2SK2595

Silicon N-Channel MOS FET
UHF Power Amplifier

HITACHI

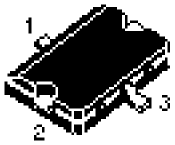
1st. Edition

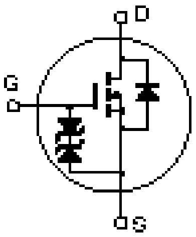
Features

- High power output, High gain, High efficiency
  PG = 7.8dB, Pout = 37.3dBm, ηD = 50 %min. (f = 836.5MHz)
- Compact package capable of surface mounting

Outline

RP8P





1. Gate
2. Source
3. Drain

This Device is sensitive to Elector Static Discharge.
An Adequate handling procedure is requested.

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Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V_{DSS}	17	V
Gate to source voltage	V_{GSS}	±10	V
Drain current	I_D	1.1	A
Drain peak current	$I_{D(pulse)}$*[1]	5	A
Channel dissipation	Pch*[2]	20	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	–45 to +150	°C

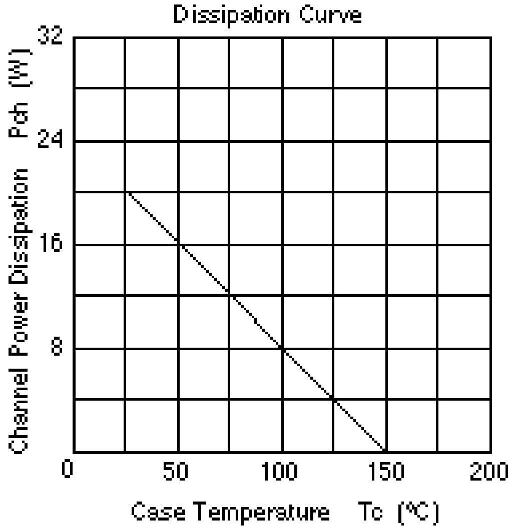
Notes: 1. PW ≤ 10µs, duty cycle ≤ 1 %
2. Value at Tc = 25°C

Electrical Characteristics (Ta = 25°C)

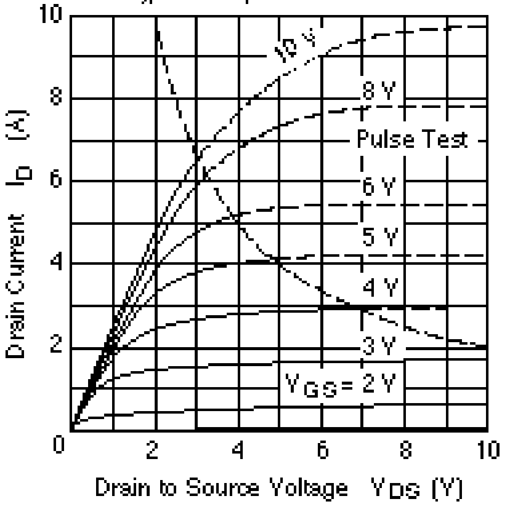
Item	Symbol	Min.	Typ	Max.	Unit	Test Conditions
Zero gate voltage drain current	I_{DSS}	—	—	10	µA	V_{DS} = 12 V, V_{GS} = 0
Gate to source leak current	I_{GSS}	—	—	±5.0	µA	V_{GS} = ±10V, V_{DS} = 0
Gate to source cutoff voltage	$V_{GS(off)}$	0.6	—	1.3	V	I_D = 6mA, V_{DS} = 12V
Input capacitance	Ciss	—	68	—	pF	V_{GS} = 5V, V_{DS} = 0 f = 1MHz
Output capacitance	Coss	—	27	—	pF	V_{DS} = 12V, V_{GS} = 0 f = 1MHz
Output Power	Pout	37.3	38.45	—	dBm	V_{DS} = 12V, f = 836.5MHz Pin = 29.5dBm
Drain Rational	ηD	50	60	—	%	V_{DS} = 12V Pout = 37.3dBm f = 836.5MHz Pin = 29.5dBm

Main Characteristics

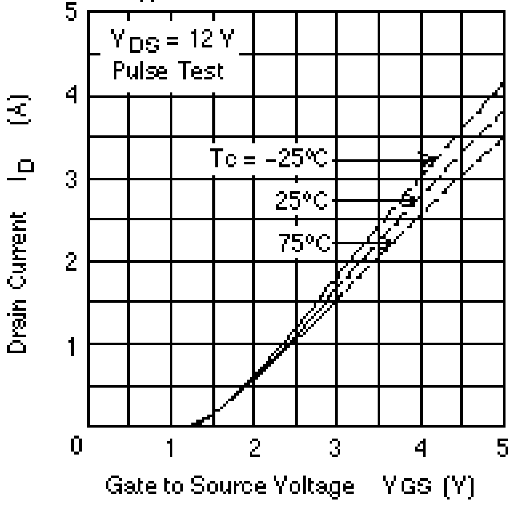
Maximum Channel Power Dissipation Curve



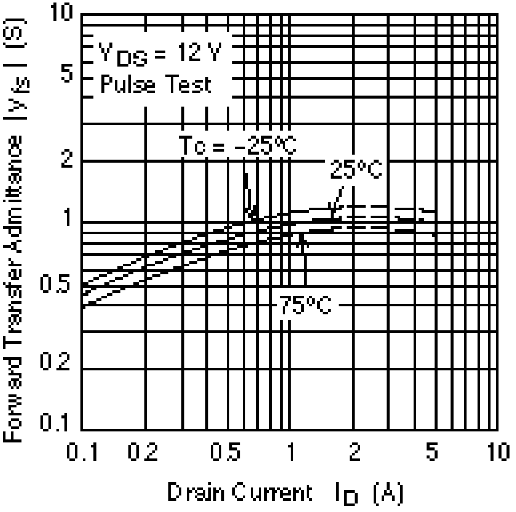
Typical Output Characteristics



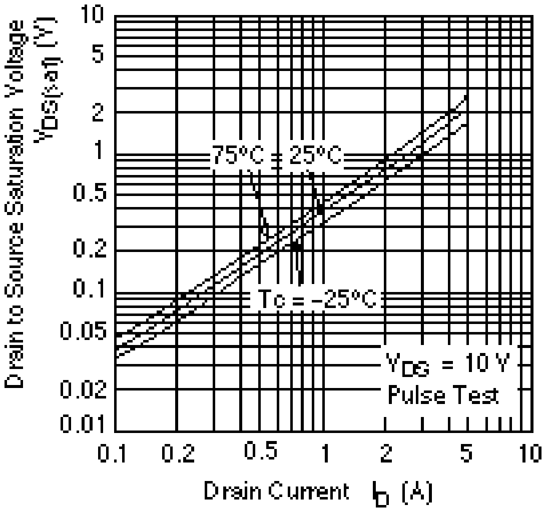
Typical Transfer Characteristics



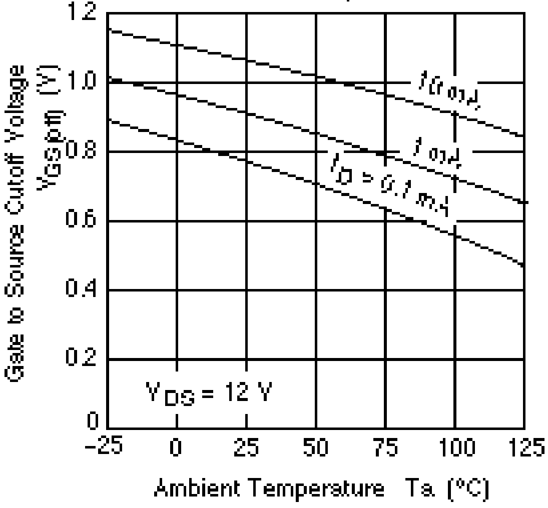
Forward Transfer Admittance vs. Drain Current



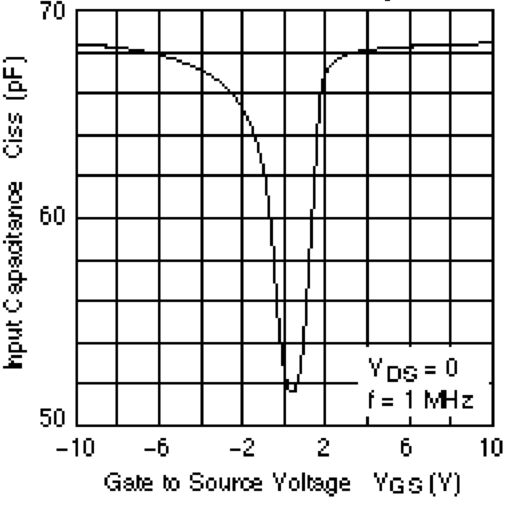
Drain to Source Saturation Voltage vs. Drain Current



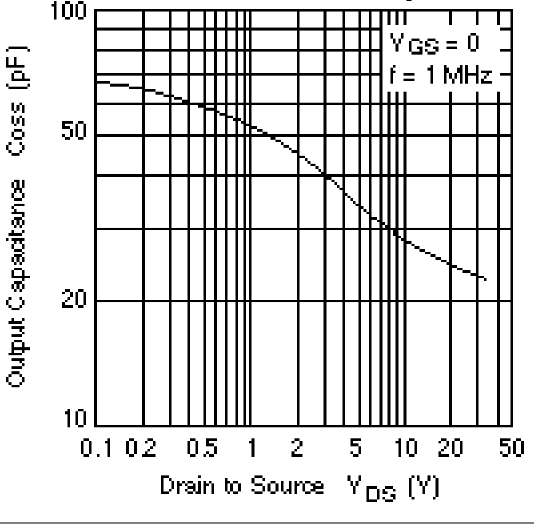
Gate to Source Cutoff Voltage vs. Ambient Temperature

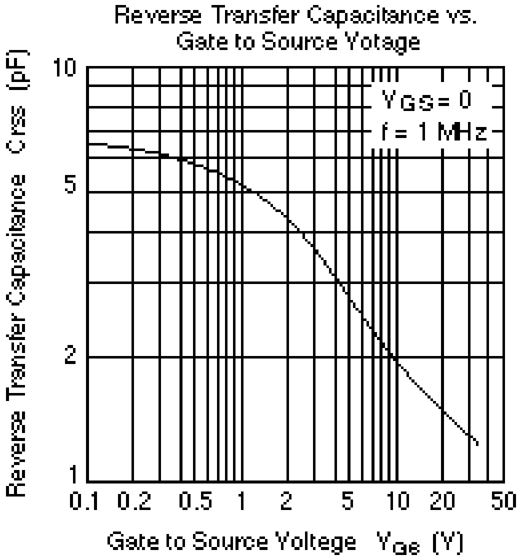


Input Capacitance vs. Gate to Source Voltage

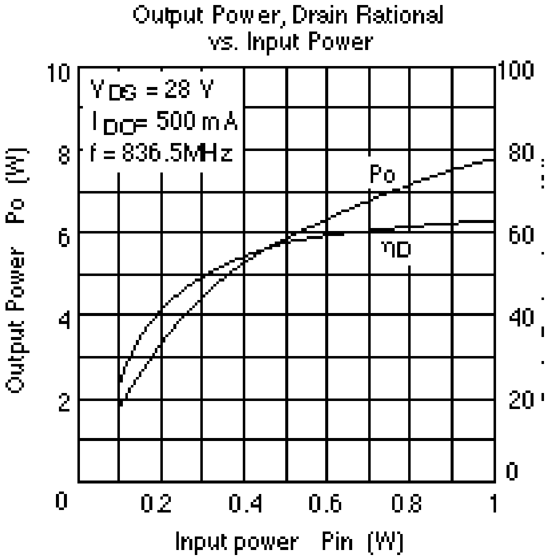


Output Capacitance vs. Drain to Source Voltage





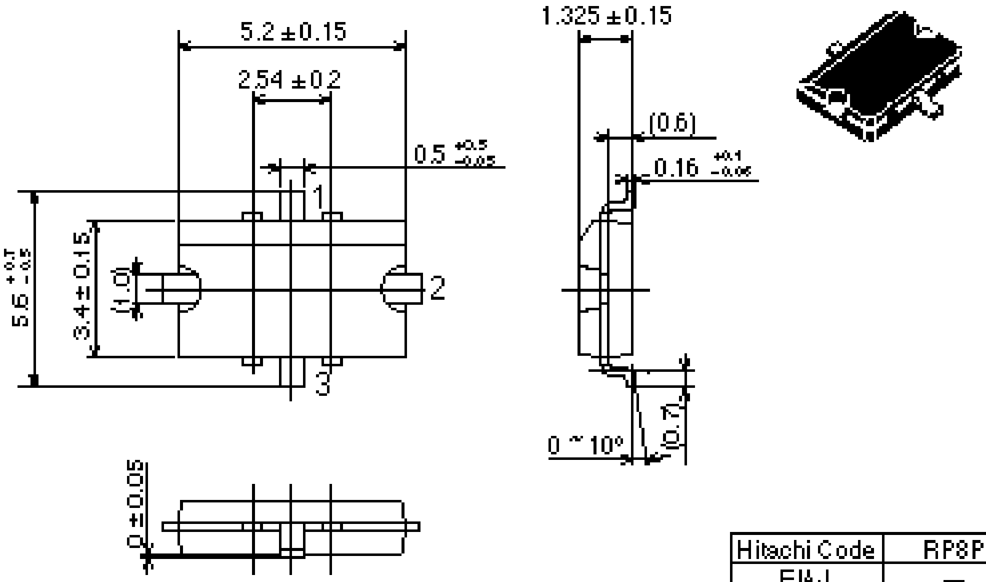
Reverse Transfer Capacitance vs. Gate to Source Yotage



Output Power, Drain Rational vs. Input Power

Package Dimensions

Unit: mm



Hitachi Code	RP8P
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HITACHI

Hitachi, Ltd.
Semiconductor & IC Div.
Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100, Japan
Tel: Tokyo (03) 3270-2111
Fax: (03) 3270-5109

For further information write to:

Hitachi America, Ltd.
Semiconductor & IC Div.
2000 Sierra Point Parkway
Brisbane, CA. 94005-1835
U S A
Tel: 415-589-8300
Fax: 415-583-4207

Hitachi Europe GmbH
Electronic Components Group
Continental Europe
Dornacher Straße 3
D-85622 Feldkirchen
München
Tel: 089-9 91 80-0
Fax: 089-9 29 30 00

Hitachi Europe Ltd.
Electronic Components Div.
Northern Europe Headquarters
Whitebrook Park
Lower Cookham Road
Maidenhead
Berkshire SL6 8YA
United Kingdom
Tel: 0628-585000
Fax: 0628-778322

Hitachi Asia Pte. Ltd.
16 Collyer Quay #20-00
Hitachi Tower
Singapore 0104
Tel: 535-2100
Fax: 535-1533

Hitachi Asia (Hong Kong) Ltd.
Unit 706, North Tower,
World Finance Centre,
Harbour City, Canton Road
Tsim Sha Tsui, Kowloon
Hong Kong
Tel: 27359218
Fax: 27306071