
2SK1575

Silicon N-Channel MOS FET

HITACHI

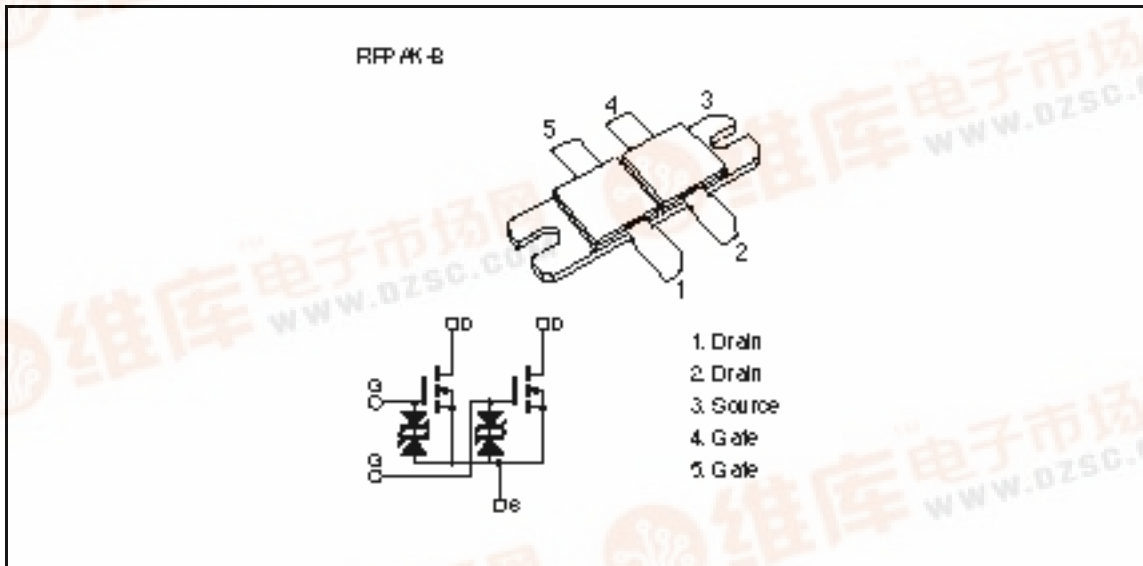
Application

VHF amplifier

Features

- High gain, high efficiency
PG = 13 dB, D = 65% typ (f = 190 MHz)
- Compact package
Suitable for push - pull circuit

Outline



2SK1575

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	180	V
Gate to source voltage	V_{GSS}	±20	V
Drain current	I_D	16	A
Channel dissipation	P_{ch}^{*1}	200	W
Channel temperature	T_{ch}	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

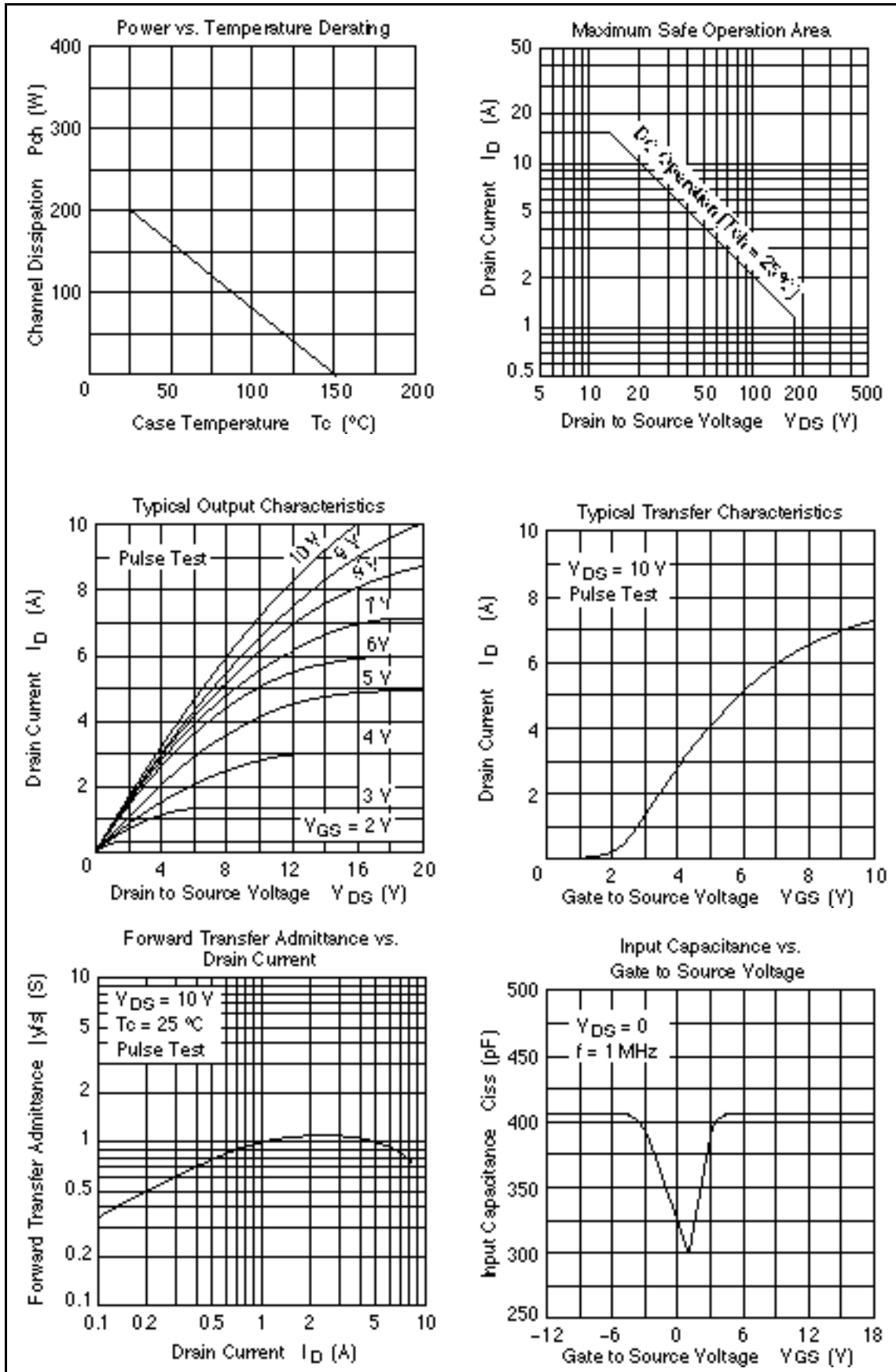
Note: 1. Value at $T_c = 25^\circ\text{C}$

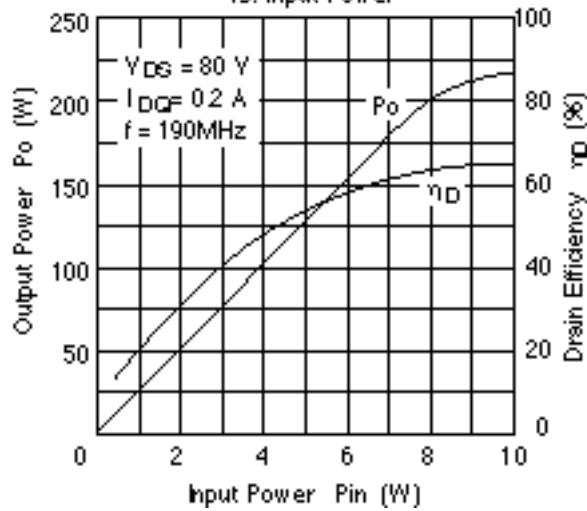
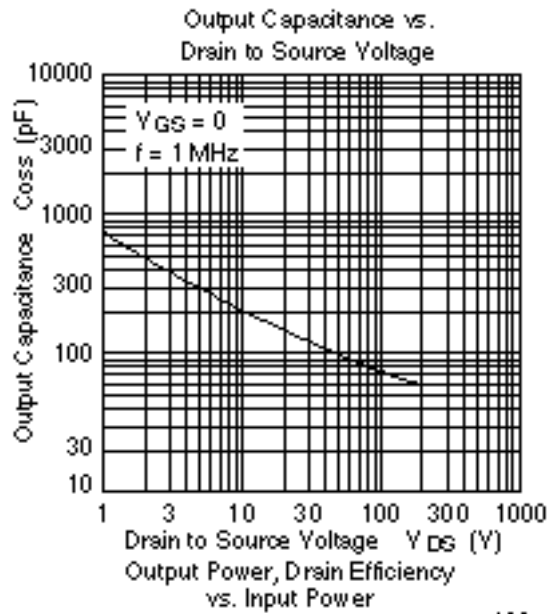
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Drain to source breakdown voltage* ¹	$V_{(BR)DSS}$	180	—	—	V	$I_D = 10\text{ mA}$, $V_{GS} = 0$
Gate to source breakdown voltage* ¹	$V_{(BR)GSS}$	±20	—	—	V	$I_G = \pm 100\ \mu\text{A}$, $V_{DS} = 0$
Zero gate voltage drain current* ¹	I_{DSS}	—	—	1	mA	$V_{DS} = 140\text{ V}$, $V_{GS} = 0$
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	$V_{DS(on)}$	—	3.8	6.0	V	$I_D = 4\text{ A}$, $V_{GS} = 10\text{ V}^{*2}$
Forward transfer admittance* ¹	$ y_{fs} $	0.9	1.25	—	S	$I_D = 3\text{ A}$, $V_{DS} = 20\text{ V}^{*2}$
Input capacitance* ¹	C_{iss}	—	440	—	pF	$V_{GS} = 5\text{ V}$, $V_{DS} = 0$ $f = 1\text{ MHz}$
Output capacitance* ¹	C_{oss}	—	75	—	pF	$V_{DS} = 50\text{ V}$, $V_{GS} = 0$ $f = 1\text{ MHz}$
Reverse transfer capacitance* ¹	C_{rss}	—	0.5	—	pF	$V_{GD} = -50\text{ V}$, $f = 1\text{ MHz}$
Output Power	P_o	180	220	—	W	$V_{DS} = 80\text{ V}$, $I_{DQ} = 0.2\text{ A}$
Drain Efficiency	D	—	65	—	%	$f = 190\text{ MHz}$, $P_{in} = 10\text{ W}$

Notes: 1. Shows / unit FET

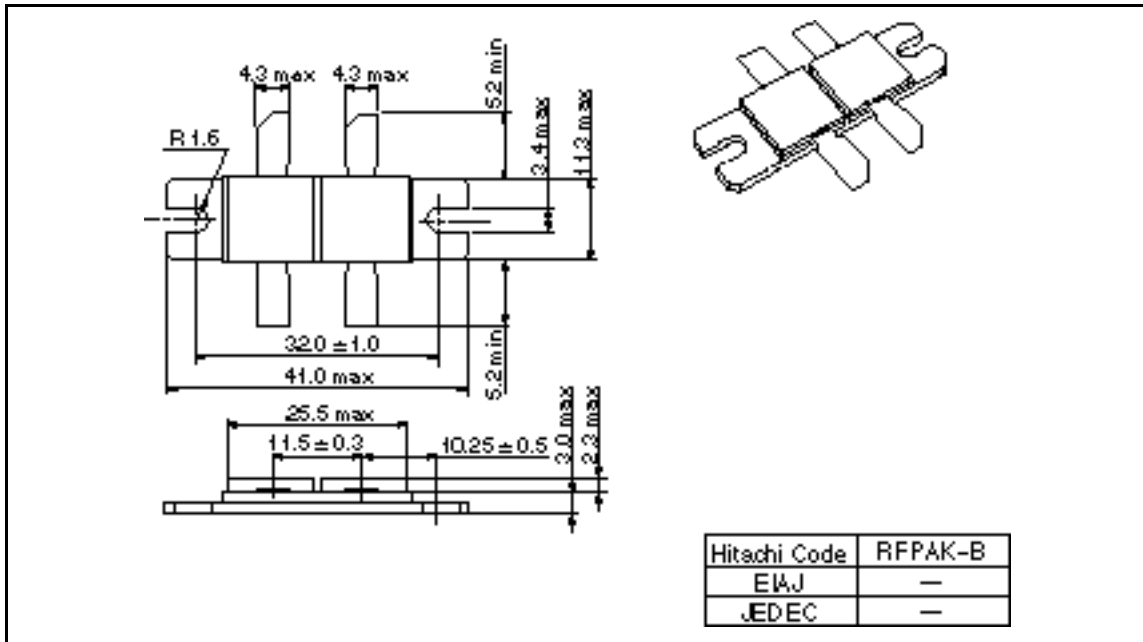
2. Pulse Test





Package Dimensions

Unit: mm



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