

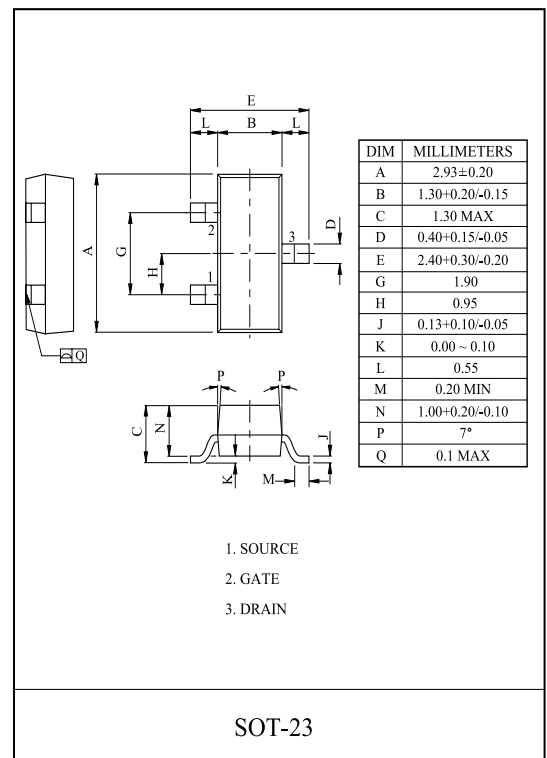
ULTRA-HIGH SPEED SWITCHING APPLICATIONS
ANALOG SWITCH APPLICATIONS

FEATURES

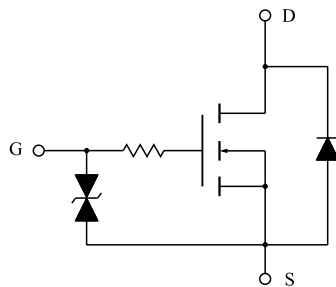
- 2.5 Gate Drive.
- Low Threshold Voltage : $V_{th}=0.5 \sim 1.5V$.
- High Speed.
- Small Package.
- Enhancement-Mode.

MAXIMUM RATING ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GSS}	± 20	V
DC Drain Current	I_D	100	mA
Drain Power Dissipation	P_D	200	mW
Channel Temperature	T_{ch}	150	
Storage Temperature Range	T_{stg}	-55 ~ 150	

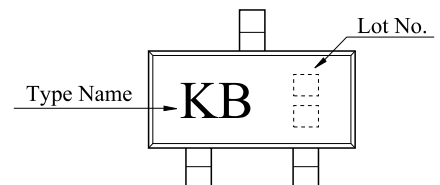


EQUIVALENT CIRCUIT



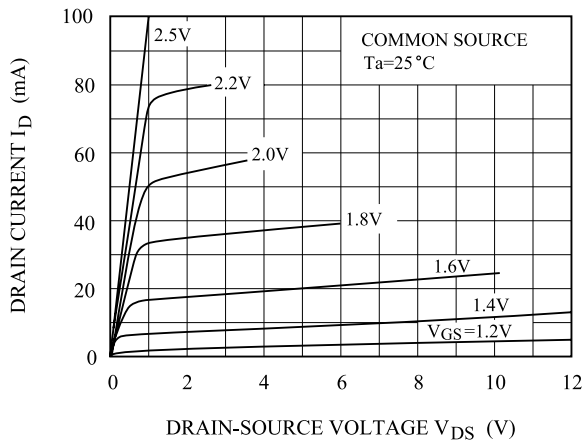
THIS TRANSISTOR IS ELECTROSTATIC SENSITIVE DEVICE.
PLEASE HANDLE WITH CAUTION.

Marking

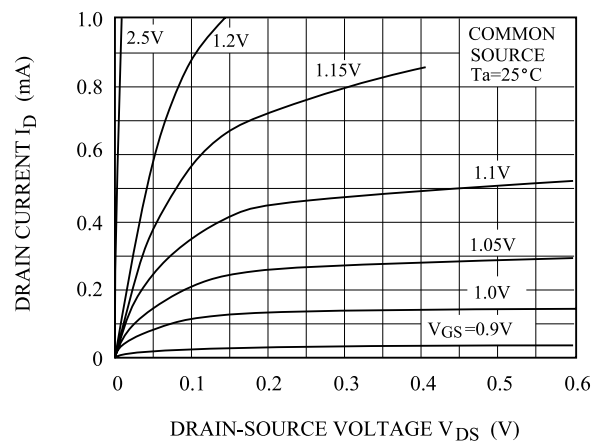
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		I_{GSS}	$V_{GS} = \pm 16V, V_{DS}=0V$	-	-	± 1	μA
Drain-Source Breakdown Voltage		$V_{(BR)DSS}$	$I_D=100 \mu A, V_{GS}=0V$	30	-	-	V
Drain Cut-off Current		I_{DSS}	$V_{DS}=30V, V_{GS}=0V$	-	-	1	μA
Gate Threshold Voltage		V_{th}	$V_{DS}=3V, I_D=0.1mA$	0.5	-	1.5	V
Forward Transfer Admittance		$ Y_{fs} $	$V_{DS}=3V, I_D=10mA$	25	-	-	mS
Drain-Source ON Resistance		$R_{DS(ON)}$	$I_D=10mA, V_{GS}=2.5V$	-	4	7	Ω
Input Capacitance		C_{iss}	$V_{DS}=3V, V_{GS}=0V, f=1MHz$	-	19	-	pF
Reverse Transfer Capacitance		C_{rss}	$V_{DS}=3V, V_{GS}=0V, f=1MHz$	-	7	-	pF
Output Capacitance		C_{oss}	$V_{DS}=3V, V_{GS}=0V, f=1MHz$	-	17	-	pF
Switching Time	Turn-on Time	t_{on}	$V_{DD}=5V, I_D=10mA, V_{GS}=0 \sim 5V$	-	50	-	nS
	Turn-off Time	t_{off}		-	180	-	nS

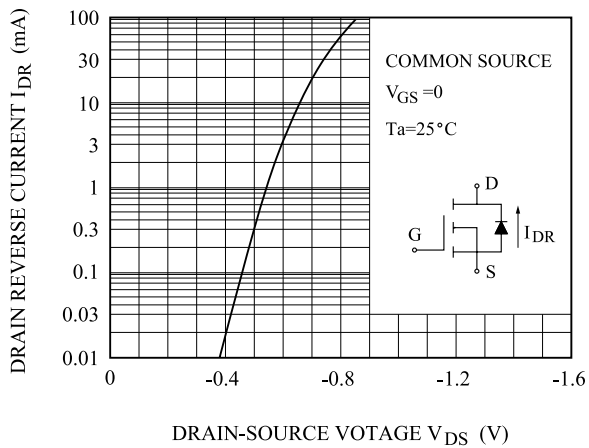
$I_D - V_{DS}$



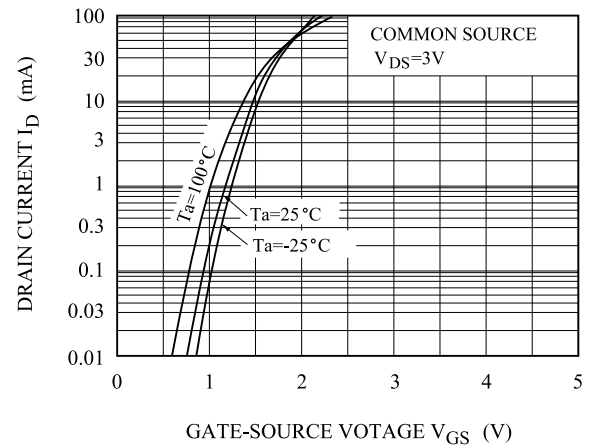
$I_D - V_{DS}$
(LOW VOLTAGE REGION)



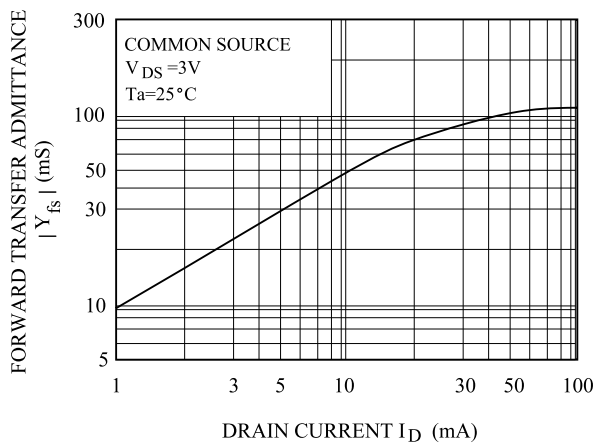
$I_{DR} - V_{DS}$



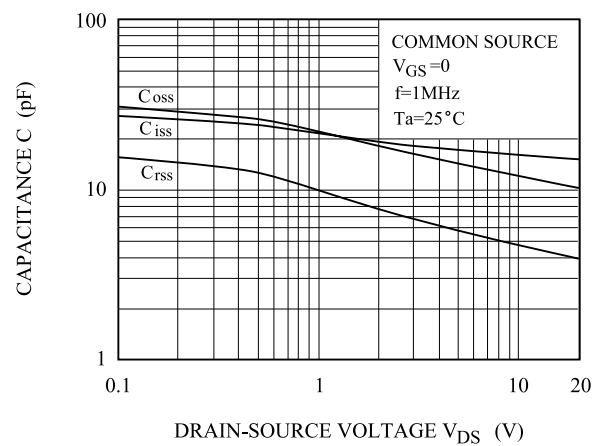
$I_D - V_{GS}$



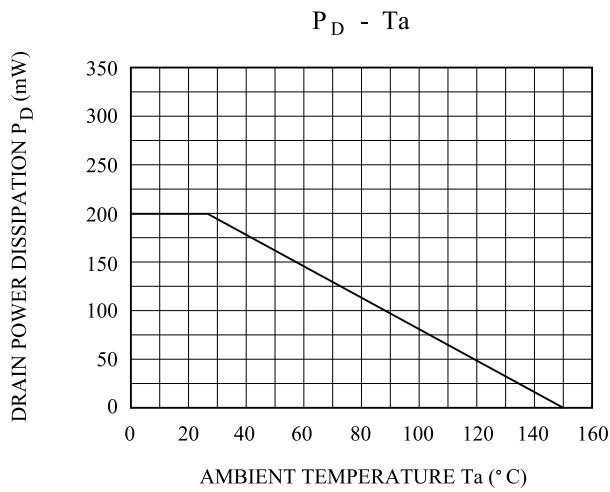
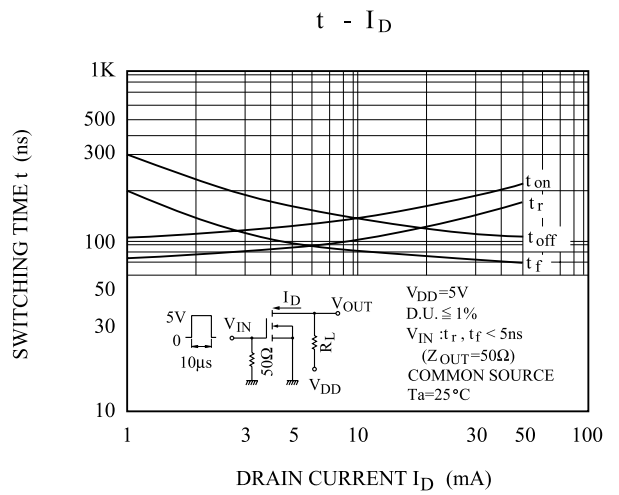
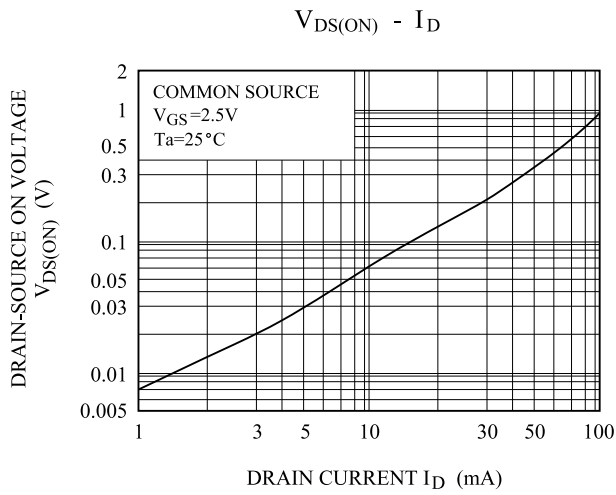
$|Y_{fs}| - I_D$



$C - V_{DS}$



KTK5132S



SWITCHING TIME TEST CIRCUIT

