

ULTRA-HIGH SPEED SWITCHING APPLICATIONS
ANALOG SWITCH APPLICATIONS

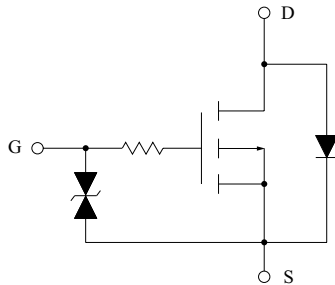
FEATURES

- 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}	± 20	V
DC Drain Current	I_D	-50	mA
Drain Power Dissipation	P_D	100	mW
Channel Temperature	T_{ch}	150	°C
Storage Temperature Range	T_{stg}	-55 ~ 150	°C

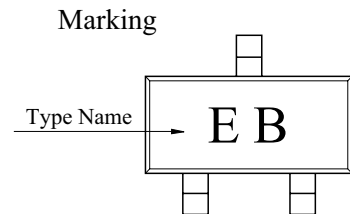
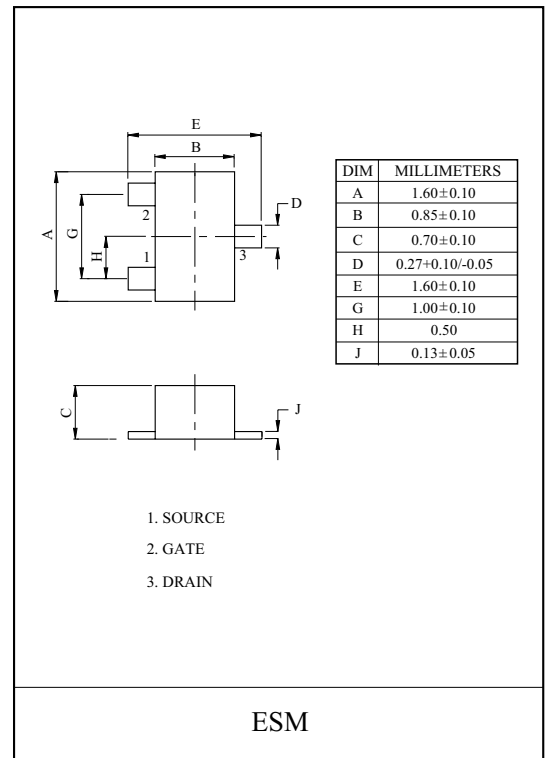
EQUIVALENT CIRCUIT



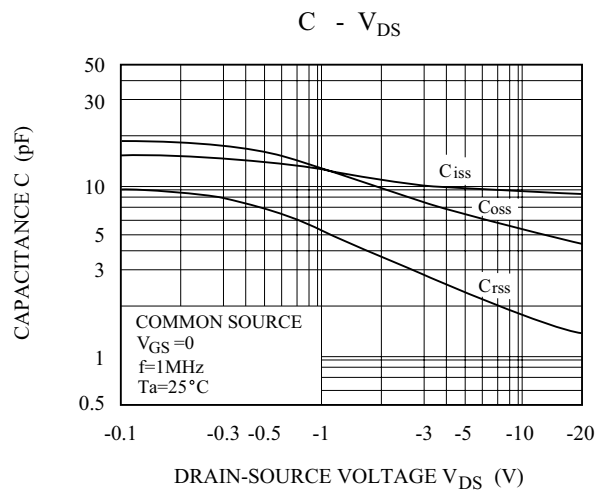
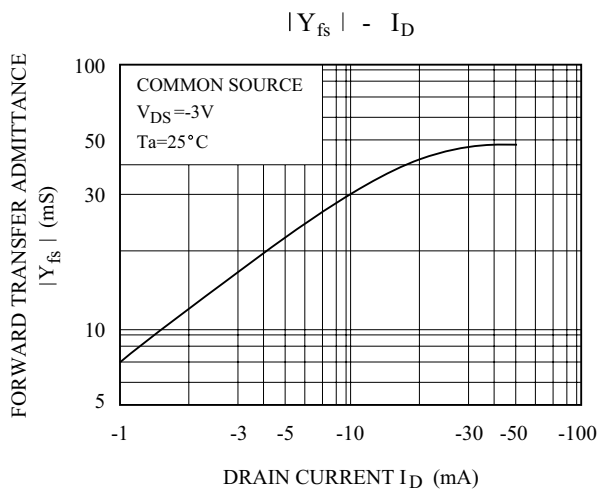
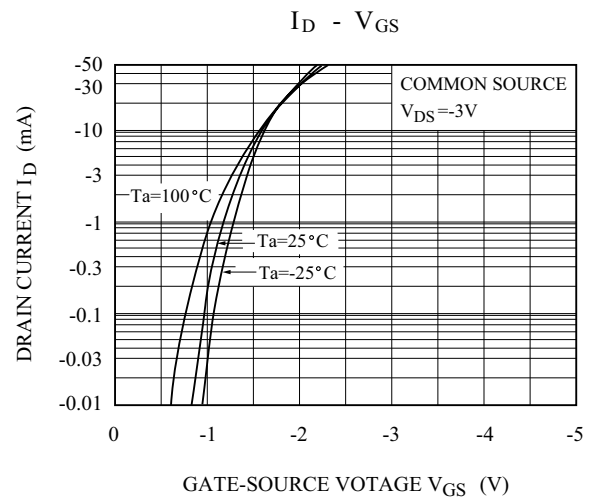
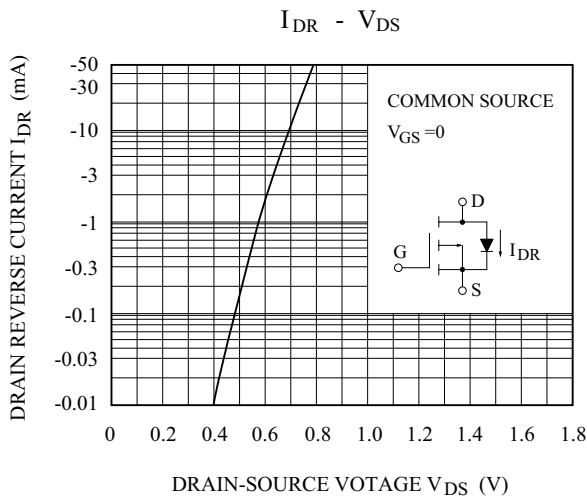
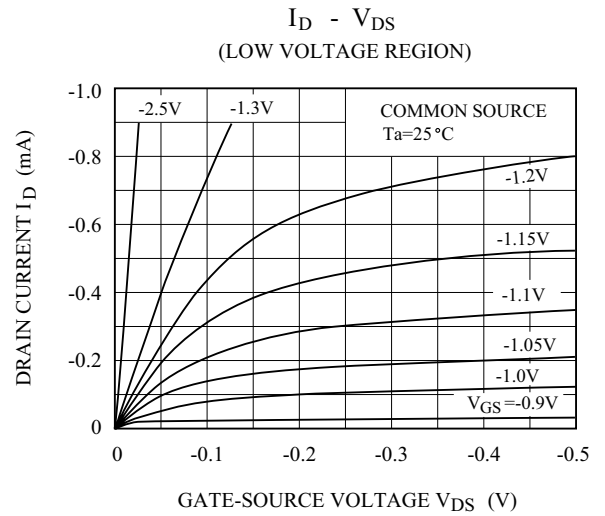
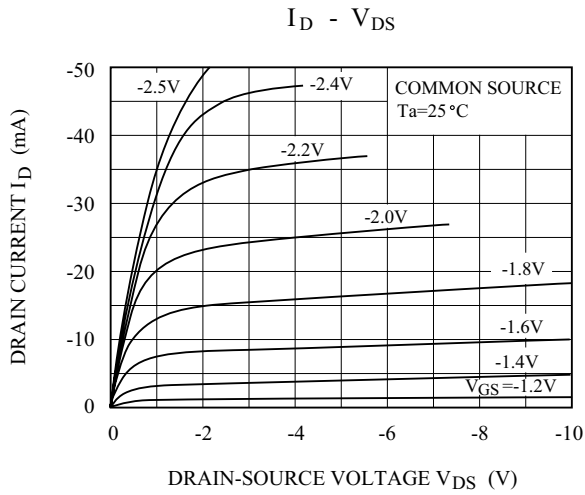
THIS TRANSISTOR IS ELECTROSTATIC SENSITIVE DEVICE.
PLEASE HANDLE WITH CAUTION.

ELECTRICAL CHARACTERISTICS (Ta=25 °C)

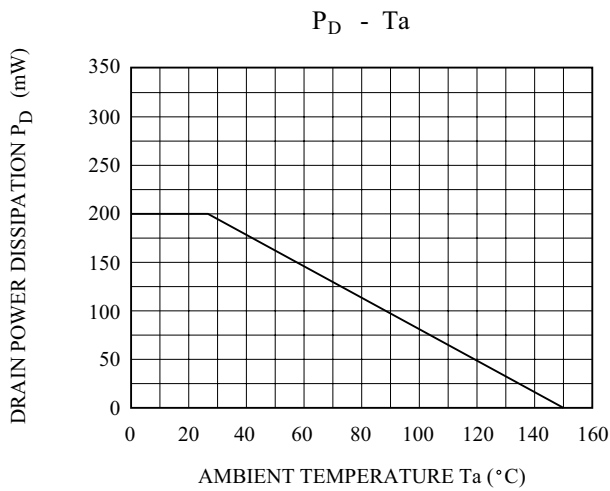
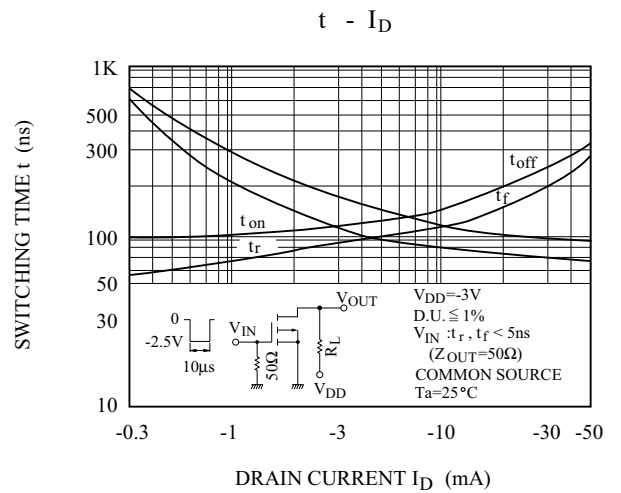
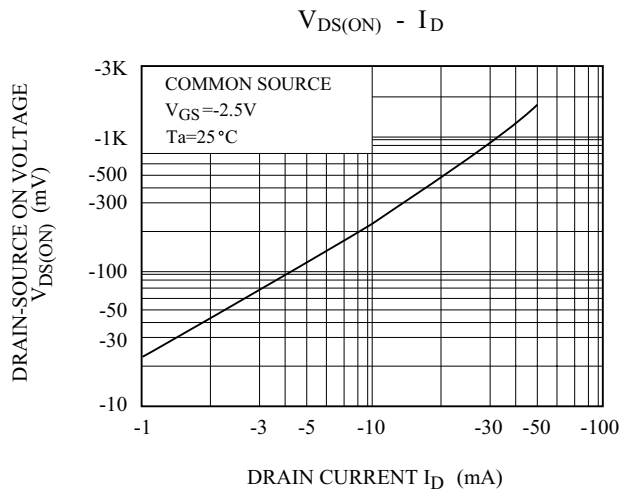
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I_{GSS}	$V_{GS} = \pm 16V, V_{DS} = 0V$	-	-	± 1	μA
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -100 \mu A, V_{GS} = 0V$	-30	-	-	V
Drain Cut-off Current	I_{DSS}	$V_{DS} = -30V, V_{GS} = 0V$	-	-	-1	μA
Gate Threshold Voltage	V_{th}	$V_{DS} = -3V, I_D = -0.1mA$	-0.5	-	-1.5	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = -3V, I_D = -10mA$	15	-	-	mS
Drain-Source ON Resistance	$R_{DS(ON)}$	$I_D = -10mA, V_{GS} = -2.5V$	-	20	40	Ω
Input Capacitance	C_{iss}	$V_{DS} = -3V, V_{GS} = 0V, f = 1MHz$	-	10.4	-	pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = -3V, V_{GS} = 0V, f = 1MHz$	-	2.8	-	pF
Output Capacitance	C_{oss}	$V_{DS} = -3V, V_{GS} = 0V, f = 1MHz$	-	8.4	-	pF
Switching Time	Turn-on Time	$V_{DD} = -3V, I_D = -10mA, V_{GS} = 0 \sim -2.5V$	-	0.15	-	μS
	Turn-off Time		-	0.13	-	μS



KTJ6131E



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SWITCHING TIME TEST CIRCUIT

