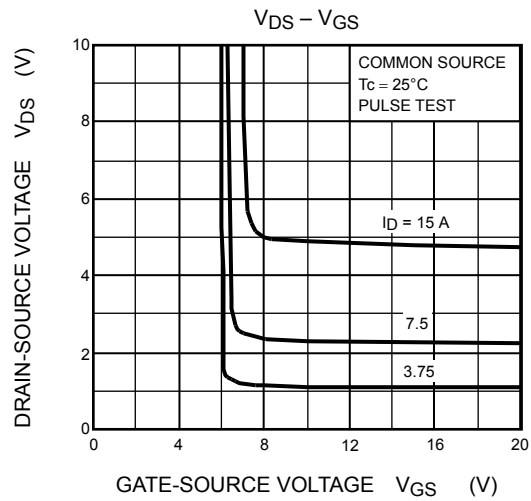
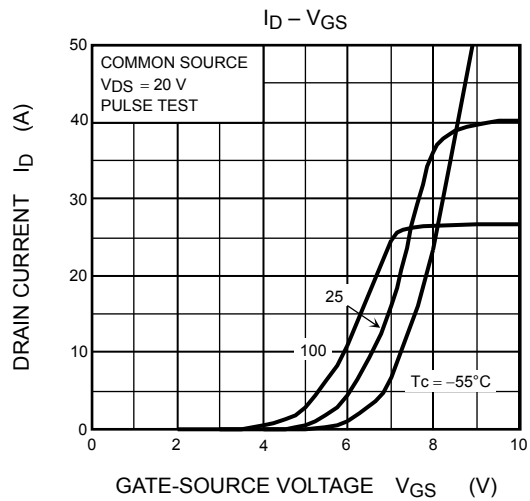
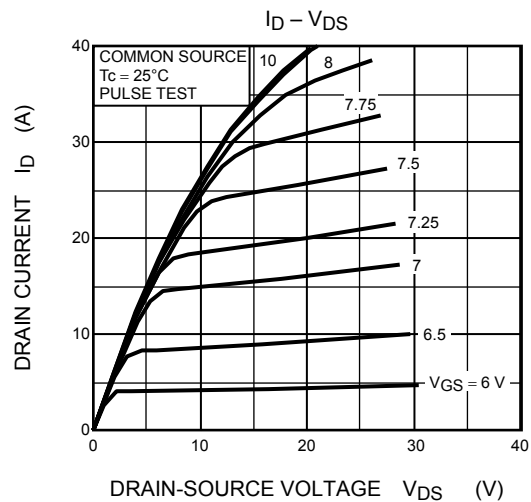
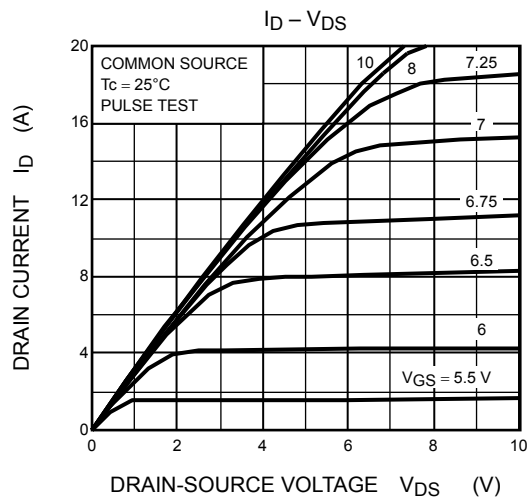
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Continuous drain reverse current (Note 1)	I_{DR}	—	—	—	15	A
Pulse drain reverse current (Note 1)	I_{DRP}	—	—	—	60	A
Forward voltage (diode)	V_{DSF}	$I_{DR} = 15 \text{ A}, V_{GS} = 0 \text{ V}$	—	—	-1.7	V
Reverse recovery time	t_{rr}	$I_{DR} = 15 \text{ A}, V_{GS} = 0 \text{ V},$	—	1700	—	ns
Reverse recovery charge	Q_{rr}	$dI_{DR}/dt = 100 \text{ A}/\mu\text{s}$	—	26	—	μC

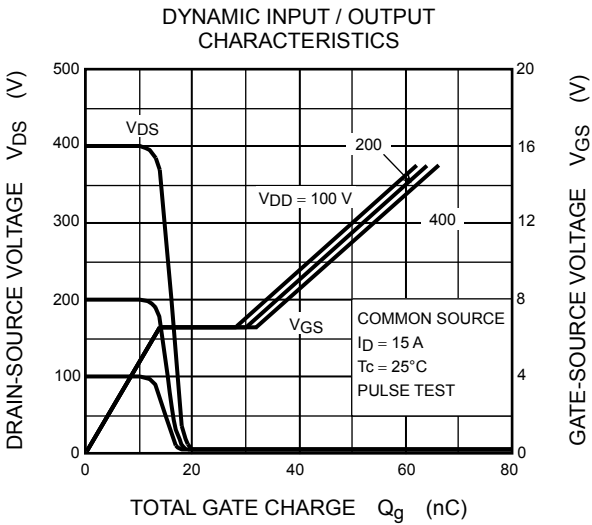
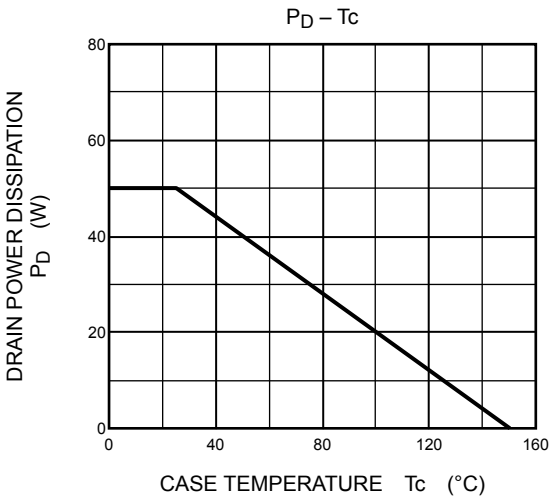
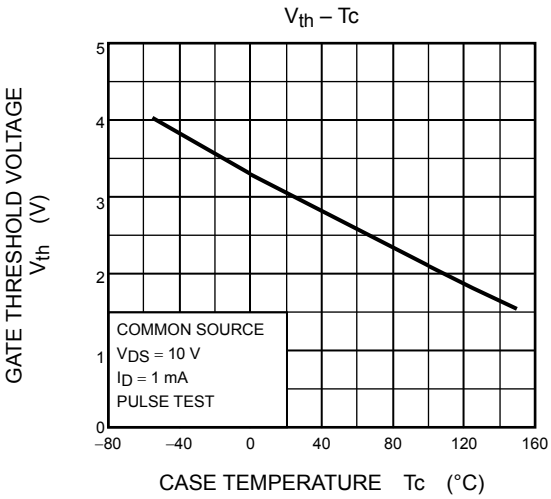
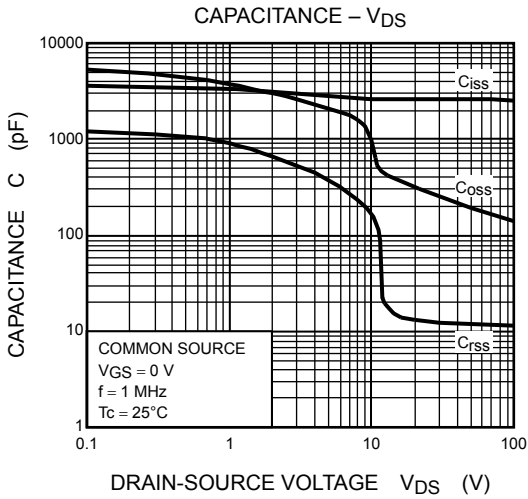
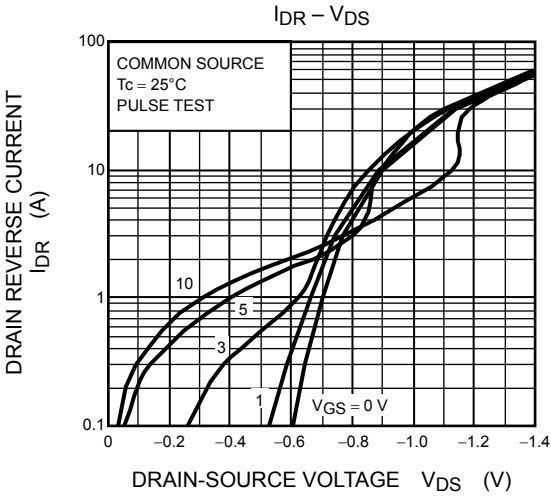
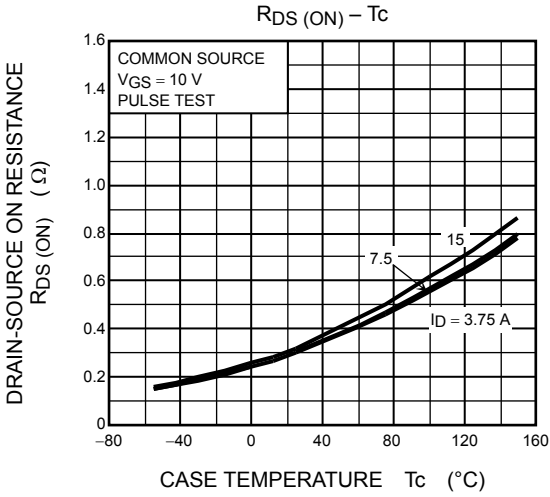
Marking

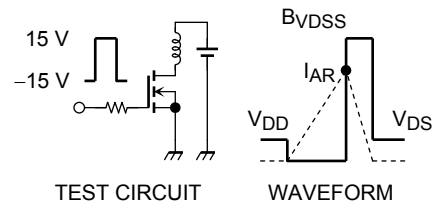
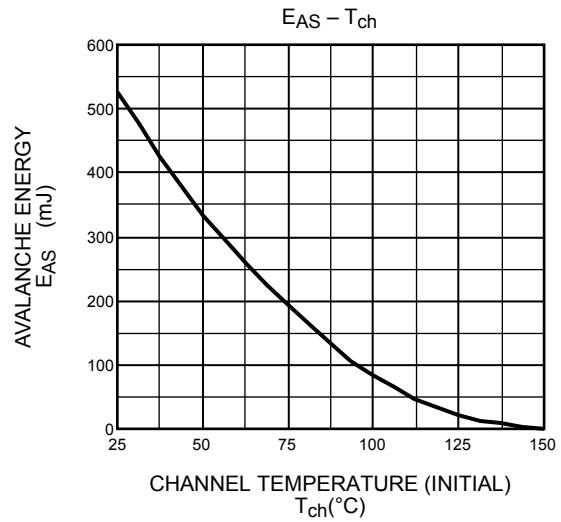
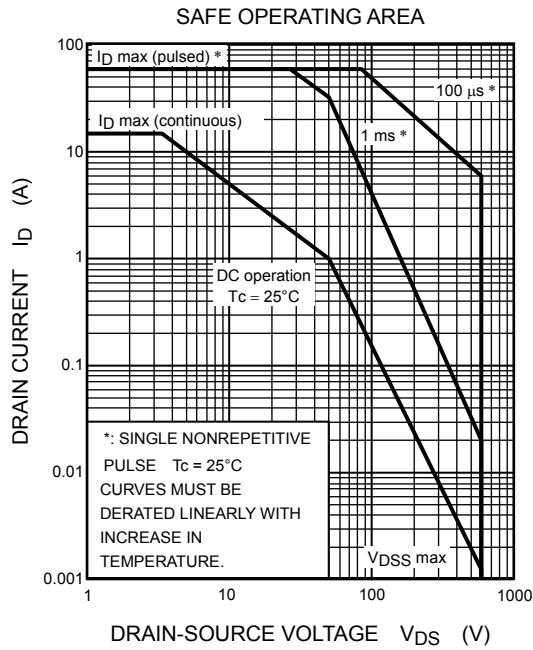
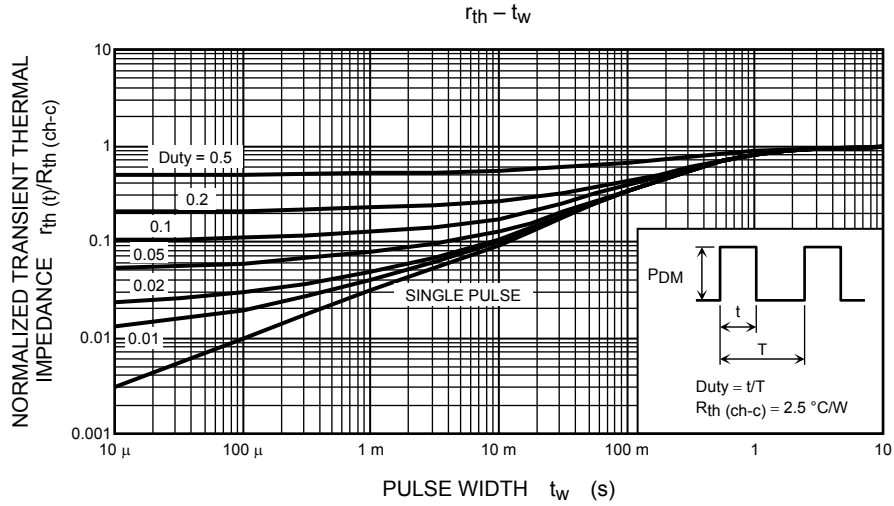


Note 4 : A line under a Lot No. identifies the indication of product Labels
[[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]

Please contact your TOSHIBA sales representative for details as to environmental matters such as the RoHS compatibility of Product. The RoHS is Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment







$R_G = 25 \, \Omega$
 $V_{DD} = 90 \, V, L = 4.1 \, mH$

$$E_{AS} = \frac{1}{2} \cdot L \cdot I_{AR}^2 \cdot \left(\frac{B_{VDSS}}{B_{VDSS} - V_{DD}} \right)$$

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