

# 2SK65

## Silicon N-Channel Junction FET

For impedance conversion in low frequency

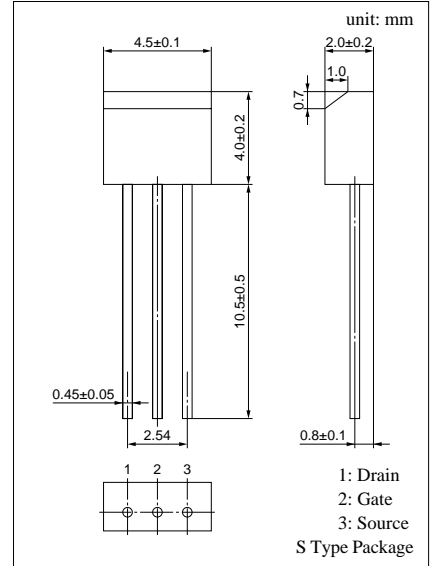
For electret capacitor microphone

### ■ Features

- Diode is connected between gate and source
- Low noise voltage

### ■ Absolute Maximum Ratings (T<sub>a</sub> = 25°C)

Parameter	Symbol	Ratings	Unit
Drain to Source voltage	V <sub>DSO</sub>	12	V
Gate to Drain voltage	V <sub>GDO</sub>	-12	V
Drain to Source current	I <sub>DSO</sub>	2	mA
Drain to Gate current	I <sub>DGO</sub>	2	mA
Gate to Source current	I <sub>GSO</sub>	2	mA
Allowable power dissipation	P <sub>D</sub>	20	mW
Operating ambient temperature	T <sub>opr</sub>	-10 to +70	°C
Storage temperature	T <sub>stg</sub>	-20 to +150	°C



### ■ Electrical Characteristics (T<sub>a</sub> = 25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Drain to Source cut-off current	I <sub>DSS</sub> *	V <sub>DS</sub> = 4.5V, V <sub>GS</sub> = 0, R <sub>S</sub> = 2.2kΩ ± 1%	0.04		0.8	mA
Mutual conductance	g <sub>m</sub>	V <sub>DS</sub> = 4.5V, V <sub>GS</sub> = 0 R <sub>S</sub> = 2.2kΩ ± 1%, f = 1kHz	300	500		μS
Noise figure	NV	V <sub>DS</sub> = 4.5V, R <sub>S</sub> = 2.2kΩ ± 1% C <sub>G</sub> = 10pF, A-curve			4	μV
Voltage gain	G <sub>V1</sub> *	V <sub>DS</sub> = 4.5V, R <sub>S</sub> = 2.2kΩ ± 1% C <sub>G</sub> = 10pF, e <sub>G</sub> = 100mV, f = 70Hz		-10		dB
	G <sub>V2</sub> *	V <sub>DS</sub> = 12V, R <sub>S</sub> = 2.2kΩ ± 1% C <sub>G</sub> = 10pF, e <sub>G</sub> = 100mV, f = 70Hz		-9.5		dB
	G <sub>V3</sub> *	V <sub>DS</sub> = 1V, R <sub>S</sub> = 2.2kΩ ± 1% C <sub>G</sub> = 10pF, e <sub>G</sub> = 100mV, f = 70Hz		-11		dB

\* I<sub>DSS</sub> rank classification and G<sub>V</sub> value

Runk	P	Q
I <sub>DSS</sub> (mA)	0.04 to 0.2	0.15 to 0.8
G <sub>V1</sub> (dB)	> -13	> -12
G <sub>V2</sub> (dB)	> -12	> -11
Δ G <sub>V1</sub> - G <sub>V2</sub>   (dB)	< 3	< 3

