2SK494

Silicon N-Channel Junction FET

HITACHI

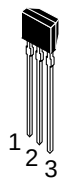
ADE-208-1173 (Z)
1st. Edition
Mar. 2001

Application

Low frequency / High frequency amplifier

Outline

SPAK



1. Drain
2. Gate
3. Source

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Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DS}	22	V
Gate to source voltage	V_{GSO}	–22	V
Drain current	I_D	100	mA
Gate current	I_G	10	mA
Channel power dissipation	Pch	300	mW
Channel temperature	Tch	150	°C
Storage temperature	Tstg	–55 to +150	°C

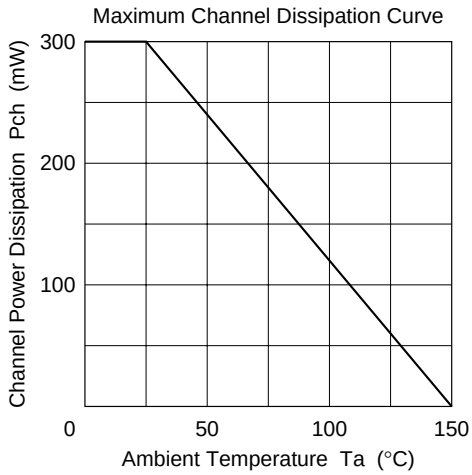
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Gate to source breakdown voltage	$V_{(BR)GSS}$	–22	—	—	V	I_G = –10 µA, V_{DS} = 0
Gate cutoff current	I_{GSS}	—	—	–10	nA	V_{GS} = –15 V, V_{DS} = 0
Gate to source cutoff voltage	$V_{GS(off)}$	—	—	–2.5	V	V_{DS} = 5 V, I_D = 10 µA
Drain current	I_{DSS}*[1]	6	—	40	mA	V_{DS} = 5 V, V_{GS} = 0, Pulse test
Forward transfer admittance	$\|y_{fs}\|$	20	—	—	mS	V_{DS} = 5 V, I_D = 10 mA, f = 1 kHz
Input capacitance	Ciss	—	9.0	11.0	pF	V_{DS} = 5 V, V_{GS} = 0, f = 1 MHz
Reverse transfer capacitance	Crss	—	2.8	4.0	pF	V_{DS} = 5 V, V_{GS} = 0, f = 1 MHz
Noise figure	NF	—	0.5	3.0	dB	V_{DS} = 5 V, I_D = 1 mA, f = 1 kHz, Rg = 1 kΩ

Note: 1. The 2SK494 is grouped by I_{DSS} as follows.

Grade	B	C	D	E
I_{DSS}	6 to 14	12 to 22	18 to 30	26 to 40

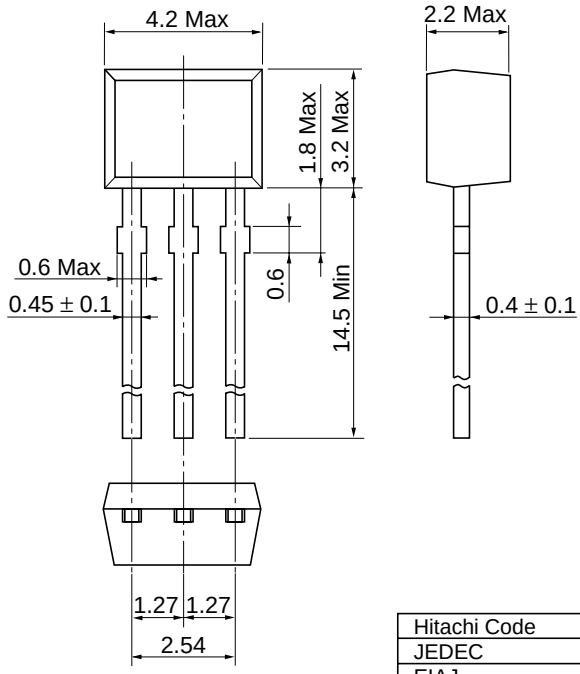
See character curves 2SK435.

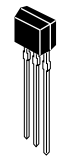

Maximum Channel Dissipation Curve
Channel Power Dissipation Pch (mW)
300
200
100
0
50
100
150
Ambient Temperature Ta (°C)

Package Dimensions

As of January, 2001

Unit: mm





Hitachi Code	SPAK
JEDEC	—
EIAJ	—
Mass (reference value)	0.10 g

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