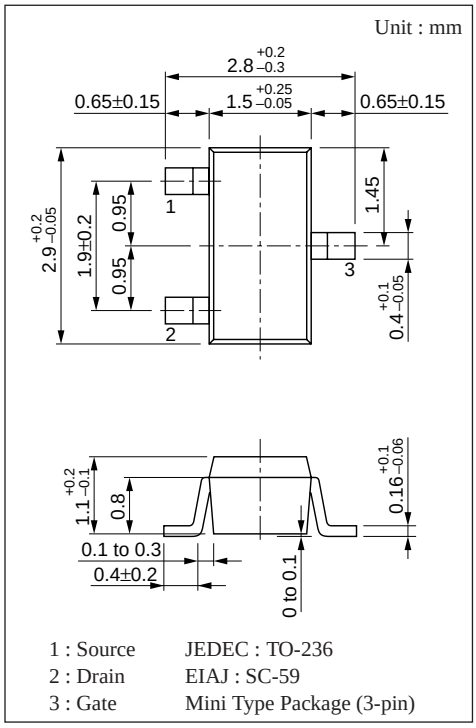
2SK1842

Silicon N-Channel Junction

For impedance conversion in low frequency
For infrared sensor



■ Features

- Low gate-source leakage current, I_{GSS}
- Small capacitance of C_{iss}, C_{oss}, C_{rss}
- Downsizing of sets by mini-type package and automatic insertion by taping/magazine packing are available.

■ Absolute Maximum Ratings (Tc = 25˚C)

Parameter	Symbol	Rating	Unit
Gate-Drain voltage	V_{GDO}	– 40	V
Gate-Source voltage	V_{GSO}	– 40	V
Drain current	I_D	±1	mA
Gate current	I_G	10	mA
Allowable power dissipation	P_D	150	mW
Junction temperature	T_j	150	˚C
Storage temperature	T_{stg}	– 55 to +150	˚C

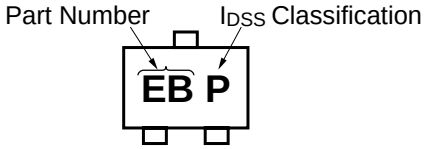
■ Electrical Characteristics (Ta = 25˚C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Drain-Source cut-off current	I_{DSS} *	V_{DS}=10V, V_{GS}= 0	30		200	µA
Gate-Source leakage current	I_{GSS}	V_{GS}= – 20V, V_{DS}= 0			– 0.5	nA
Gate-Drain voltage	V_{DS}	I_{GS}= –10µA, V_{DS}= 0	– 40			V
Gate-Source cut-off voltage	V_{GSC}	V_{DS}=10V, I_D=1µA		–1.3	– 3	V
Forward transadmittance	$\|Y_{fs}\|$	V_{DS}=10V, V_{GS}= 0, f=1kHz	0.05			mS
Input capacitance	C_{iss}	V_{DS}=10V, V_{GS}= 0, f=1MHz		1		pF
Output capacitance	C_{oss}			0.4		pF
Feedback capacitance	C_{rss}			0.4		pF

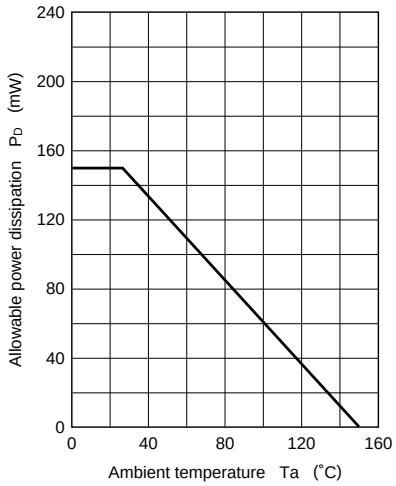
* I_{DSS} rank classification

Rank	P	Q	R	S
I_{DSS}(mA)	30 to 75	50 to 100	70 to 130	100 to 200
Part number symbol	EB P	EB Q	EB R	EB S

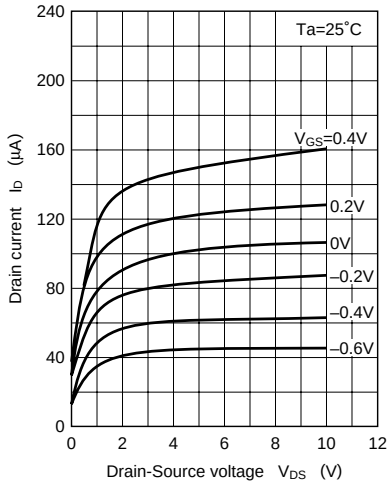
■ Marking (Example)



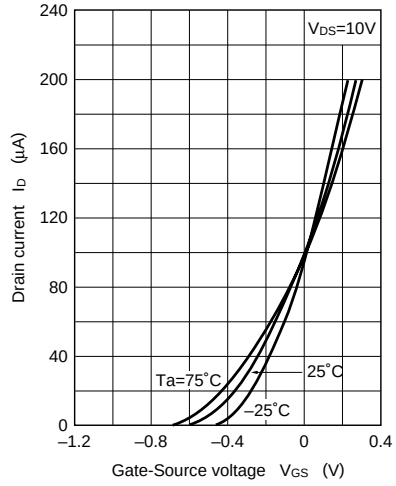
$P_D - Ta$



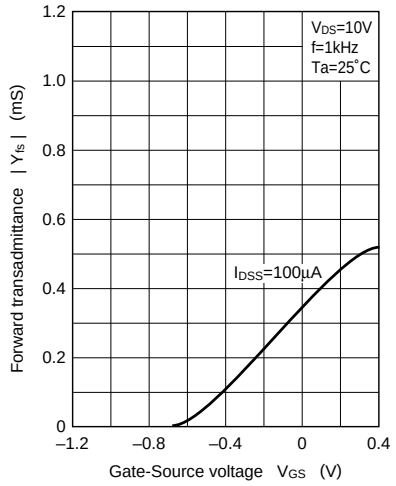
$I_D - V_{DS}$



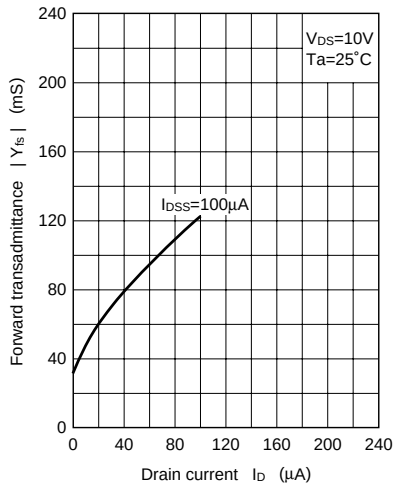
$I_D - V_{GS}$



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



$|Y_{fs}| - I_D$



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