

ULTRA-HIGH SPEED SWITCHING APPLICATIONS  
ANALOG SWITCH APPLICATIONS

### FEATURES

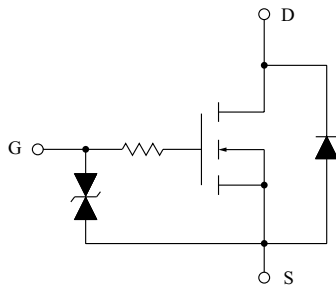
- 2.5 Gate Drive.
- Low Threshold Voltage :  $V_{th}=0.5 \sim 1.5V$ .
- High Speed.
- Small Package.
- Enhancement-Mode.

### MAXIMUM RATING (Ta=25°C)

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

Note) \* Package Mounted On 99.5% Alumina  $10 \times 8 \times 0.6$ mm)

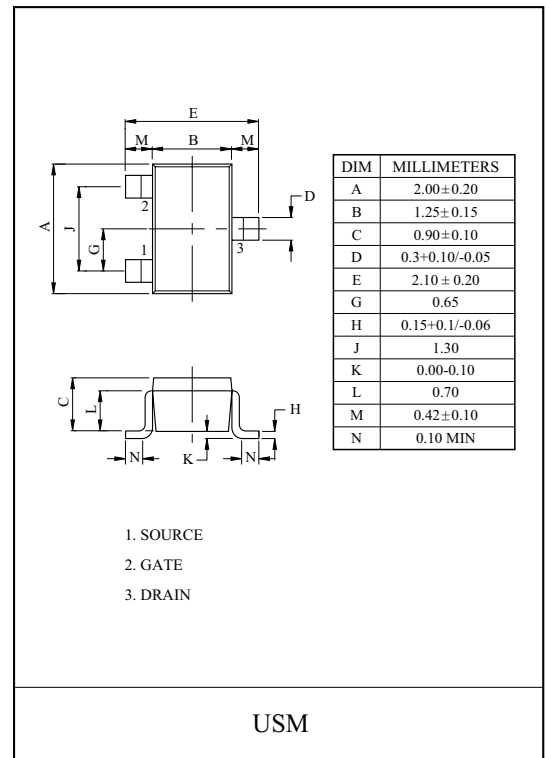
### EQUIVALENT CIRCUIT



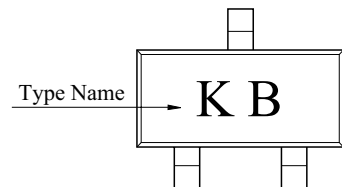
THIS TRANSISTOR IS ELECTROSTATIC SENSITIVE DEVICE.  
PLEASE HANDLE WITH CAUTION.

### ELECTRICAL CHARACTERISTICS (Ta=25°C)

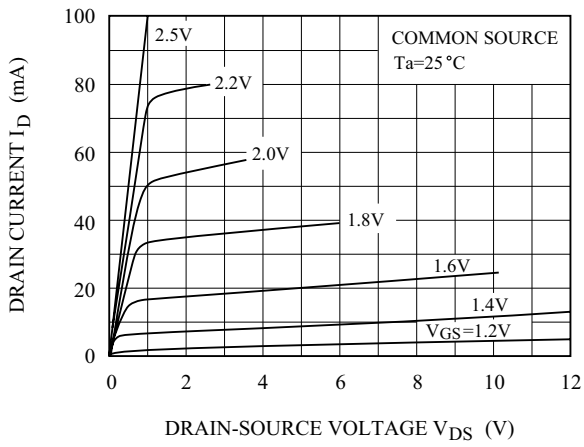
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	$I_{GSS}$	$V_{GS} = \pm 16V, V_{DS} = 0V$	-	-	$\pm 1$	$\mu A$
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 100\mu A, V_{GS} = 0V$	30	-	-	V
Drain Cut-off Current	$I_{DSS}$	$V_{DS} = 30V, V_{GS} = 0V$	-	-	1	$\mu A$
Gate 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	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS} = 3V, V_{GS} = 0V, f = 1MHz$	-	8.5	-	pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS} = 3V, V_{GS} = 0V, f = 1MHz$	-	3.3	-	pF
Output Capacitance	$C_{oss}$	$V_{DS} = 3V, V_{GS} = 0V, f = 1MHz$	-	9.3	-	pF
Switching Time	Turn-on Time	$t_{on}$	-	50	-	nS
	Turn-off Time	$t_{off}$	-	180	-	nS



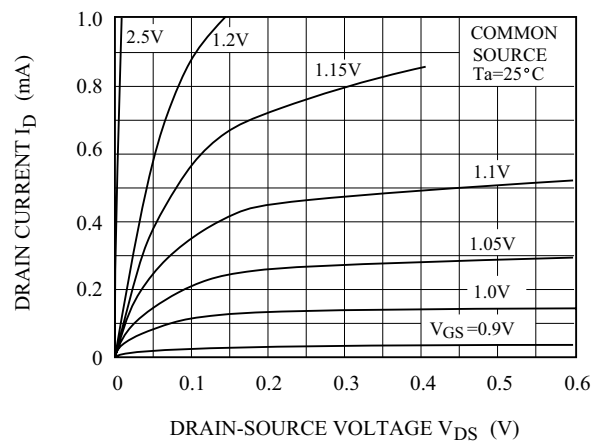
### Marking



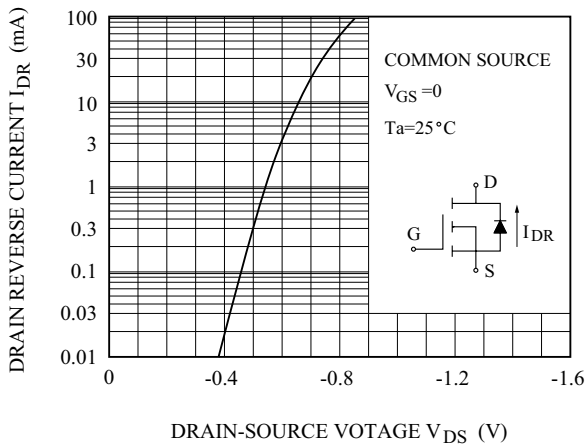
$I_D - V_{DS}$



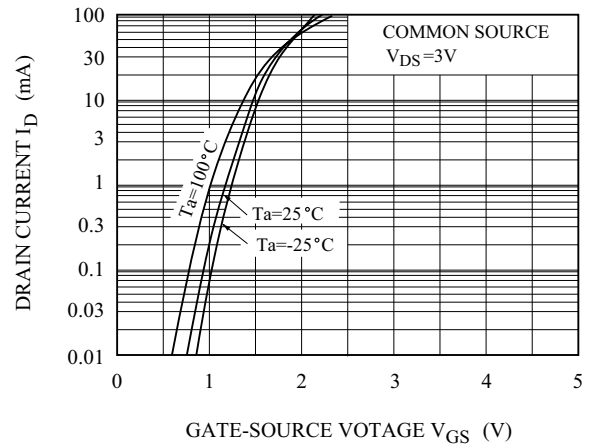
$I_D - V_{DS}$   
(LOW VOLTAGE REGION)



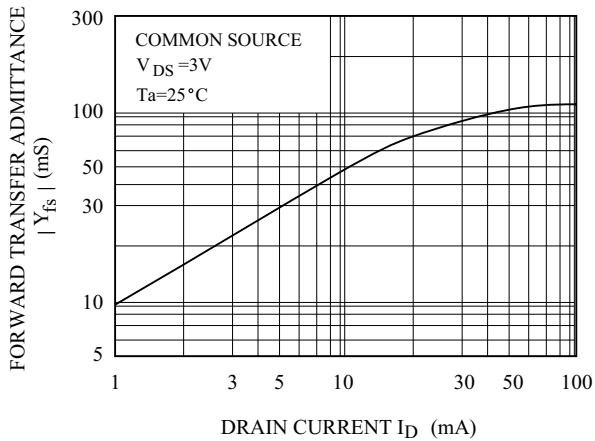
$I_{DR} - V_{DS}$



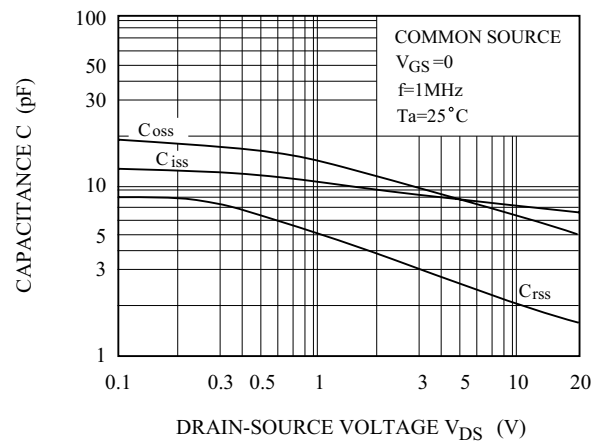
$I_D - V_{GS}$



$|Y_{fs}| - I_D$

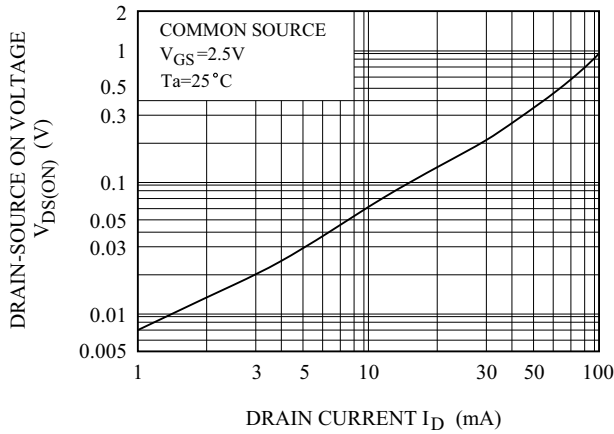


$C - V_{DS}$

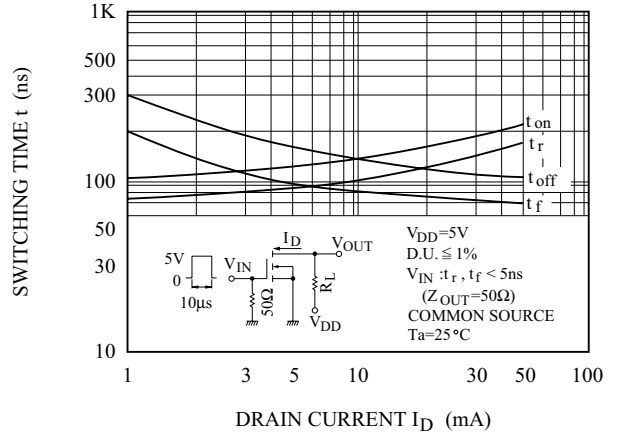


# KTK5132U

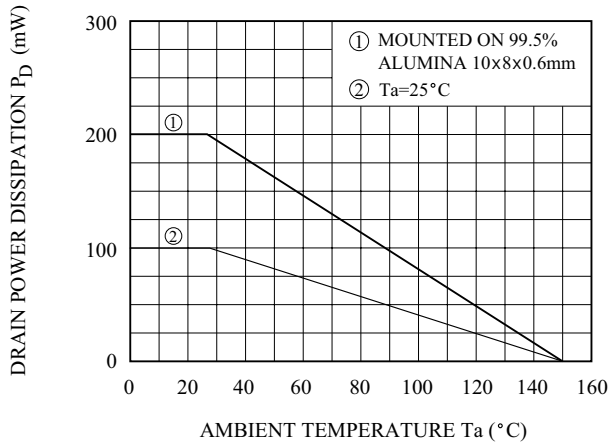
$V_{DS(ON)} - I_D$



$t - I_D$



$P_D - T_a$



## SWITCHING TIME TEST CIRCUIT

