Unit: mm

2SK0123 (2SK123)

Silicon N-Channel Junction FET

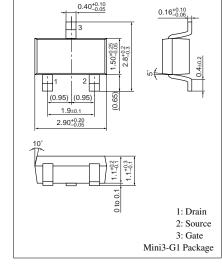
For impedance conversion in low frequency For electret capacitor microphone

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

Features

- \bullet High mutual conductance g_m
- Low noise voltage of NV

Parameter	Symbol	Ratings	Unit	
Drain to Source voltage	V _{DSO}	20	V	
Drain to Gate voltage	V _{DGO}	20	V	
Drain to Source current	I _{DSO}	2	mA	
Drain to Gate current	I _{DGO}	2	mA	
Gate to Source current	I _{GSO}	2	mA	
Allowable power dissipation	P _D	200	mW	
Operating ambient temperature	T _{opr}	-20 to +80	°C	
Storage temperature	T _{stg}	-55 to +150	°C	



Marking Symbol: 1H

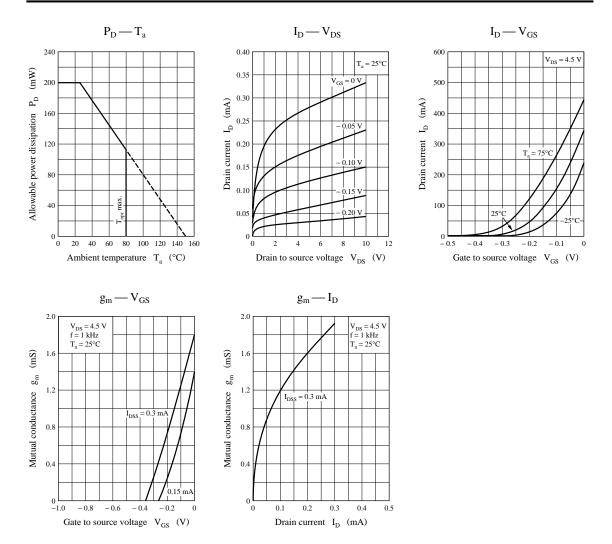
Note: For the forming type, (Y) is indicated after the part No.

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

Parameter	Symbol	Conditions	min	typ	max	Unit
Current consumption	I _D	$V_{\rm D} = 4.5 \text{ V}, C_{\rm O} = 10 \text{ pF}, R_{\rm D} = 2.2 \text{ k}\Omega \pm 1\%$	100		600	μΑ
Drain to Source cut-off current	I _{DSS}	$V_{DS} = 4.5 \text{ V}, V_{GS} = 0$	95		480	μΑ
Mutual conductance	g _m	$V_D = 4.5 V, V_{GS} = 0, f = 1 \text{ kHz}$	0.7	1.6		mS
Noise figure	NV	$V_D = 4.5V, R_D = 2.2 \text{ k}\Omega \pm 1\%$ $C_O = 10 \text{ pF, A-curve}$			4	μV
G_{V1} Voltage gain G_{V2} G_{V3}	G _{V1}		-3	2		dB
	G _{V2}	$V_D = 4.5 \text{ V}, R_D = 2.2 \text{ k}\Omega \pm 1\%$ $C_O = 10 \text{ pF}, e_G = 10 \text{ mV}, f = 1 \text{ kHz}$	0	3.3		dB
	G _{V3}	$V_D = 12 \text{ V}, R_D = 2.2 \text{ k}\Omega \pm 1\%$ $C_O = 10 \text{ pF}, e_G = 10 \text{ mV}, f = 1 \text{ kHz}$	-4.5	- 0.3		dB
Voltage gain difference	$\Delta G_{V2} - G_{V1} $	$V_D = 1.5 \text{ V}, R_D = 2.2 \text{ k}\Omega \pm 1\%$	0		+3.5	dB
	$\Delta G_{V1} - G_{V3} $	$C_0 = 10 \text{ pF}, e_G = 10 \text{ mV}, f = 1 \text{ kHz}$	0		+3.5	dB

Note) The part number in the parenthesis shows conventional part number.

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