2SK1070

Silicon N-Channel Junction FET

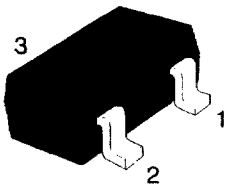
HITACHI

Application

Low frequency / High frequency amplifier

Outline

MPAK



1. Drain
2. Source
3. Gate

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Gate to drain voltage	V_{GDO}	–22	V
Gate to source voltage	V_{GSO}	–22	V
Drain current	I_D	50	mA
Gate current	I_G	10	mA
Channel power dissipation	Pch	150	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 cutoff current	I_{GSS}	—	—	–10	nA	V_{GS} = –15 V, V_{DS} = 0
Gate to source breakdown voltage	$V_{(BR)GSS}$	–22	—	—	V	I_G = –10 µA, V_{DS} = 0
Drain current	I_{DSS}*1	6	—	40	mA	V_{DS} = 5 V, V_{GS} = 0, Pulse test
Gate to source cutoff voltage	$V_{GS(off)}$	0	—	–2.5	V	V_{DS} = 5 V, I_D = 10 µA
Forward transfer admittance	$\|y_{fs}\|$	20	30	—	mS	V_{DS} = 5 V, V_{GS} = 0, f = 1 kHz
Input capacitance	Ciss	—	9	—	pF	V_{DS} = 5 V, V_{GS} = 0, f = 1 MHz

Note: 1. The 2SK1070 is grouped by I_{DSS} as follows.

Grade	B	C	D	E
Mark	PIB	PIC	PID	PIE
I_{DSS}	6 to 14	12 to 22	18 to 30	27 to 40

See characteristic curves of 2SK435.

Maximum Channel Dissipation Curve