



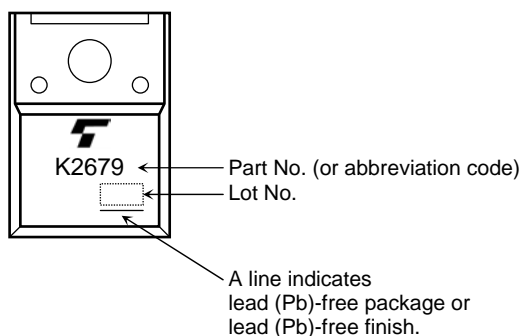
## Electrical Characteristics (Ta = 25°C)

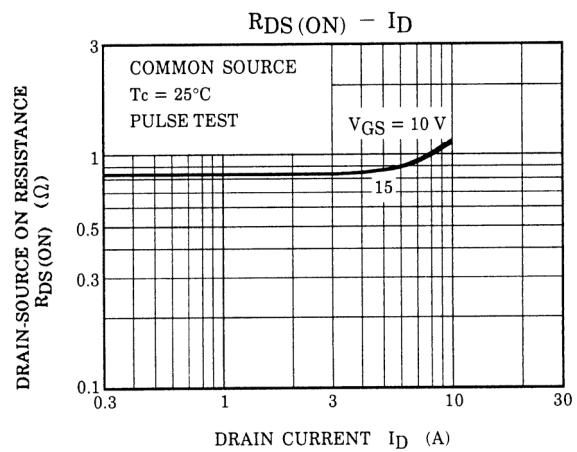
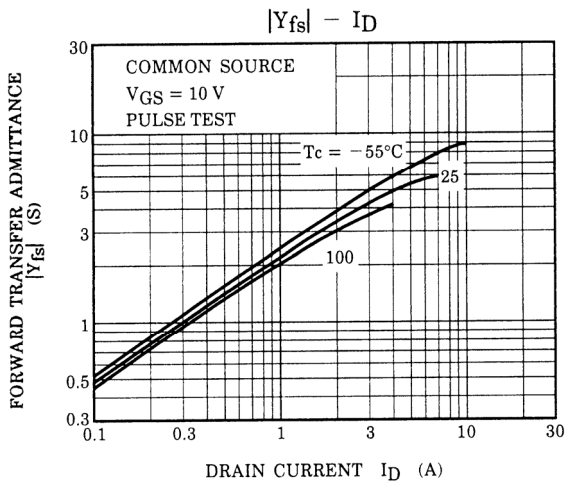
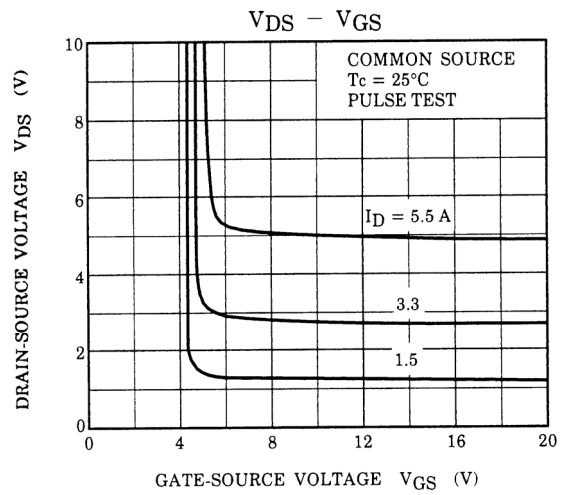
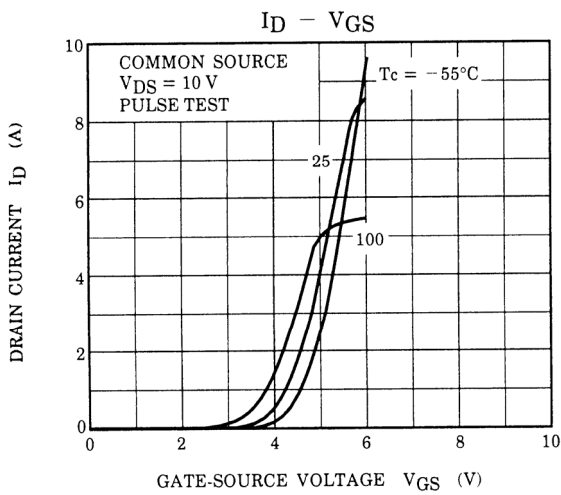
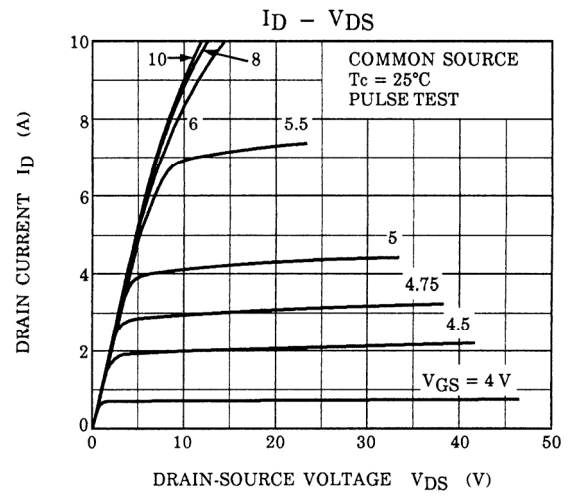
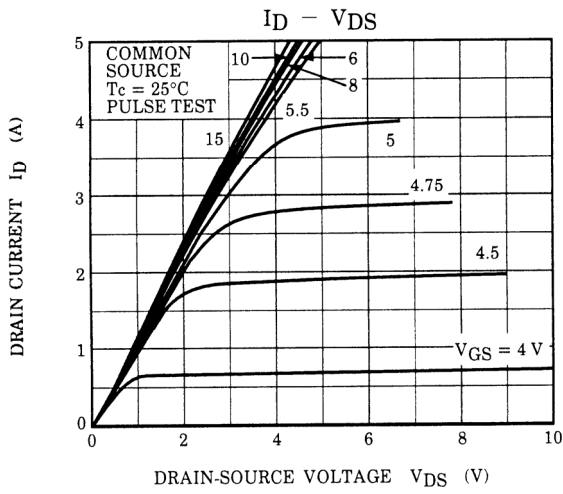
Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Gate leakage current		$I_{GSS}$	$V_{GS} = \pm 25\text{ V}, V_{DS} = 0\text{ V}$	—	—	$\pm 10$	$\mu\text{A}$
Gate-source breakdown voltage		$V_{(BR)GSS}$	$I_G = \pm 10\ \mu\text{A}, V_{DS} = 0\text{ V}$	$\pm 30$	—	—	V
Drain cut-off current		$I_{DSS}$	$V_{DS} = 400\text{ V}, V_{GS} = 0\text{ V}$	—	—	100	$\mu\text{A}$
Drain-source breakdown voltage		$V_{(BR)DSS}$	$I_D = 10\text{ mA}, V_{GS} = 0\text{ V}$	400	—	—	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		$R_{DS(ON)}$	$V_{GS} = 10\text{ V}, I_D = 3\text{ A}$	—	0.84	1.2	$\Omega$
Forward transfer admittance		$ Y_{fs} $	$V_{DS} = 10\text{ V}, I_D = 3\text{ A}$	2.0	4.4	—	S
Input capacitance		$C_{iss}$	$V_{DS} = 10\text{ V}, V_{GS} = 0\text{ V}, f = 1\text{ MHz}$	—	720	—	pF
Reverse transfer capacitance		$C_{rss}$		—	80	—	
Output capacitance		$C_{oss}$		—	250	—	
Switching time	Rise time	$t_r$		—	15	—	ns
	Turn-on time	$t_{on}$		—	30	—	
	Fall time	$t_f$		—	25	—	
	Turn-off time	$t_{off}$		Duty $\leq 1\%$ , $t_w = 10\ \mu\text{s}$	—	110	
Total gate charge (gate-source plus gate-drain)		$Q_g$	$V_{DD} \approx 320\text{ V}, V_{GS} = 10\text{ V}, I_D = 5.5\text{ A}$	—	17	—	nC
Gate-source charge		$Q_{gs}$		—	10	—	
Gate-drain ("miller") Charge		$Q_{gd}$		—	7	—	

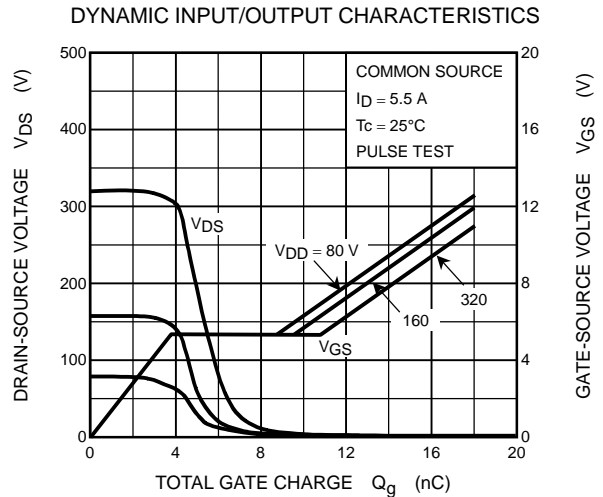
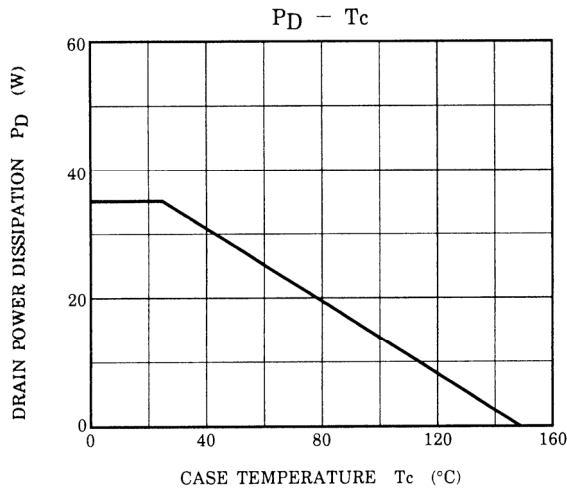
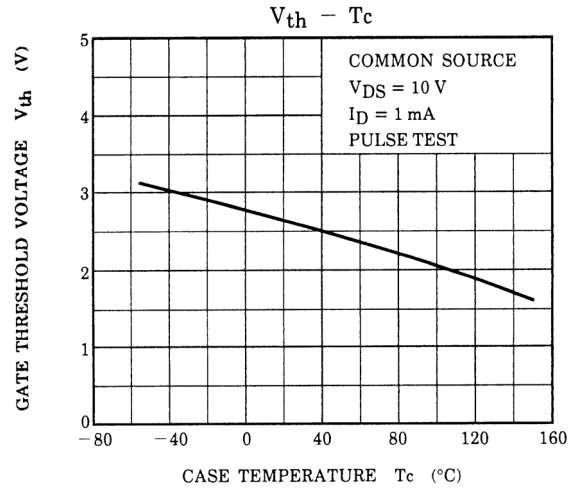
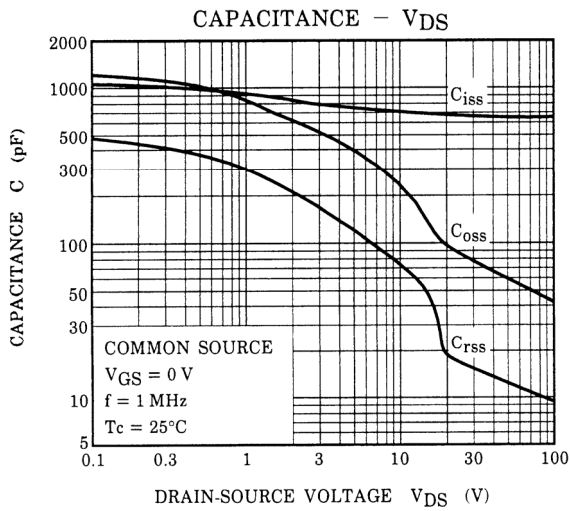
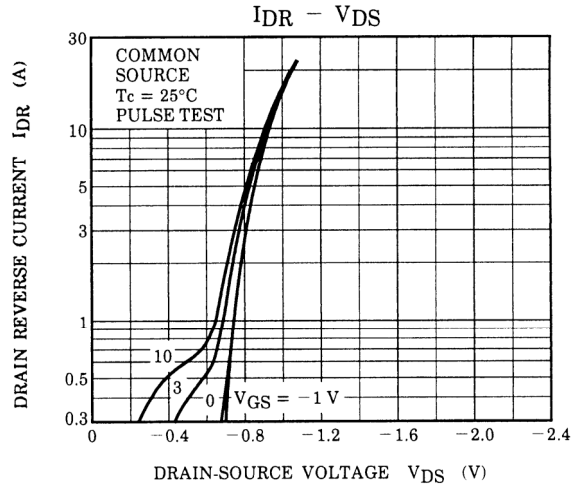
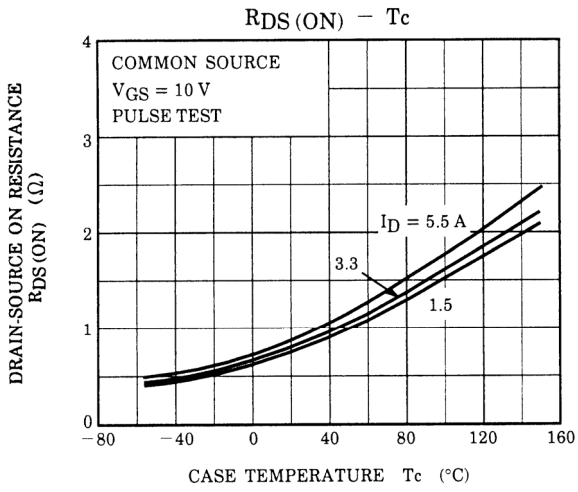
## Source-Drain Ratings and Characteristics (Ta = 25°C)

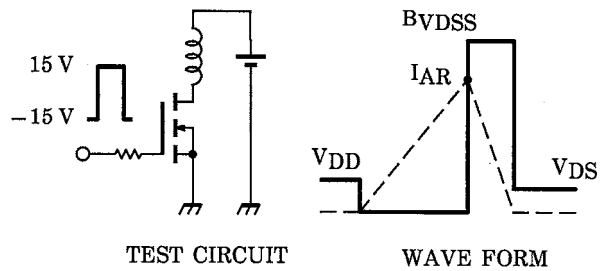
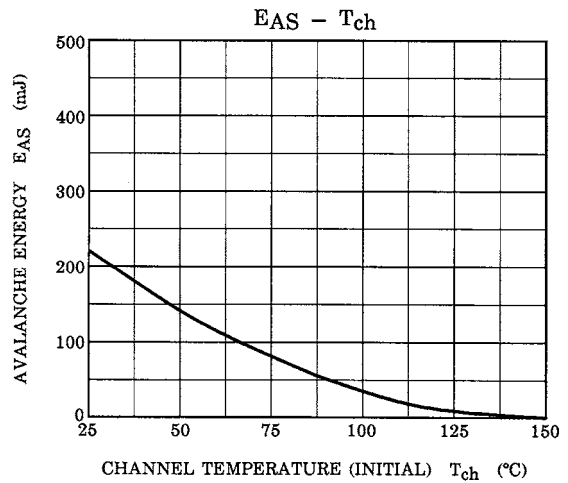
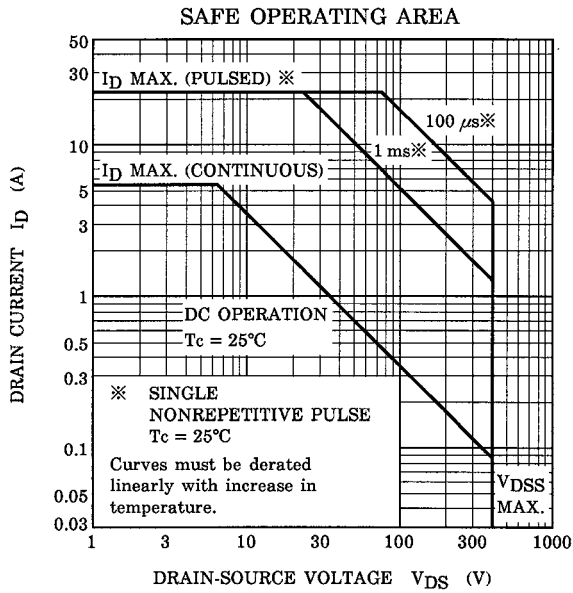
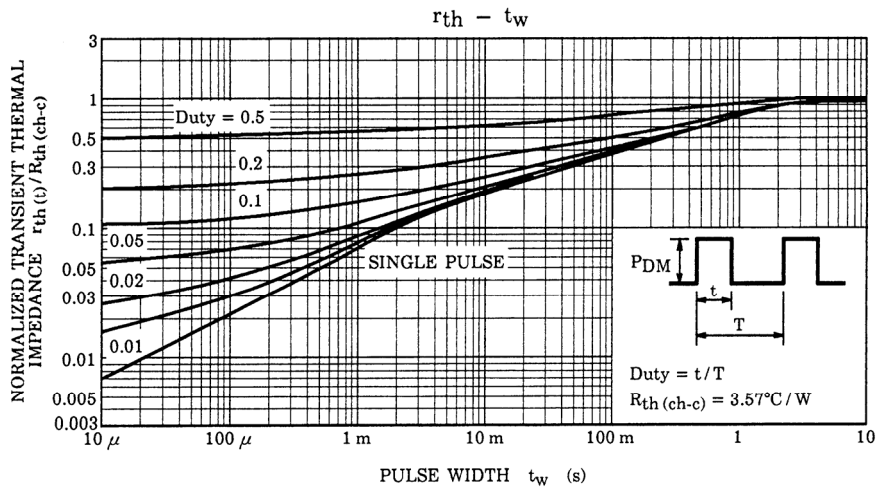
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Continuous drain reverse current (Note 1)	$I_{DR}$	—	—	—	5.5	A
Pulse drain reverse current (Note 1)	$I_{DRP}$	—	—	—	22	A
Forward voltage (diode)	$V_{DSF}$	$I_{DR} = 5.5\text{ A}, V_{GS} = 0\text{ V}$	—	—	-1.7	V
Reverse recovery time	$t_{rr}$	$I_{DR} = 5.5\text{ A}, V_{GS} = 0\text{ V}$	—	350	—	ns
Reverse recovery charge	$Q_{rr}$	$dI_{DR} / dt = 100\text{ A} / \mu\text{s}$	—	2.1	—	$\mu\text{C}$

## Marking









$R_G = 25 \Omega$   
 $V_{DD} = 90 V, L = 12 mH$

$$E_{AS} = \frac{1}{2} \cdot L \cdot I^2 \cdot \left( \frac{BVDSS}{BVDSS - V_{DD}} \right)$$

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