
2SK1999

Silicon N-Channel MOS FET

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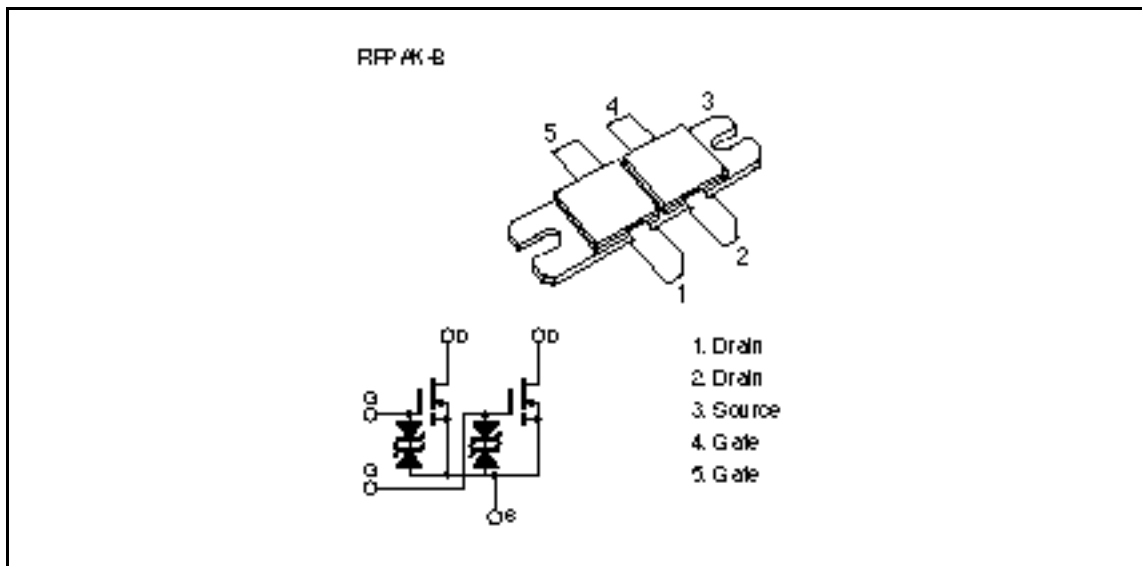
Application

VHF amplifier

Features

- Σ High gain, high efficiency
PG = 15 dB, hD = 65% typ (f = 200 MHz)
- Σ Compact package
Suitable for push - pull circuit

Outline



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Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	120	V
Gate to source voltage	V_{GSS}	±20	V
Drain current	I_D	12	A
Channel dissipation	Pch* ¹	180	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	–55 to +150	°C

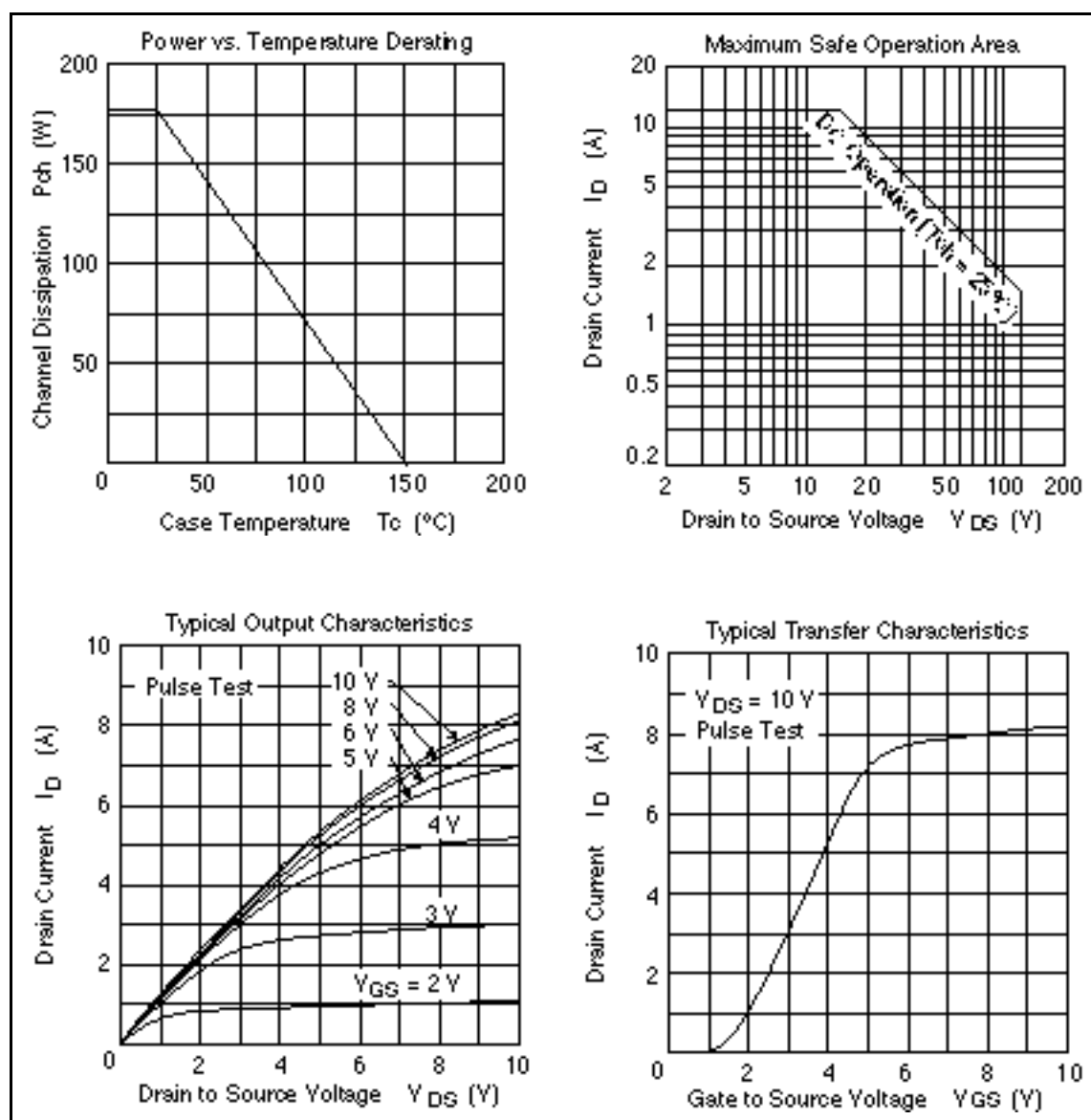
Note: 1. Value at T_c = 25°C

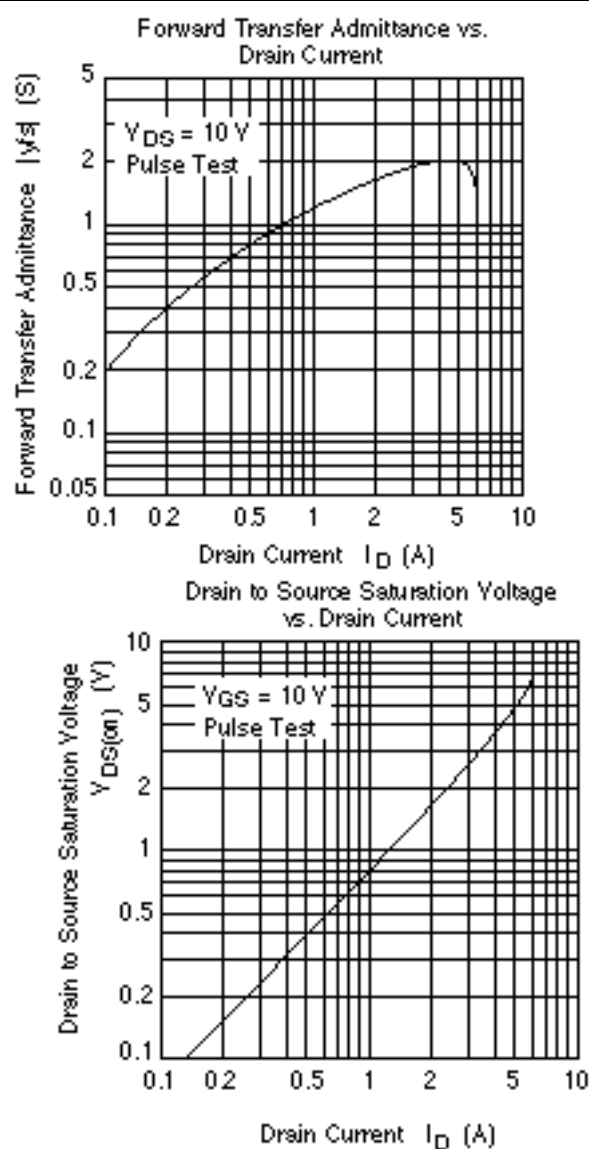
Electrical Characteristics (Ta = 25°C)

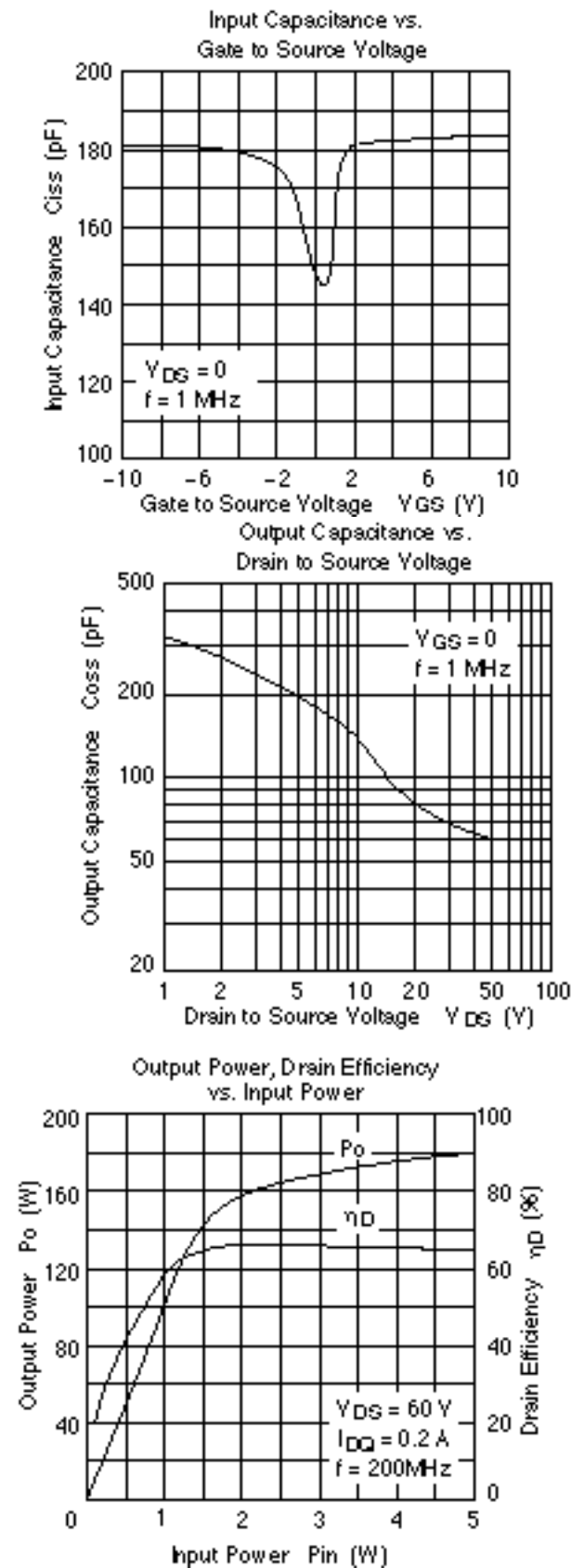
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage* ¹	$V_{(BR)DSS}$	120	—	—	V	$I_D = 1 \text{ mA}$, $V_{GS} = 0$
Gate to source breakdown voltage* ¹	$V_{(BR)GSS}$	±20	—	—	V	$I_G = \pm 100 \text{ } \mu\text{A}$, $V_{DS} = 0$
Zero gate voltage drain current* ¹	I_{DSS}	—	—	0.5	mA	$V_{DS} = 100 \text{ V}$, $V_{GS} = 0$
Gate to source cutoff voltage* ¹	$V_{GS(off)}$	0.5	—	2.0	V	$I_D = 1 \text{ mA}$, $V_{DS} = 10 \text{ V}$
Drain to source cutoff voltage* ¹	$V_{DS(on)}$	—	2.7	3.5	V	$I_D = 3 \text{ A}$, $V_{GS} = 10 \text{ V}$ * ²
Forward transfer admittance* ¹	$ y_{fs} $	1.5	1.8	—	S	$I_D = 2.5 \text{ A}$, $V_{DS} = 10 \text{ V}$ * ²
Input capacitance* ¹	Ciss	—	185	—	pF	$V_{GS} = 5 \text{ V}$, $V_{DS} = 0$ $f = 1 \text{ MHz}$
Output capacitance* ¹	Coss	—	60	—	pF	$V_{DS} = 50 \text{ V}$, $V_{GS} = 0$ $f = 1 \text{ MHz}$
Output Power	Po	150	180	—	W	$V_{DS} = 60 \text{ V}$, $I_{DQ} = 0.2 \text{ A}$
Drain Efficiency	hD	—	65	—	%	$f = 200 \text{ MHz}$, Pin = 5 W

Notes: 1. Shows / unit FET

2. Pulse Test





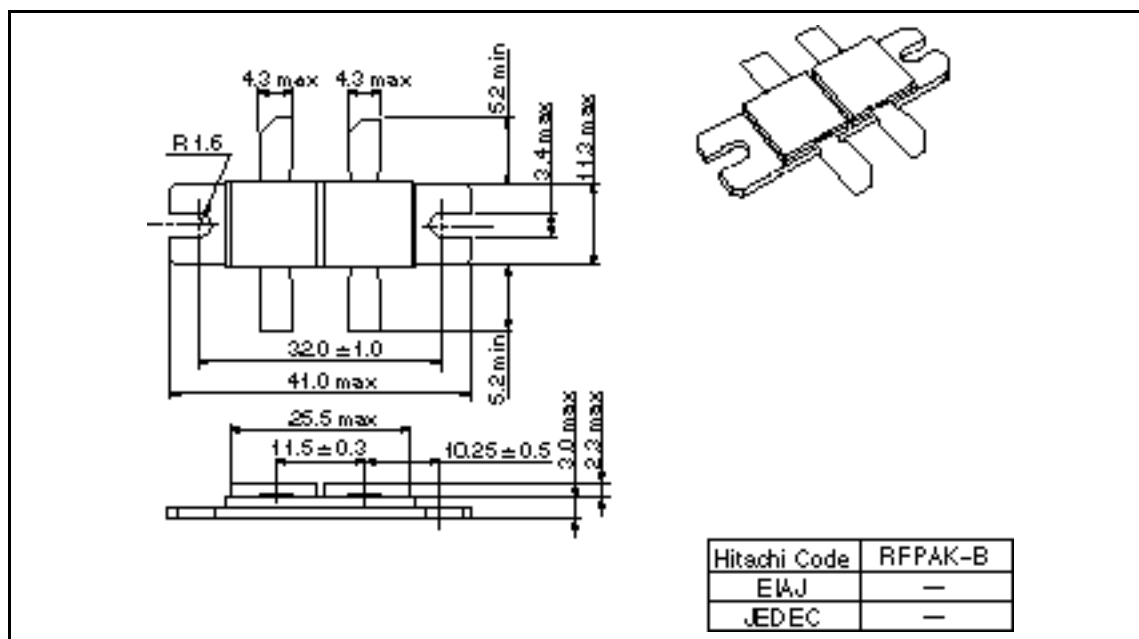


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Package Dimensions

Unit: mm



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