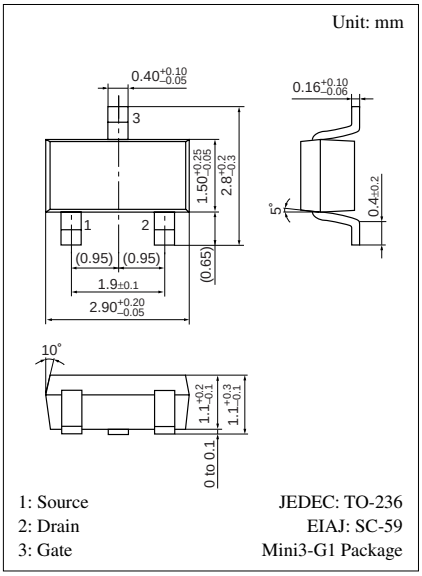
2SK1842

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}
- Mini-type package, allowing downsizing of the sets and automatic insertion through the tape/magazine packing.



Marking Symbol (Example): EB

■ Absolute Maximum Ratings (T_a = 25°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	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

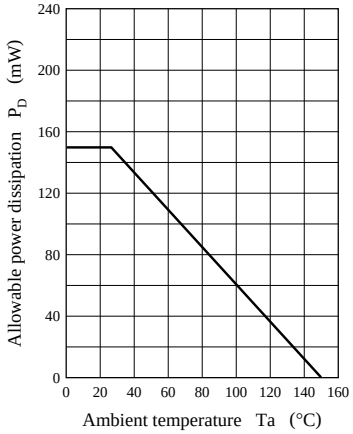
■ Electrical Characteristics (T_a = 25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Drain to Source cut-off current	I_{DSS} *	V_{DS} = 10 V, V_{GS} = 0	30		200	µA
Gate to Source leakage current	I_{GSS}	V_{GS} = −20 V, V_{DS} = 0			− 0.5	nA
Gate to Drain voltage	V_{GDS}	I_G = −10 µA, V_{DS} = 0	−40			V
Gate to Source cut-off voltage	V_{GSC}	V_{DS} = 10 V, I_D = 1 µA		−1.3	−3	V
Forward transfer admittance	$\|Y_{fs}\|$	V_{DS} = 10 V, V_{GS} = 0, f = 1 kHz	0.05			mS
Input capacitance (Common Source)	C_{iss}	V_{DS} = 10 V, V_{GS} = 0, f = 1 MHz		1		pF
Output capacitance (Common Source)	C_{oss}			0.4		pF
Reverse transfer capacitance (Common Source)	C_{rss}			0.4		pF

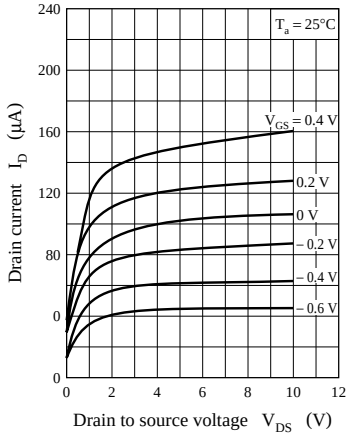
* I_{DSS} rank classification

Runk	O	P	Q	R
I_{DSS} (mA)	30 to 75	50 to 100	70 to 130	100 to 200
Marking Symbol	EBP	EBQ	EBR	EBS

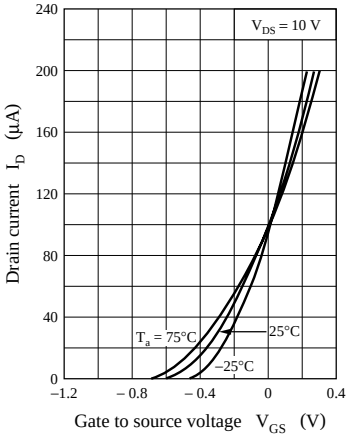
P_D — T_a



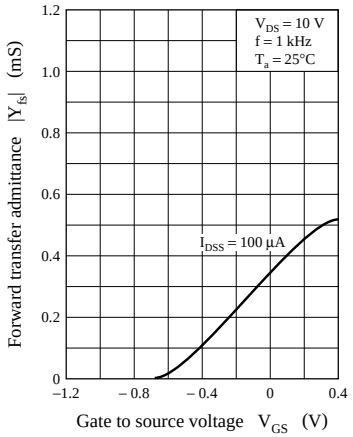
I_D — V_{DS}



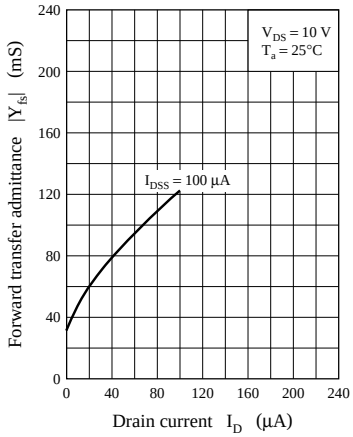
I_D — V_{GS}



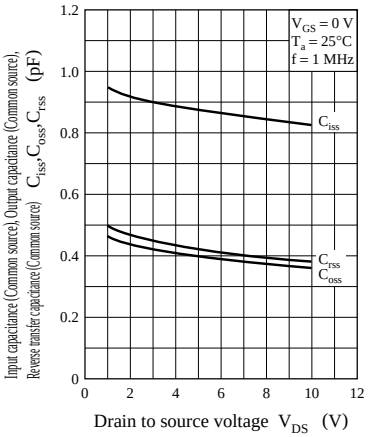
$|Y_{fs}|$ — V_{GS}



$|Y_{fs}|$ — I_D



C_{iss}, C_{oss}, C_{rss} — V_{DS}



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