2SK1228

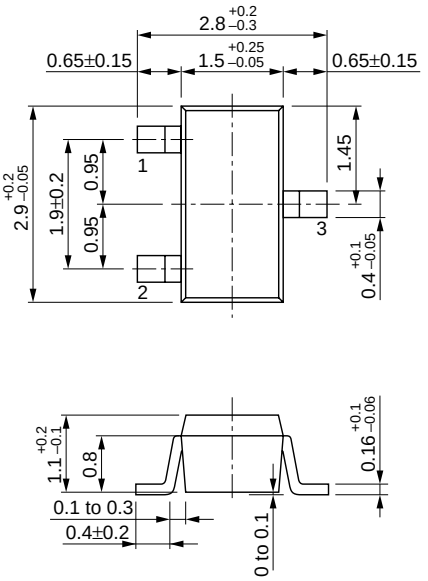
Silicon N-Channel MOS

For switching

■ Features

- High-speed switching
- Wide frequency band
- Gate-protection diode built-in
- 2.5V drive possible

Unit : mm



1 : Gate
2 : Source
3 : Drain

JEDEC : TO-236
EIAJ : SC-59
Mini Type Package (3-pin)

■ Absolute Maximum Ratings (Ta = 25˚C)

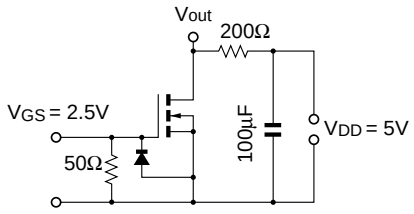
Parameter	Symbol	Rating	Unit
Drain-Source voltage	V_{DS}	50	V
Gate-Source voltage	V_{GSO}	10	V
Drain current	I_D	±50	mA
Max drain current	I_{DP}	±100	mA
Allowable power dissipation	P_D	150	mW
Channel temperature	T_{ch}	150	˚C
Storage temperature	T_{stg}	– 55 to +150	˚C

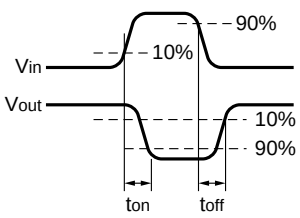
■ Electrical Characteristics (Ta = 25˚C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source cut-off current	I_{DSS}	V_{DS}= 20V, V_{GS}= 0			1	µA
Gate-Source leakage current	I_{GSS}	V_{GS}=10V, V_{GS}= 0			1	µA
Drain-Source breakdown voltage	V_{DSS}	I_D=10µA, V_{GS}= 0	50	100		V
Gate threshold voltage	V_{th}	I_D=100µA, V_{DS}= 5V	0.5	0.8	1.1	V
Drain-Source ON-resistance	$R_{DS(on)}$ * 1	I_D=10mA, V_{GS}= 2.5V		27	50	Ω
Forward transadmittance	$\|Y_{fs}\|$	I_D=10mA, V_{DS}= 5V, f=1kHz	20	39		mS
Input capacitance	C_{iss}	V_{DS}= 5V, V_{GS}= 0, f=1MHz		4.5		pF
Output capacitance	C_{oss}			4.1		pF
Feedback capacitance	C_{rss}			1.2		pF
Turn-on time	t_{on} * 2	V_{DD}= 5V, V_{GS}= 0 to 2.5V, R_L= 470Ω		0.2		µs
Turn-off time	t_{off} * 2	V_{DD}= 5V, V_{GS}= 2.5 to 0V, R_L= 470Ω		0.2		µs

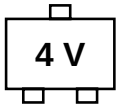
* 1 Pulse measurement

* 2 t_{on}, t_{off} measurement circuit

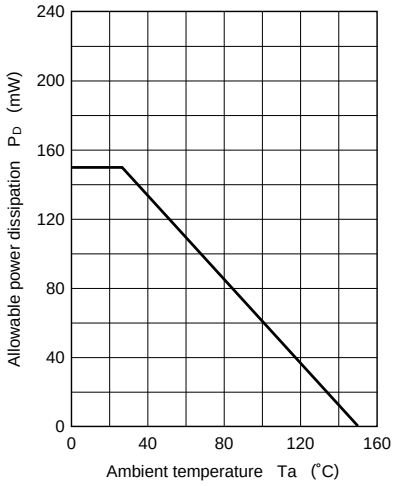




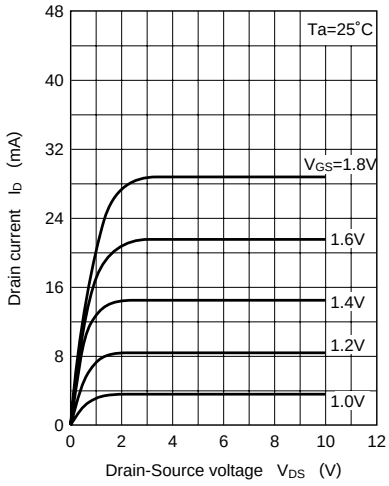
■ Marking



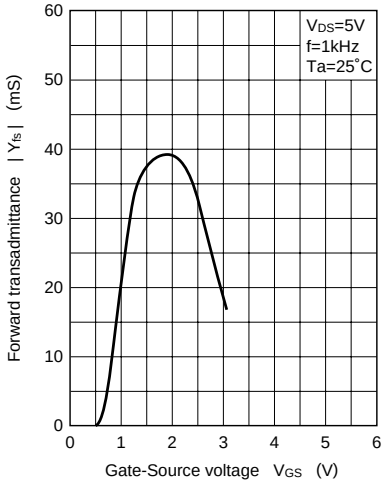
$P_D - Ta$



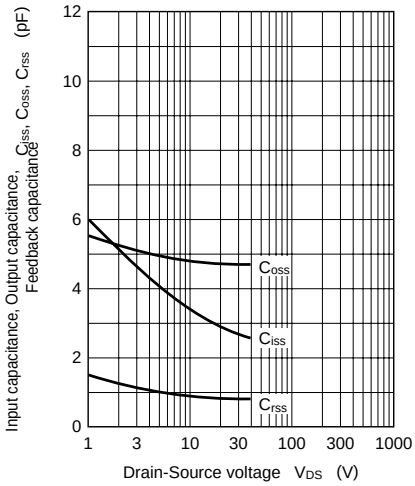
$I_D - V_{DS}$



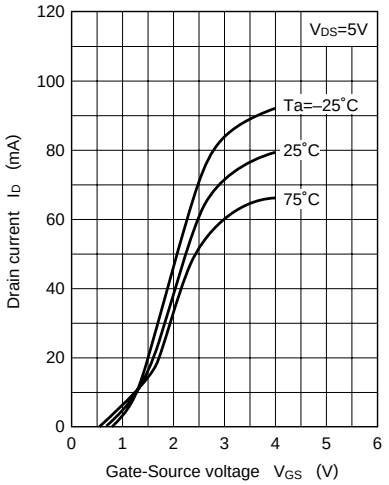
$|Y_{fs}| - V_{GS}$



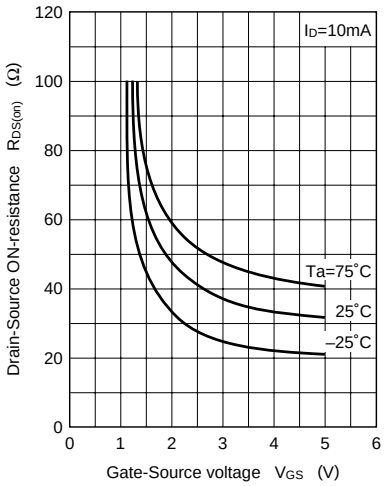
$C_{iss}, C_{oss}, C_{rss} - V_{DS}$



$I_D - V_{GS}$



$R_{DS(on)} - V_{GS}$



$V_{IN} - I_O$