



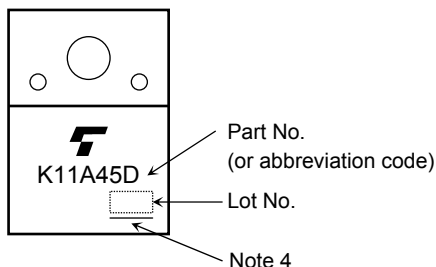
## Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Gate leakage current		$I_{GSS}$	$V_{GS} = \pm 30\text{ V}, V_{DS} = 0\text{ V}$	—	—	$\pm 1$	$\mu\text{A}$
Drain cut-off current		$I_{DSS}$	$V_{DS} = 450\text{ V}, V_{GS} = 0\text{ V}$	—	—	10	$\mu\text{A}$
Drain-source breakdown voltage		$V_{(BR)DSS}$	$I_D = 10\text{ mA}, V_{GS} = 0\text{ V}$	450	—	—	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		$R_{DS(ON)}$	$V_{GS} = 10\text{ V}, I_D = 5.5\text{ A}$	—	0.5	0.62	$\Omega$
Forward transfer admittance		$ Y_{fs} $	$V_{DS} = 10\text{ V}, I_D = 5.5\text{ A}$	0.8	3.2	—	S
Input capacitance		$C_{iss}$	$V_{DS} = 25\text{ V}, V_{GS} = 0\text{ V}, f = 1\text{ MHz}$	—	1050	—	pF
Reverse transfer capacitance		$C_{rss}$		—	5	—	
Output capacitance		$C_{oss}$		—	100	—	
Switching time	Rise time	$t_r$		—	25	—	ns
	Turn-on time	$t_{on}$		—	60	—	
	Fall time	$t_f$		—	10	—	
	Turn-off time	$t_{off}$		Duty $\leq 1\%$ , $t_w = 10\ \mu\text{s}$	—	75	
Total gate charge		$Q_g$	$V_{DD} \approx 360\text{ V}, V_{GS} = 10\text{ V}, I_D = 11\text{ A}$	—	20	—	nC
Gate-source charge		$Q_{gs}$		—	13	—	
Gate-drain charge		$Q_{gd}$		—	7	—	

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

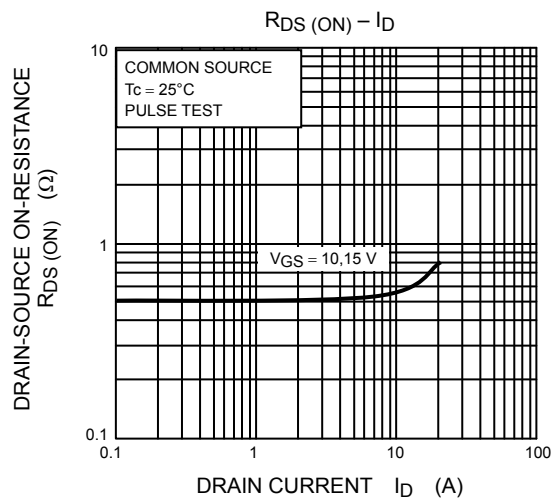
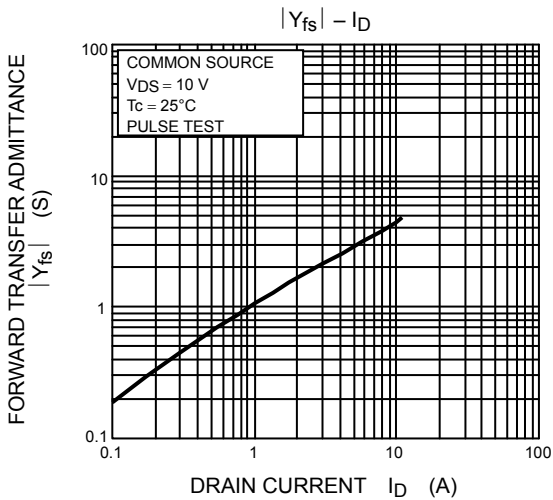
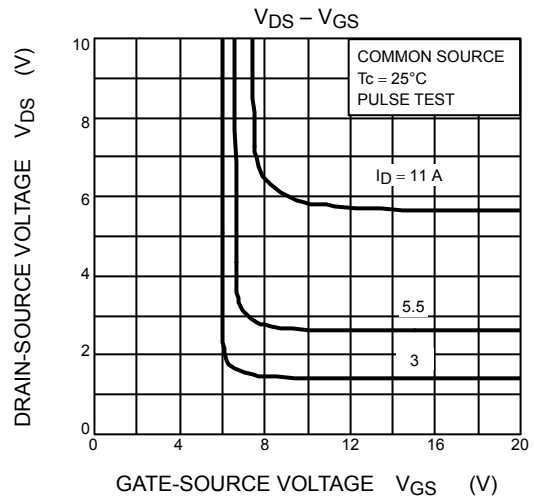
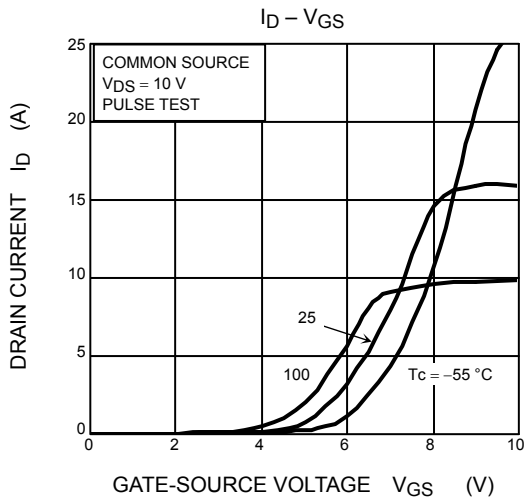
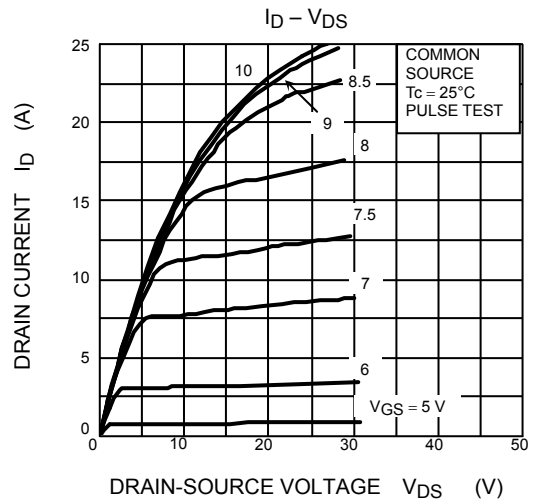
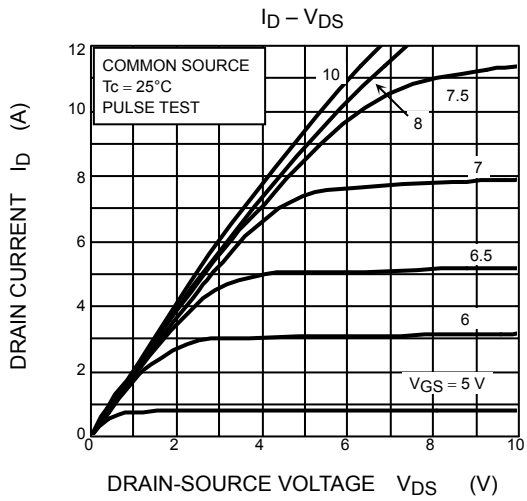
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Continuous drain reverse current (Note 1)	$I_{DR}$	—	—	—	11	A
Pulse drain reverse current (Note 1)	$I_{DRP}$	—	—	—	44	A
Forward voltage (diode)	$V_{DSF}$	$I_{DR} = 11\text{ A}, V_{GS} = 0\text{ V}$	—	—	-1.7	V
Reverse recovery time	$t_{rr}$	$I_{DR} = 11\text{ A}, V_{GS} = 0\text{ V},$	—	1350	—	ns
Reverse recovery charge	$Q_{rr}$	$dI_{DR}/dt = 100\text{ A}/\mu\text{s}$	—	14	—	$\mu\text{C}$

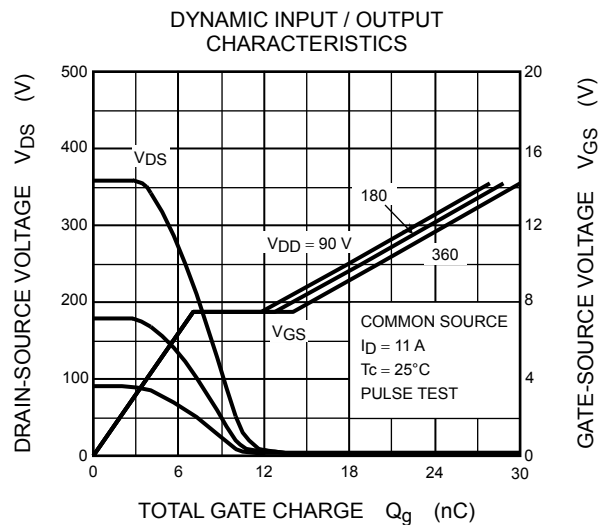
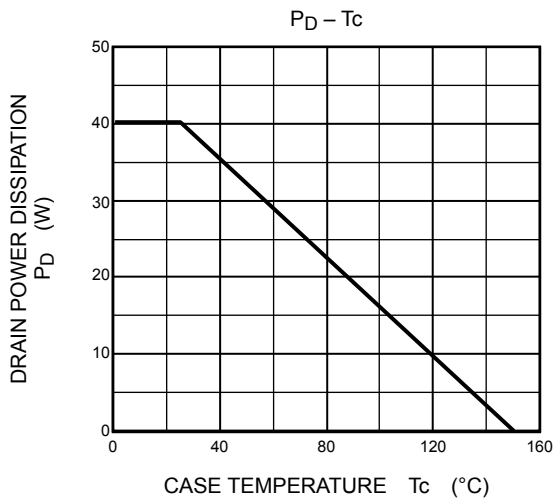
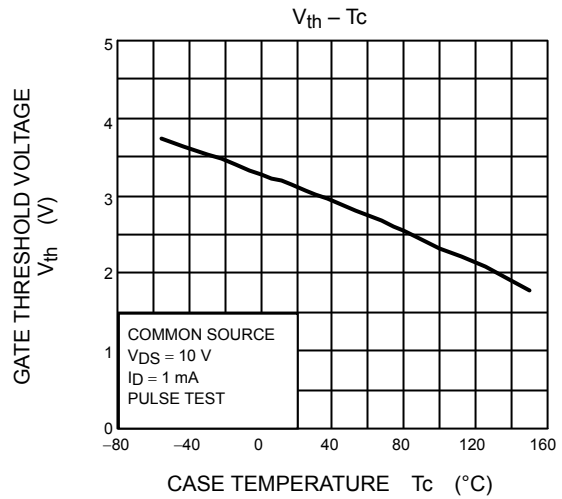
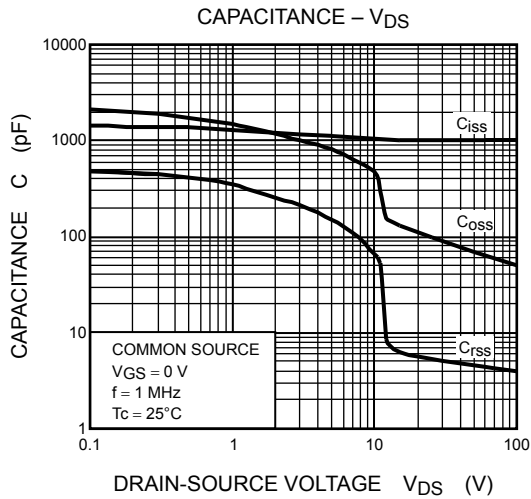
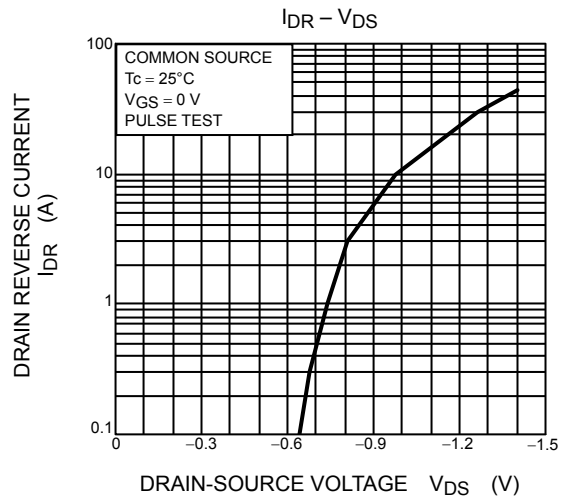
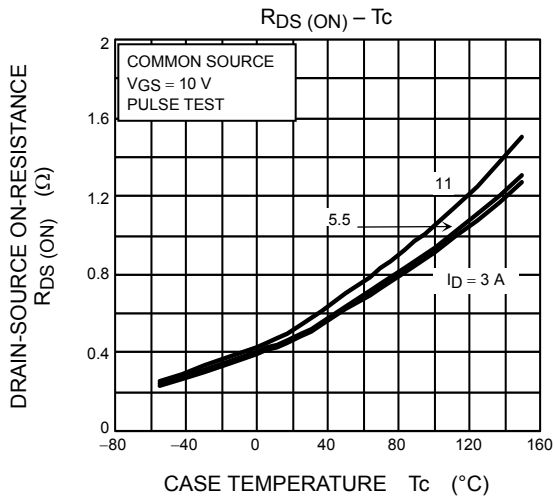
## Marking

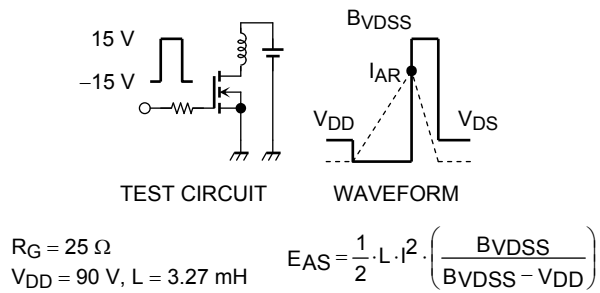
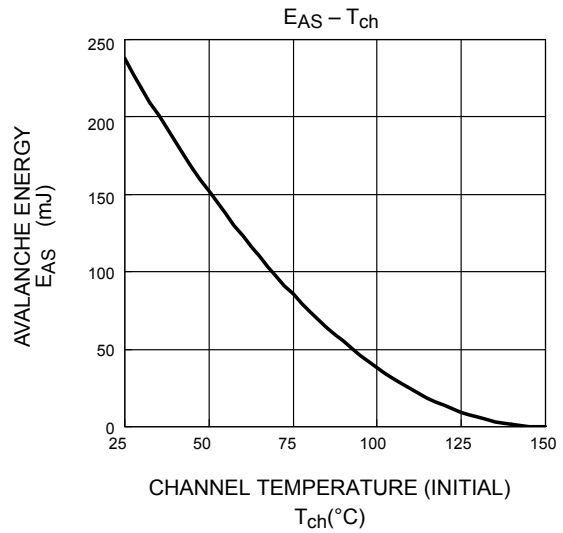
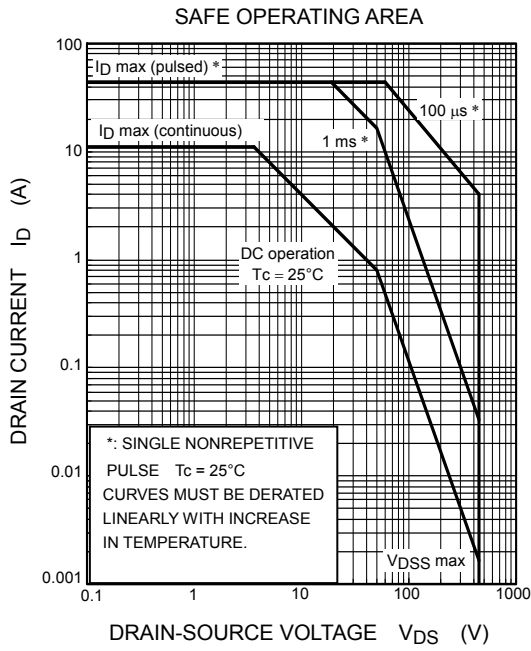
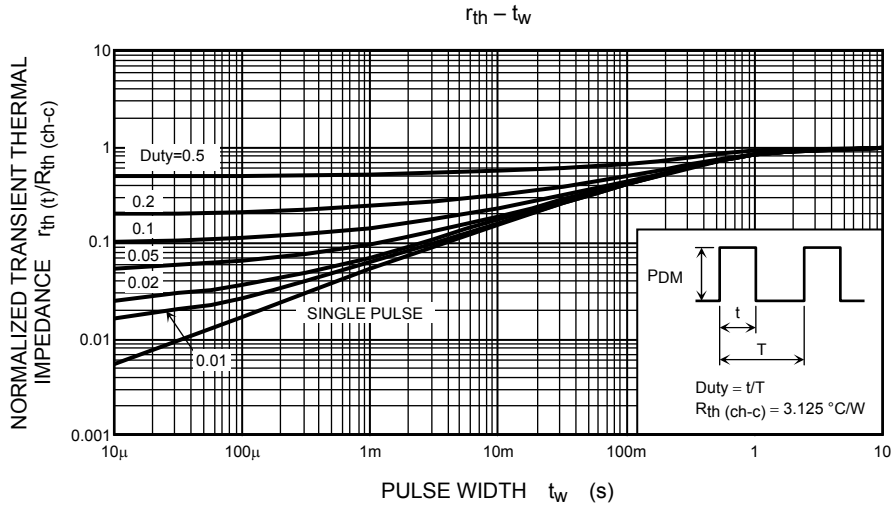


Note 4 : A line under a Lot No. identifies the indication of product Labels [[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]

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.







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