

# 2SK2380

## Silicon N-Channel Junction FET

For impedance conversion in low frequency

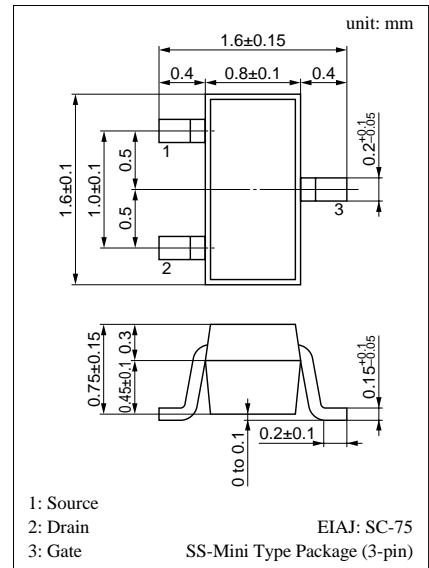
For infrared sensor

### ■ Features

- Low gate to source leakage current,  $I_{GSS}$
- Small capacitance of  $C_{iss}$ ,  $C_{oss}$ ,  $C_{rss}$
- SS-mini type package, allowing downsizing of the sets and automatic insertion through the tape/magazine packing.

### ■ Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Ratings	Unit
Gate to Drain voltage	$V_{GDO}$	-40	V
Gate to Source voltage	$V_{GSO}$	-40	V
Drain current	$I_D$	$\pm 1$	mA
Gate current	$I_G$	10	mA
Allowable power dissipation	$P_D$	125	mW
Channel temperature	$T_{ch}$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$



Marking Symbol (Example): EB

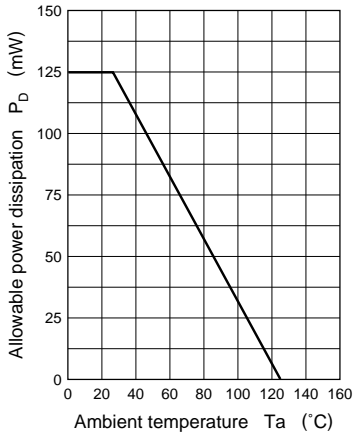
### ■ Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Conditions	min	typ	max	Unit
Drain to Source cut-off current	$I_{DSS}^*$	$V_{DS} = 10\text{V}, V_{GS} = 0$	50		200	$\mu\text{A}$
Gate to Source leakage current	$I_{GSS}$	$V_{GS} = -20\text{V}, V_{DS} = 0$			-0.5	nA
Gate to Drain voltage	$V_{DS}$	$I_G = -10\mu\text{A}, V_{DS} = 0$	-40			V
Gate to Source cut-off voltage	$V_{GSC}$	$V_{DS} = 10\text{V}, I_D = 1\mu\text{A}$		-1.3	-3	V
Forward transfer admittance	$ Y_{fs} $	$V_{DS} = 10\text{V}, V_{GS} = 0, f = 1\text{kHz}$	0.05			mS
Input capacitance (Common Source)	$C_{iss}$	$V_{DS} = 10\text{V}, V_{GS} = 0, f = 1\text{MHz}$		1		pF
Output capacitance (Common Source)	$C_{oss}$			0.4		pF
Reverse transfer capacitance (Common Source)	$C_{rss}$			0.4		pF

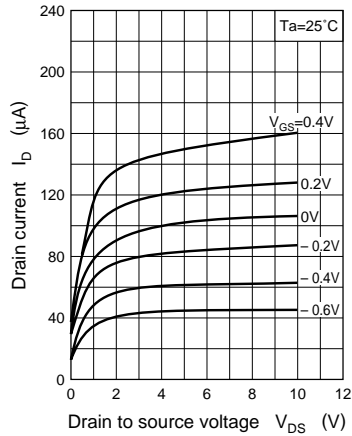
\*  $I_{DSS}$  rank classification

Rank	Q	R	S
$I_{DSS}$ (mA)	50 to 100	70 to 130	100 to 200
Marking Symbol	EBQ	EBR	EBS

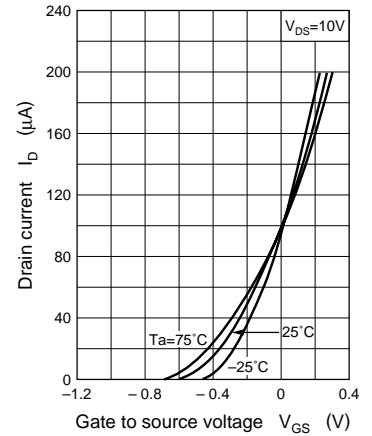
$P_D - T_a$



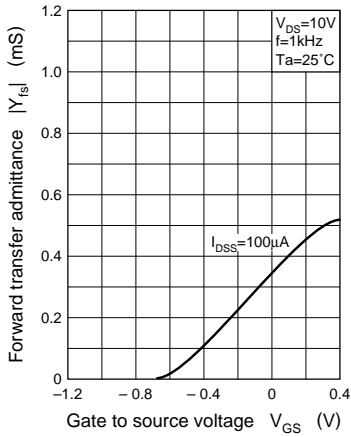
$I_D - V_{DS}$



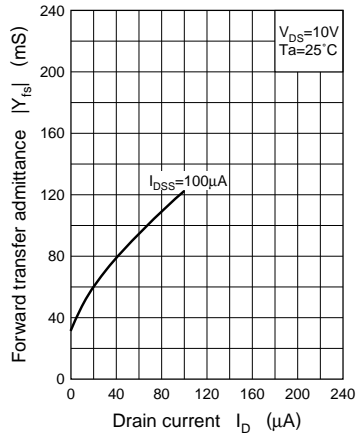
$I_D - V_{GS}$



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



$|Y_{fs}| - I_D$



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

