

## 2SK121

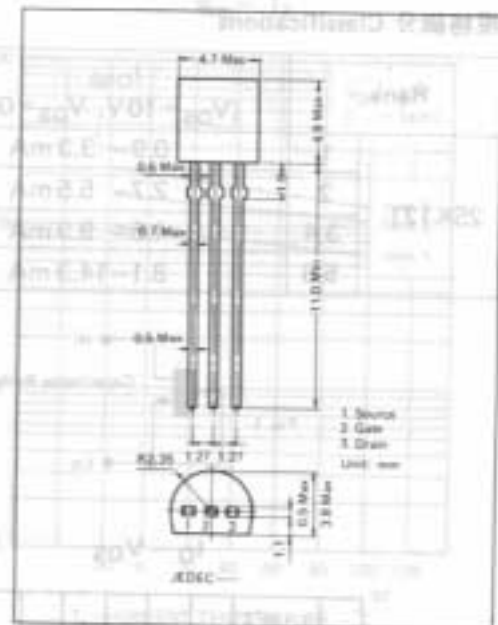
2SK121

## Silicon N-Channel Junction FET

- Low Noise, High  $G_m$
- Preamplifiers for Audio, Video
- Switchings

絶対最大定格 Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Characteristics	Symbol	2SK121
Drain-to-Gate Voltage	$V_{DGS}$	30V
Source-to-Gate Voltage	$V_{SGS}$	50V
Drain Current	$I_D$	20 mA
Gate Current	$I_G$	5 mA
Power Dissipation	P	300 mW
Junction Temperature	$T_j$	100°C
Storage Temperature	$T_{stg}$	-50~+120°C

電気的特性 Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Characteristics	Symbol	Conditions	Min.	Typ.	Max.	Unit
Drain-to-Gate Voltage	$V_{DGS}$	$I_G = 10\mu\text{A}$ , $V_{DS} = 0$	25			V
Gate Cutoff Current	$I_{GSS}$	$V_{GS} = -15\text{V}$ , $V_{DS} = 0$			-1.0	nA
Drain Saturation Current	$I_{DSS}$	$V_{DS} = 10\text{V}$ , $V_{GS} = 0$	0.9		14.3	mA
Pinch-off Voltage	$V_p$	$V_{DS} = 10\text{V}$ , $I_D = 30\mu\text{A}$	0.18		1.49	V
Forward Transfer Conductance	$g_m$	$V_{DS} = 10\text{V}$ , $V_{GS} = 0$ , $f = 1\text{ kHz}$	6.3			$\text{m}\Omega$
Input Impedance $Y_{11S}$	$r_D$	$V_{DS} = 10\text{V}$ , $V_{GS} = 0$ , $f = 100\text{ MHz}$		1.2		$\text{k}\Omega$
	$C_D$			13		pF
Output Impedance $Y_{22S}$	$r_D$	$V_{DS} = 10\text{V}$ , $V_{GS} = 0$ , $f = 100\text{ MHz}$				
	$C_D$			2.7		pF
Reverse Transfer Capacitance	$C_{dg}$	$V_{DS} = 10\text{V}$ , $V_{GS} = 0$ , $f = 1\text{ MHz}$		2.4		pF
Gate-to-Drain Capacitance	$C_{GD}$	$V_{GS} = 0$ , $f = 1\text{ MHz}$ , Fig. 1		7		pF
Gate-to-Source Capacitance	$C_{GS}$	$V_{GS} = 0$ , $f = 1\text{ MHz}$ , Fig. 2		7		pF
Input Noise Voltage	$e$	$V_{GS} = 0$ , $V_{DS} = 10\text{V}$ , $R_g = 10\text{ k}\Omega$ , $f = 1\text{ kHz}$		13		$\text{nV}/\text{Hz}^{1/2}$
	$e$	$V_{GS} = 0$ , $V_{DS} = 10\text{V}$ , $R_g = 100\text{ k}\Omega$ , $f = 10\text{ Hz}$		39		$\text{nV}/\text{Hz}^{1/2}$
Noise Figure	NF	$V_{GS} = 0$ , $V_{DS} = 10\text{V}$ , $R_g = 10\text{ k}\Omega$ , $f = 1\text{ kHz}$		0.1		dB
	NF	$V_{GS} = 0$ , $V_{DS} = 10\text{V}$ , $R_g = 10\text{ k}\Omega$ , $f = 10\text{ Hz}$		0.1		dB