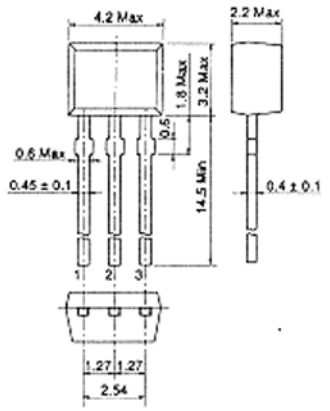
HITACHI

2SK494

SILICON N-CHANNEL JUNCTION FET

LOW FREQUENCY / HIGH FREQUENCY AMPLIFIER



(SPAK)

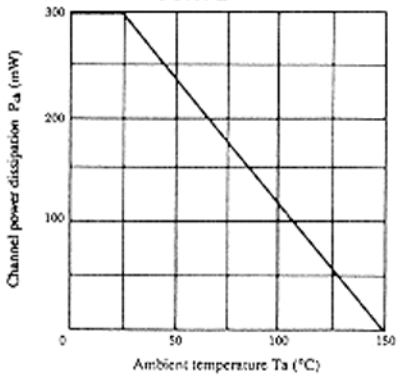
1. Drain
2. Gate
3. Source

(Dimensions in mm)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SK494	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	P_{ch}	300	mW
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

MAXIMUM CHANNEL DISSIPATION CURVE



■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Gate to source breakdown voltage	$V_{(BR)GSS}$	$I_G = -10\mu A$, $V_{DS} = 0$	−22	—	—	V
Gate cutoff current	I_{GSS}	$V_{GS} = -15V$, $V_{DS} = 0$	—	—	−10	nA
Gate to source cutoff voltage	$V_{GS(off)}$	$V_{DS} = 5V$, $I_D = 10\mu A$	—	—	−2.5	V
Drain current	I_{DSS}*	$V_{DS} = 5V$, $V_{GS} = 0$, Pulse Test	6	—	40	mA
Forward transfer admittance	$\|y_{fs}\|$	$V_{DS} = 5V$, $I_D = 10mA$, $f = 1kHz$	20	—	—	mS
Input capacitance	C_{iss}	$V_{DS} = 5V$, $V_{GS} = 0$, $f = 1MHz$	—	9.0	11.0	pF
Reverse transfer capacitance	C_{rss}	$V_{DS} = 5V$, $V_{GS} = 0$, $f = 1MHz$	—	2.8	4.0	pF
Noise figure	NF	$V_{DS} = 5V$, $I_D = 1mA$, $f = 1kHz$, $R_g = 1k\Omega$	—	0.5	3.0	dB

* The 2SK494 is grouped by I_{DSS} as follows.

B	C	D	E
6 to 14	12 to 22	18 to 30	26 to 40

■ See characteristic curves 2SK435.