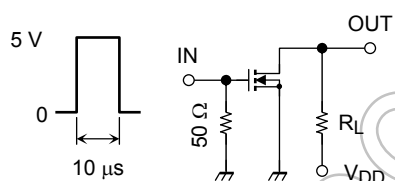


Electrical Characteristics (Ta = 25°C)

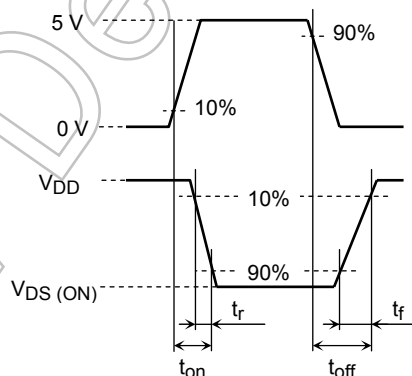
Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Gate leakage current		I_{GSS}	$V_{GS} = \pm 16 \text{ V}, V_{DS} = 0$	—	—	± 1	μA
Drain-Source breakdown voltage		$V_{(BR)DSS}$	$I_D = 0.1 \text{ mA}, V_{GS} = 0$	30	—	—	V
Drain Cut-off current		I_{DSS}	$V_{DS} = 30 \text{ V}, V_{GS} = 0$	—	—	1	μA
Gate threshold voltage		V_{th}	$V_{DS} = 3 \text{ V}, I_D = 0.1 \text{ mA}$	0.8	—	1.5	V
Forward transfer admittance		$ Y_{fs} $	$V_{DS} = 3 \text{ V}, I_D = 10 \text{ mA}$	25	—	—	mS
Drain-Source ON resistance		$R_{DS(ON)}$	$I_D = 10 \text{ mA}, V_{GS} = 4 \text{ V}$	—	2.2	4.0	Ω
			$I_D = 10 \text{ mA}, V_{GS} = 2.5 \text{ V}$	—	4.0	7.0	
Input capacitance		C_{iss}	$V_{DS} = 3 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$	—	7.8	—	pF
Reverse transfer capacitance		C_{rss}	$V_{DS} = 3 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$	—	3.6	—	pF
Output capacitance		C_{oss}	$V_{DS} = 3 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$	—	8.8	—	pF
Switching time	Turn-on time	t_{on}	$V_{DD} = 5 \text{ V}, I_D = 10 \text{ mA},$ $V_{GS} = 0 \text{ to } 5 \text{ V}$	—	50	—	ns
	Turn-off time	t_{off}		—	180	—	

Switching Time Test Circuit

(a) Test circuit



$V_{DD} = 5 \text{ V}$
 $D.U. \leq 1\%$
 $V_{IN}: t_r, t_f < 5 \text{ ns}$
 $(Z_{out} = 50 \Omega)$
 Common source
 $T_a = 25^\circ\text{C}$

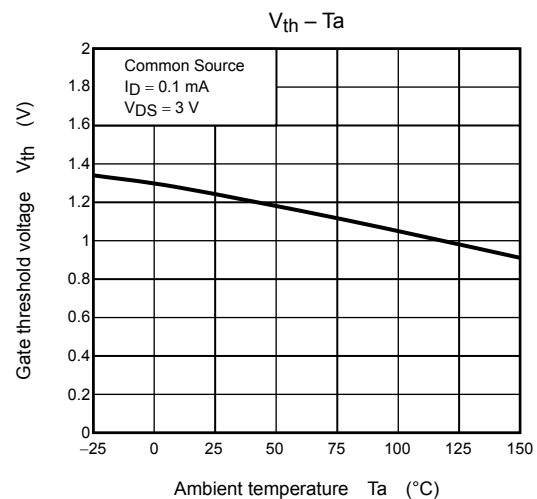
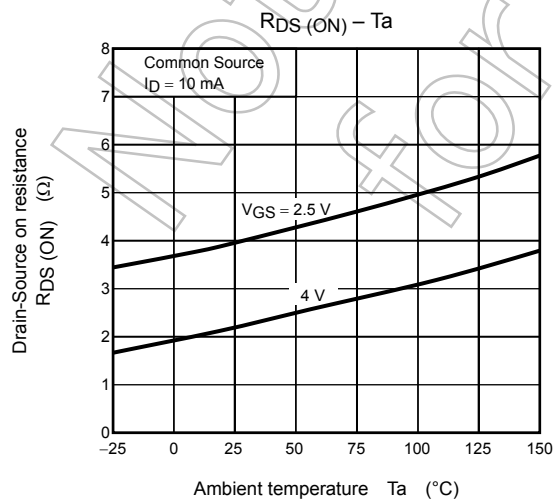
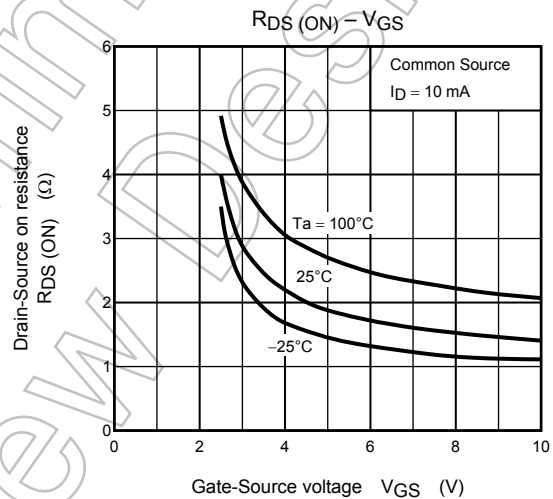
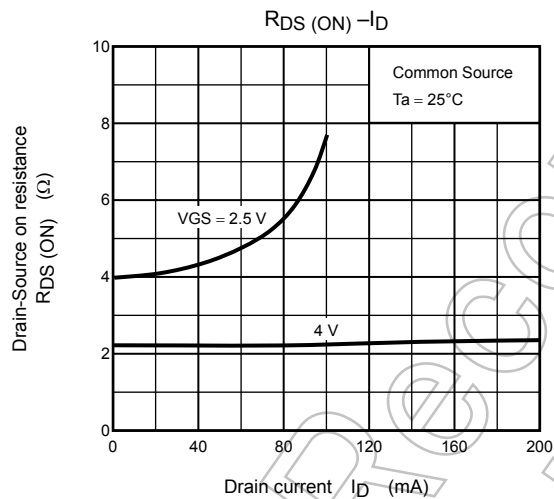
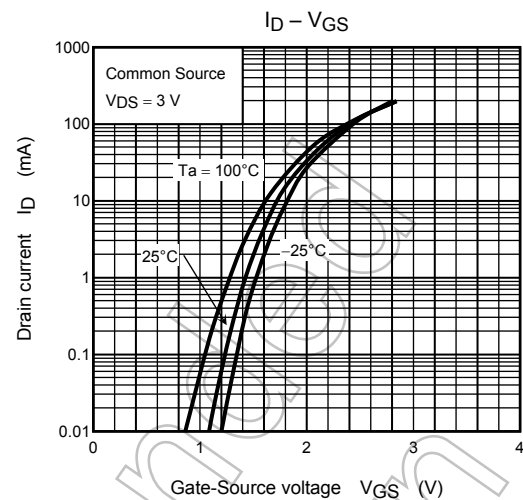
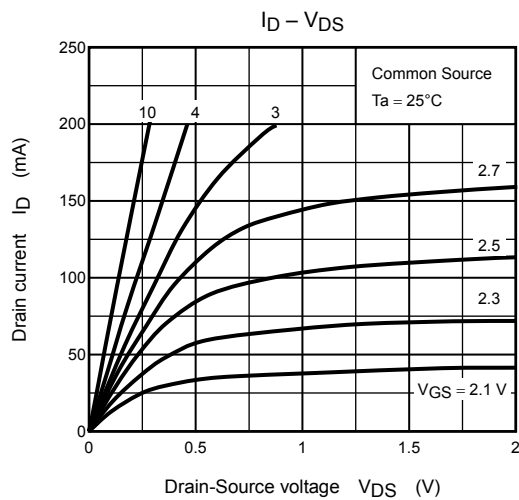
(b) V_{IN} (c) V_{OUT}

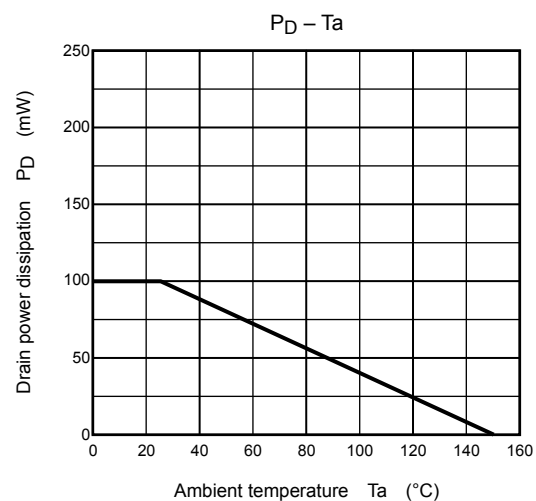
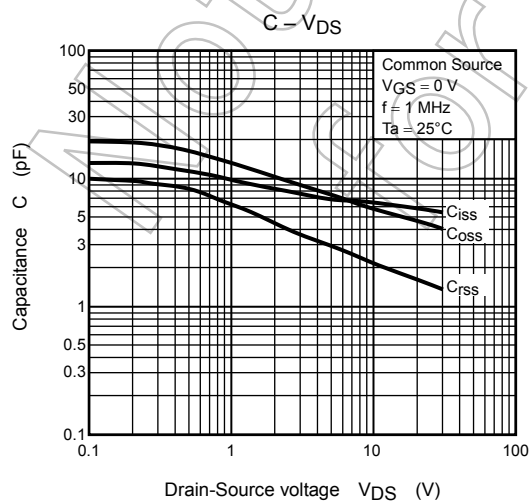
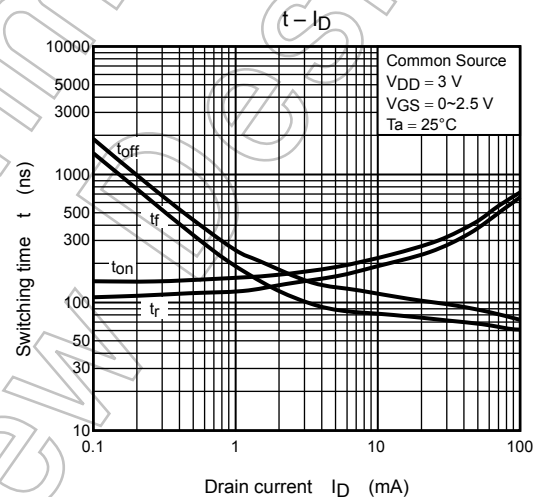
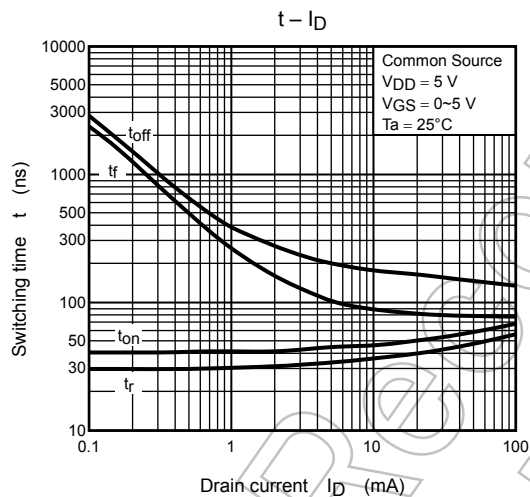
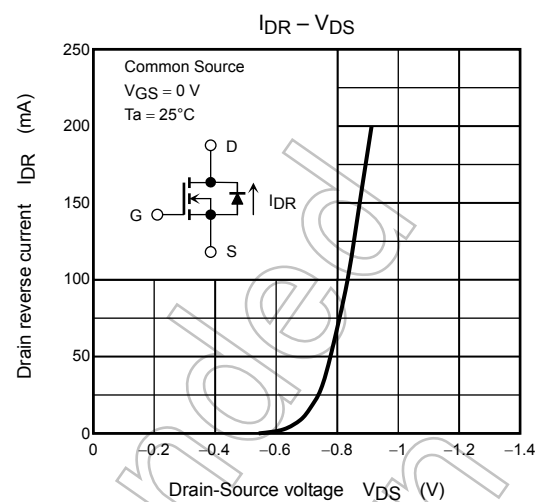
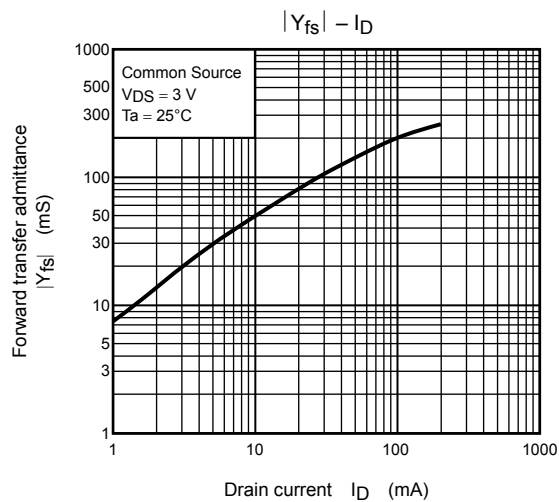
Precaution

V_{th} can be expressed as voltage between gate and source when low operating current value is $I_D = 100 \mu\text{A}$ for this product. For normal switching operation, $V_{GS(on)}$ requires higher voltage than V_{th} and $V_{GS(off)}$ requires lower voltage than V_{th} .

(relationship can be established as follows: $V_{GS(off)} < V_{th} < V_{GS(on)}$)

Please take this into consideration for using the device.





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