

2SJ168

High Speed Switching Applications
Analog Switch Applications
Interface Applications

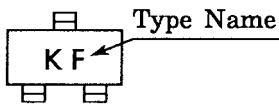
- Excellent switching time: $t_{on} = 14 \text{ ns (typ.)}$
- High forward transfer admittance: $|Y_{fs}| = 100 \text{ mS (min)}$
 $@I_D = -50 \text{ mA}$
- Low on resistance: $R_{DS(ON)} = 1.3 \text{ } \Omega \text{ (typ.) @ } I_D = -50 \text{ mA}$
- Enhancement-mode
- Complementary to 2SK1062

Maximum Ratings (Ta = 25°C)

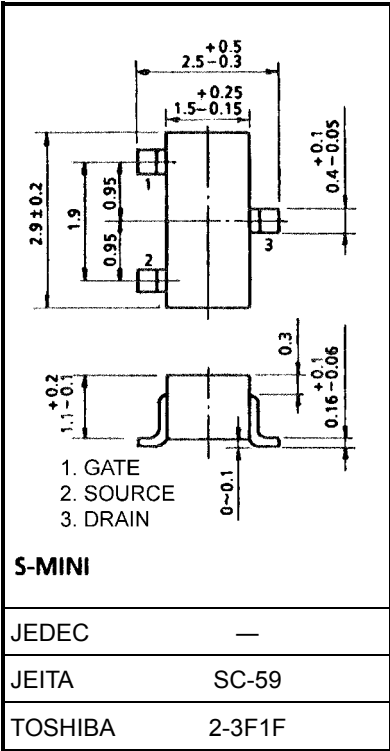
Characteristics		Symbol	Rating	Unit
Drain-source voltage		V_{DSS}	-60	V
Gate-source voltage		V_{GSS}	±20	V
Drain current	DC	I_D	-200	mA
	Pulse	I_{DP}	-800	
Drain power dissipation (Ta = 25°C)		P_D	200	mW
Channel temperature		T_{ch}	150	°C
Storage temperature range		T_{stg}	-55~150	°C

Note: This transistor is the electrostatic sensitive device. Please handle with caution.

Marking

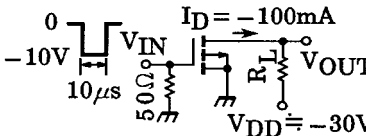


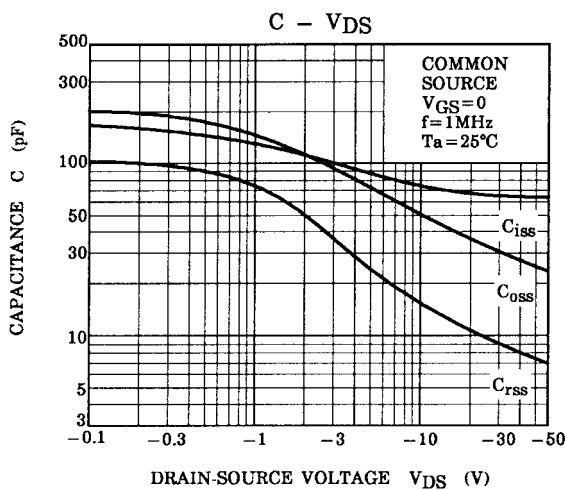
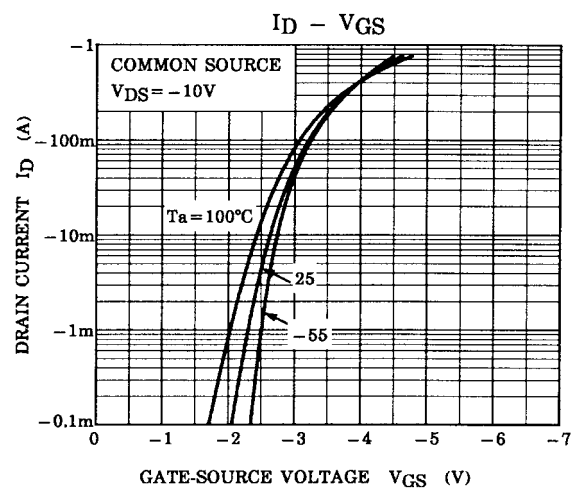
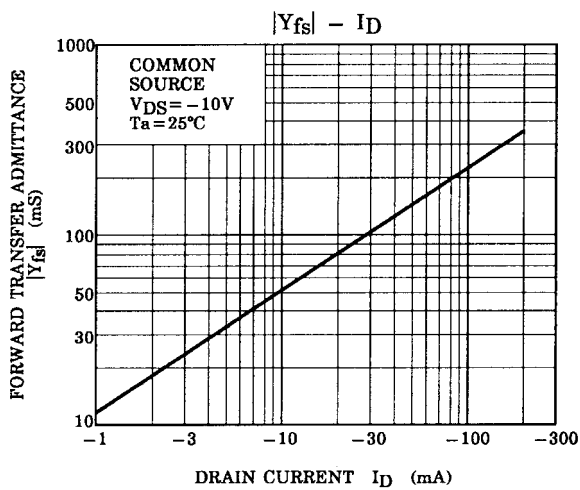
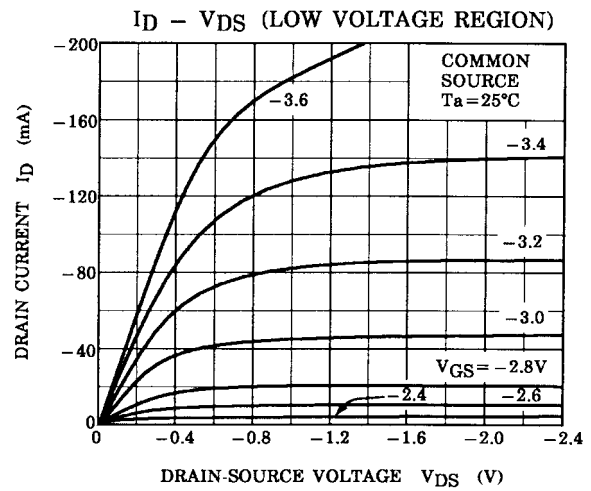
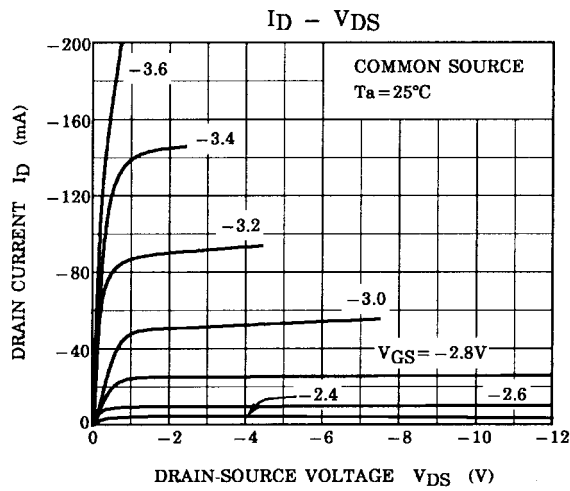
Unit: mm

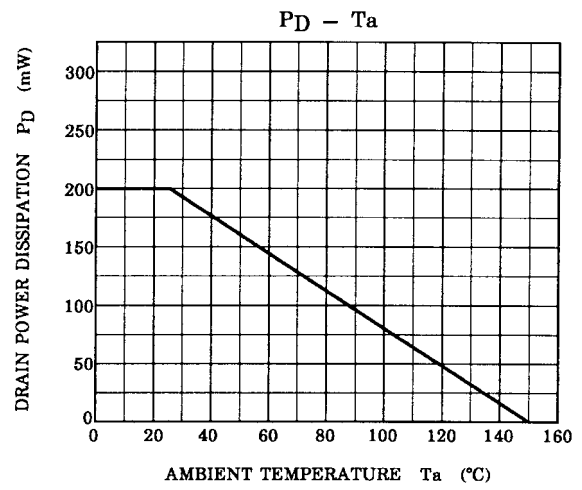
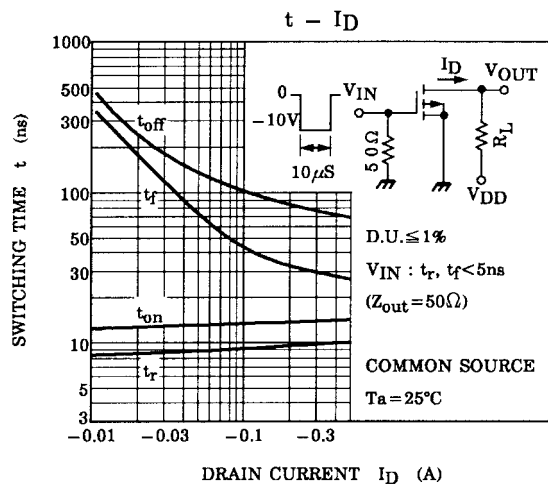
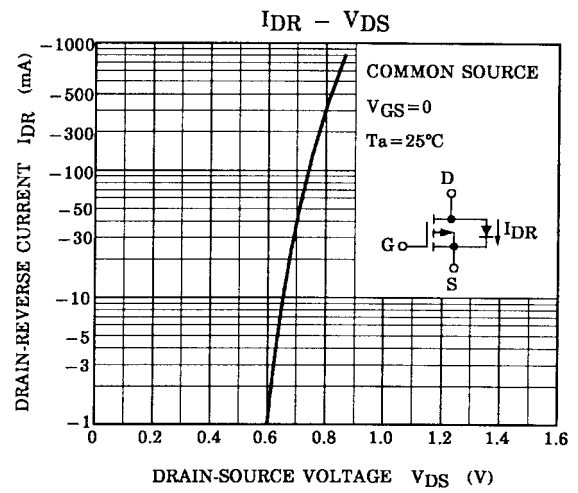
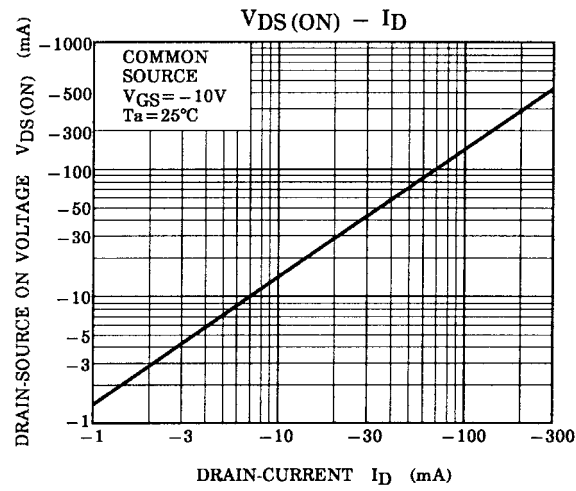


Weight: 0.012 g (typ.)

Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Gate leakage current		I_{GSS}	$V_{GS} = \pm 10\text{ V}, V_{DS} = 0$	—	—	± 100	nA
Drain cut-off current		I_{DSS}	$V_{DS} = -60\text{ V}, V_{GS} = 0$	—	—	-10	μA
Drain-source breakdown voltage		$V_{(BR)DSS}$	$I_D = -1\text{ mA}, V_{GS} = 0$	-60	—	—	V
Gate threshold voltage		V_{th}	$V_{DS} = -10\text{ V}, I_D = -1\text{ mA}$	-2	—	-3.5	V
Forward transfer admittance		$ Y_{fs} $	$V_{DS} = -10\text{ V}, I_D = -50\text{ mA}$	100	—	—	mS
Drain-source ON resistance		$R_{DS(ON)}$	$I_D = -50\text{ mA}, V_{GS} = -10\text{ V}$	—	1.3	2.0	Ω
Drain-source ON voltage		$V_{DS(ON)}$	$I_D = -50\text{ mA}, V_{GS} = -10\text{ V}$	—	-65	-100	mV
Input capacitance		C_{iss}	$V_{DS} = -10\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$	—	73	85	pF
Reverse transfer capacitance		C_{rss}	$V_{DS} = -10\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$	—	15	22	pF
Output capacitance		C_{oss}	$V_{DS} = -10\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$	—	48	60	pF
Switching time	Rise time	t_r	 $V_{IN}: t_r, t_f < 5\text{ ns}$ D.U. $\leq 1\%$ ($Z_{out} = 50\ \Omega$)	—	8	—	ns
	Turn-on time	t_{on}		—	14	—	
	Fall time	t_f		—	35	—	
	Turn-off Time	t_{off}		—	100	—	





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