2SK494

Silicon N-Channel Junction FET

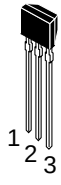
HITACHI

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

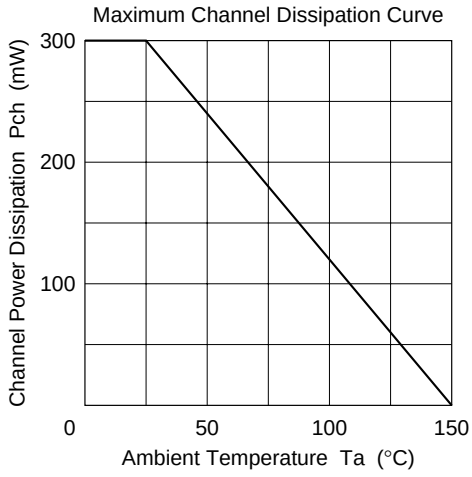
Electrical Characteristics (Ta = 25°C)

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

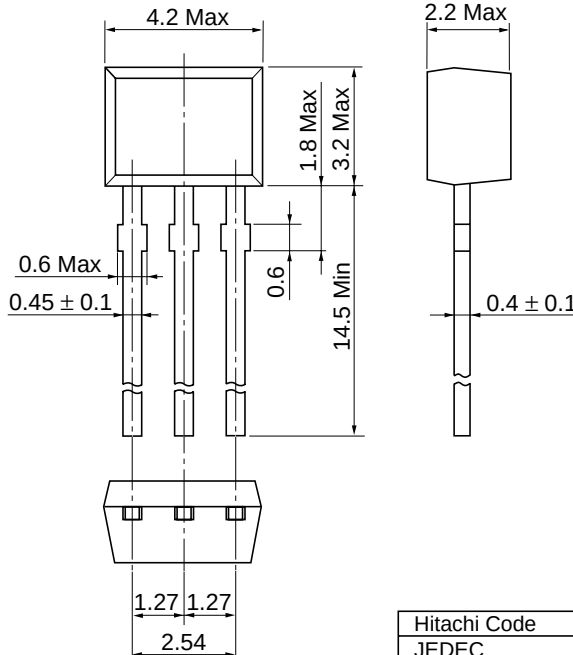
Note: 1. The 2SK494 is grouped by I_{DSS} as follows.

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)

Unit: mm



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

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Hitachi, Ltd.
Semiconductor & Integrated Circuits.
Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan
Tel: Tokyo (03) 3270-2111 Fax: (03) 3270-5109

URL
NorthAmerica : http:semiconductor.hitachi.com/
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For further information write to:

Hitachi Semiconductor
(America) Inc.
179 East Tasman Drive,
San Jose,CA 95134
Tel: <1> (408) 433-1990
Fax: <1>(408) 433-0223

Hitachi Europe GmbH
Electronic components Group
Dornacher Straße 3
D-85622 Feldkirchen, Munich
Germany
Tel: <49> (89) 9 9180-0
Fax: <49> (89) 9 29 30 00

Hitachi Europe Ltd.
Electronic Components Group.
Whitebrook Park
Lower Cookham Road
Maidenhead
Berkshire SL6 8YA, United Kingdom
Tel: <44> (1628) 585000
Fax: <44> (1628) 778322

Hitachi Asia Pte. Ltd.
16 Collyer Quay #20-00
Hitachi Tower
Singapore 049318
Tel: 535-2100
Fax: 535-1533

Hitachi Asia Ltd.
Taipei Branch Office
3F, Hung Kuo Building. No.167,
Tun-Hwa North Road, Taipei (105)
Tel: <886> (2) 2718-3666
Fax: <886> (2) 2718-8180

Hitachi Asia (Hong Kong) Ltd.
Group III (Electronic Components)
7/F., North Tower, World Finance Centre,
Harbour City, Canton Road, Tsim Sha Tsui,
Kowloon, Hong Kong
Tel: <852> (2) 735 9218
Fax: <852> (2) 730 0281
Telex: 40815 HITEC HX