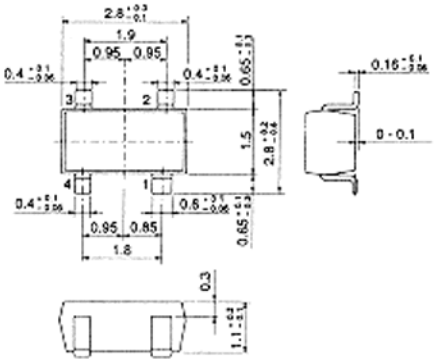
HITACHI

3SK136

SILICON N-CHANNEL DUAL GATE MOS FET

VHF TV TUNER RF AMPLIFIER



1. Source
2. Gate 1
3. Gate 2
4. Drain

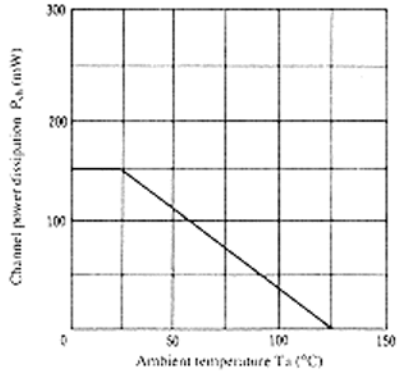
(Dimensions in mm)

(MPAK-4)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	3SK136	Unit
Drain to source voltage	V_{DS}	20	V
Gate 1 to source voltage	V_{G1S}	±8	V
Gate 2 to source voltage	V_{G2S}	±8	V
Drain current	I_D	35	mA
Channel power dissipation	P_{ch}	150	mW
Channel temperature	T_{ch}	125	°C
Storage temperature	T_{stg}	−55 to +125	°C

MAXIMUM CHANNEL POWER DISSIPATION CURVE



■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Gate 1 to source breakdown voltage	$V_{(BR)G1SS}$	I_{G1} = ±10µA, V_{DS} = V_{G2S} = 0	±8	—	±20	V
Gate 2 to source breakdown voltage	$V_{(BR)G2SS}$	I_{G2} = ±10µA, V_{DS} = V_{G1S} = 0	±8	—	±20	V
Gate 1 cutoff current	I_{G1SS}	V_{G1S} = ±8V, V_{DS} = V_{G2S} = 0	—	—	±100	nA
Gate 2 cutoff current	I_{G2SS}	V_{G2S} = ±8V, V_{DS} = V_{G1S} = 0	—	—	±100	nA
Gate 1 to source cutoff voltage	$V_{G1S(off)}$	V_{DS} = 15V, V_{G2S} = 4V, I_D = 100µA	−0.3	—	−3.0	V
Gate 2 to source cutoff voltage	$V_{G2S(off)}$	V_{DS} = 15V, V_{G1S} = 0, I_D = 100µA	−0.4	—	−2.0	V
Drain current	I_{DSS}	V_{DS} = 15V, V_{G2S} = 4V, V_{G1S} = 0	5.0	—	25	mA
Forward transfer admittance	$\|y_{fs}\|$	V_{DS} = 15V, V_{G2S} = 4V, I_D = 10mA, f = 1kHz	8.0	—	—	mS
Input capacitance	C_{iss}	V_{DS} = 15V, V_{G2S} = 4V, I_D = 10mA, f = 1MHz	—	5.0	—	pF
Output capacitance	C_{oss}		—	2.0	—	pF
Reverse transfer capacitance	C_{rss}		—	0.03	—	pF
Power gain	PG	V_{DS} = 15V, V_{G2S} = 4V, I_D = 10mA, f = 200MHz	17	—	—	dB
Noise figure	NF		—	—	3.3	dB

* Marking is HV–L

■ See characteristic curves of 3SK81.