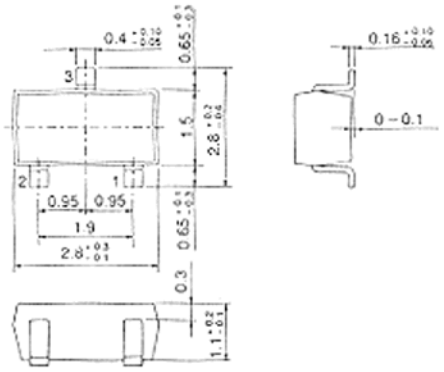
HITACHI

2SK431

SILICON N-CHANNEL JUNCTION FET

LOW FREQUENCY LOW NOISE AMPLIFIER



1. Drain
2. Source
3. Gate

(Dimensions in mm)

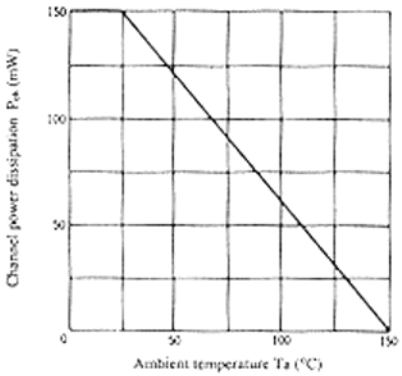
(MPAK)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SK431	Unit
Gate to source voltage	V_{GSS}	−40	V
Drain to source voltage	V_{DSX}*	40	V
Drain current	I_D	30	mA
Gate current	I_G	10	mA
Channel power dissipation	P_{ch}	150	mW
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

* V_{GS} = −2V

MAXIMUM CHANNEL DISSIPATION CURVE



■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Gate to source breakdown voltage	$V_{(BR)GSS}$	I_G = −100μA, V_{DS} = 0	−40	—	—	V
Gate cutoff current	I_{GSS}	V_{GS} = −30V, V_{DS} = 0	—	—	−10	nA
Drain current	I_{DSS}*	V_{DS} = 10V, V_{GS} = 0, Pulse Test	2.5	—	20	mA
Gate to source cutoff voltage	$V_{GS(off)}$	V_{DS} = 10V, I_D = 10μA	−0.13	—	−1.5	V
Forward transfer admittance	$\lvert y_{fs} \rvert$	V_{DS} = 10V, I_D = 3mA, f = 1kHz	18	21	—	mS
Input capacitance	C_{iss}	V_{DS} = 10V, V_{GS} = 0, f = 1MHz	—	28	—	pF
Reverse transfer capacitance	C_{rss}	V_{DS} = 10V, V_{GS} = 0, f = 1MHz	—	5.6	—	pF
Noise voltage referred to input	e_n	V_{DS} = 10V, I_D = 3mA, R_g = 0, f = 1MHz	—	1.0	—	nV√Hz

* The 2SK431 is grouped by I_{DSS} as follows.

Grade	C	D	E	F
Mark	HC	HD	HE	HF
I_{DSS}	2.5 to 5.0	4 to 8	6 to 12	10 to 20

■ See characteristic curves of 2SK187.