

HN1J02FU

High Speed Switching Applications

Analog Switch Applications

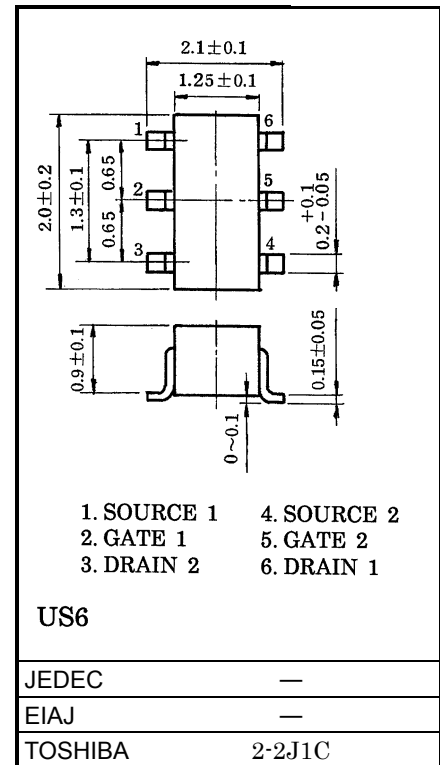
Unit in mm

- High input impedance
- Low threshold voltage: $V_{th} = -0.5V \sim -1.5V$
- High speed
- Small package

Maximum Ratings ($T_a = 25^\circ C$) (Q1, Q2 Common)

Characteristic	Symbol	Rating	Unit
Drain-source voltage	V_{DS}	-20	V
Gate-source voltage	V_{GSS}	-7	V
DC drain current	I_D	-50	mA
Drain power dissipation	P_D^*	200	mW
Channel temperature	T_{ch}	150	$^\circ C$
Storage temperature range	T_{stg}	-55~150	$^\circ C$

* Total rating



JEDEC	—
EIAJ	—
TOSHIBA	2-2J1C

Weight: 6.8mg

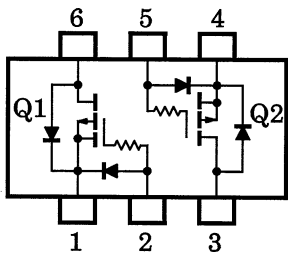
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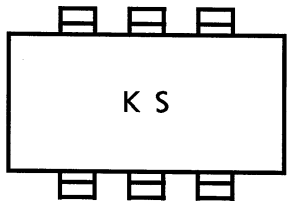
Electrical Characteristics (Ta = 25°C) (Q1, Q2 Common)

Characteristic		Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Gate leakage current		IGSS	—	VGS = -7V, VDS = 0	—	—	-1	μA
Drain-source breakdown voltage		V (BR) DSS	—	ID = -100μA, VGS = 0	-20	—	—	V
Drain cut-off current		IDSS	—	VDS = -20V, VGS = 0	—	—	-1	μA
Gate threshold voltage		Vth	—	VDS = -3V, ID = -0.1mA	-0.5	—	-1.5	V
Forward transfer admittance		Yfs	—	VDS = -3V, ID = -10mA	15	—	—	mS
Drain-source ON resistance		RDS (ON)	—	ID = -10mA, VGS = -2.5V	—	20	40	Ω
Input capacitance		Ciss	—	VDS = -3V, VGS = 0, f = 1MHz	—	10.4	—	pF
Reverse transfer capacitance		Crss	—	VDS = -3V, VGS = 0, f = 1MHz	—	2.8	—	pF
Output capacitance		Coss	—	VDS = -3V, VGS = 0, f = 1MHz	—	8.4	—	pF
Switching time	Turn-on time	ton	—	VDD = -3V, ID = -10mA, VGS = 0~-2.5V	—	0.15	—	μs
	Turn-off time	t _{off}	—	VDD = -3V, ID = -10mA, VGS = 0~-2.5V	—	0.13	—	μs

Equivalent Circuit (Top View)

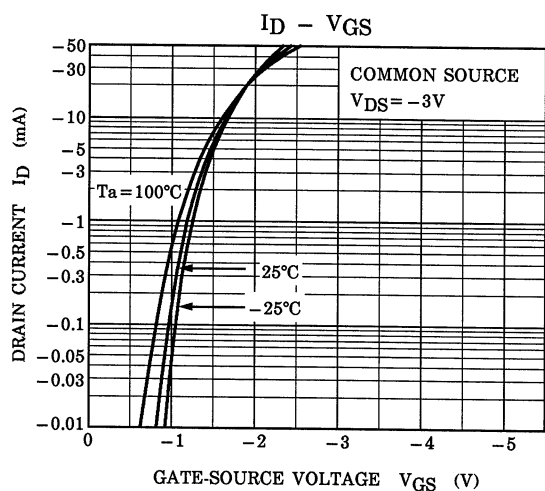
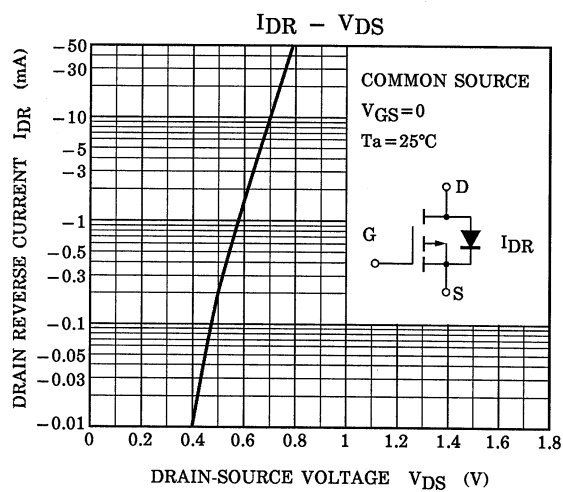
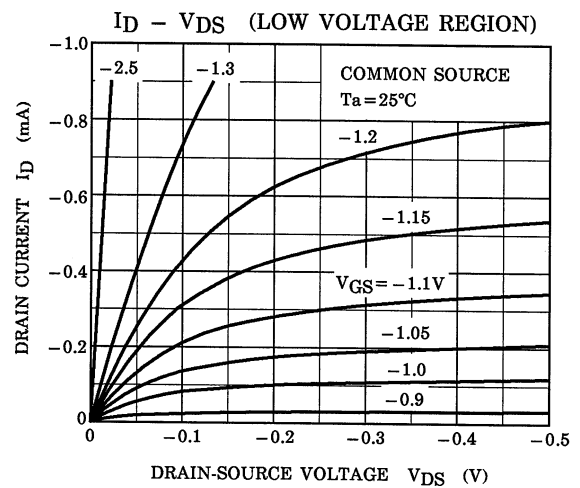
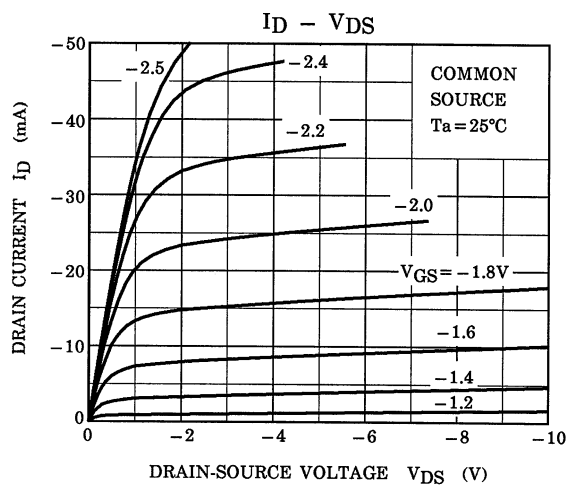
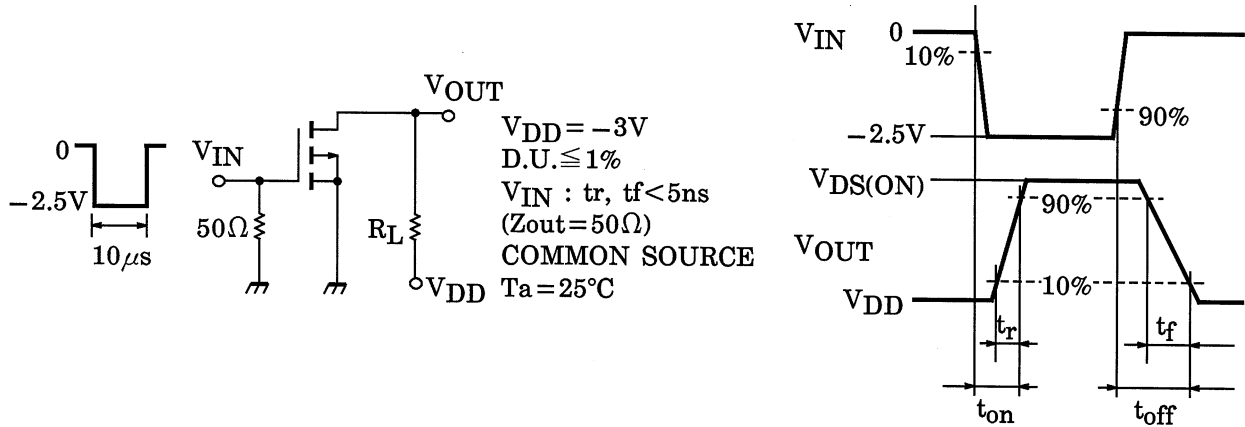


Marking

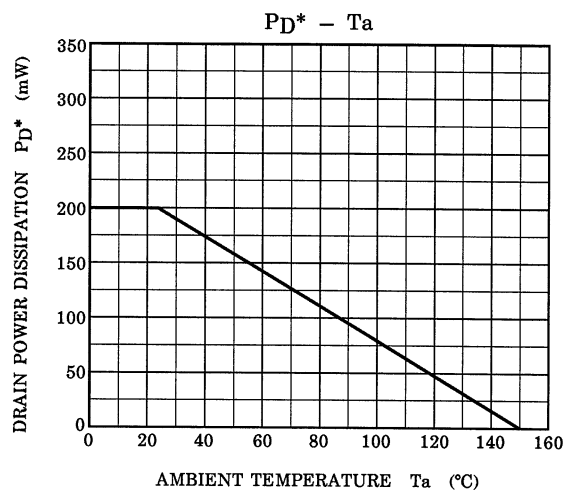
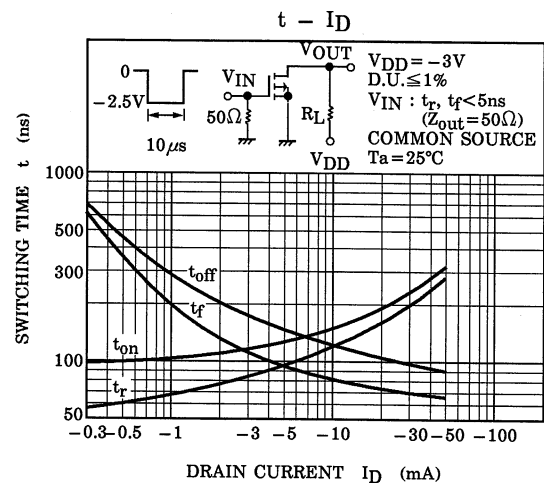
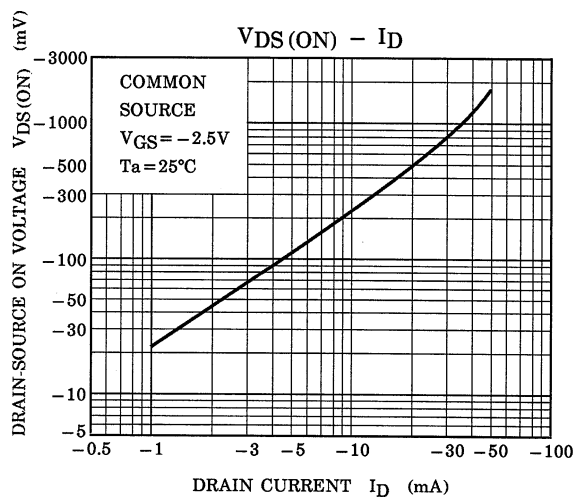
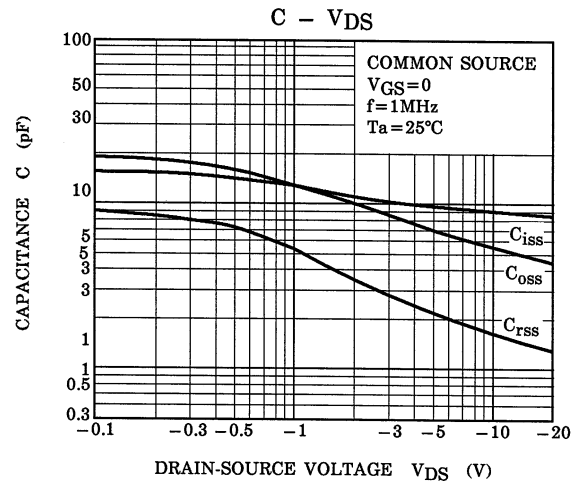
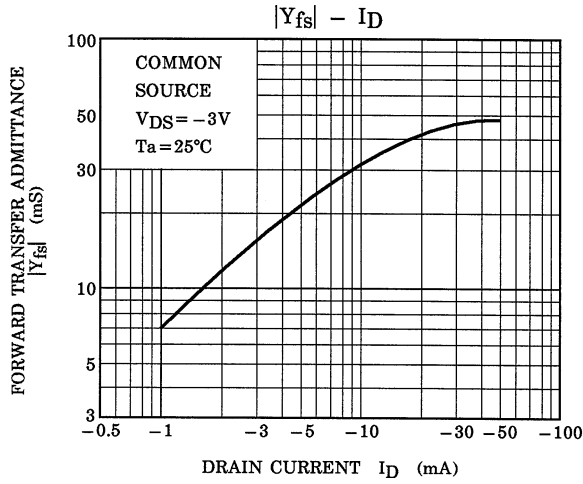


(Q1,Q2 Common)

Switching Time Test Circuit



(Q1,Q2 Common)



* : Total Rating