

# 2SK2596

Silicon N-Channel MOS FET  
UHF Power Amplifier

# HITACHI

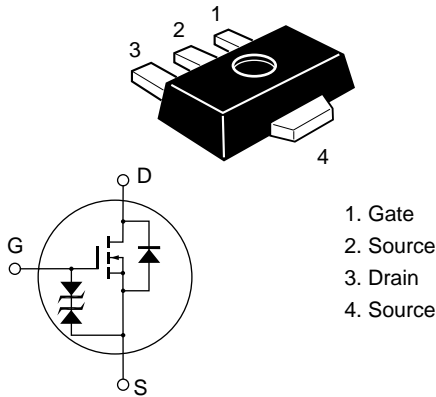
ADE-208-1367 (Z)  
1st. Edition  
Mar. 2001

## Features

- High power output, High gain, High efficiency  
PG = 12.2dB, Pout = 30.2dBm,  $\eta_D = 45\%$  min. ( $f = 836.5\text{MHz}$ )
- Compact package capable of surface mounting

## Outline

UPAK



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

**Absolute Maximum Ratings** (Ta = 25°C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V <sub>DSS</sub>	17	V
Gate to source voltage	V <sub>GSS</sub>	±10	V
Drain current	I <sub>D</sub>	0.4	A
Drain peak current	I <sub>D(pulse)</sub> *1	1	A
Channel dissipation	Pch*2	3	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	-45 to +150	°C

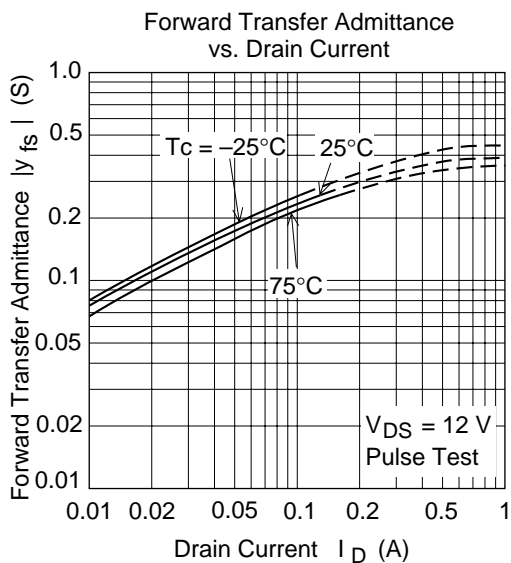
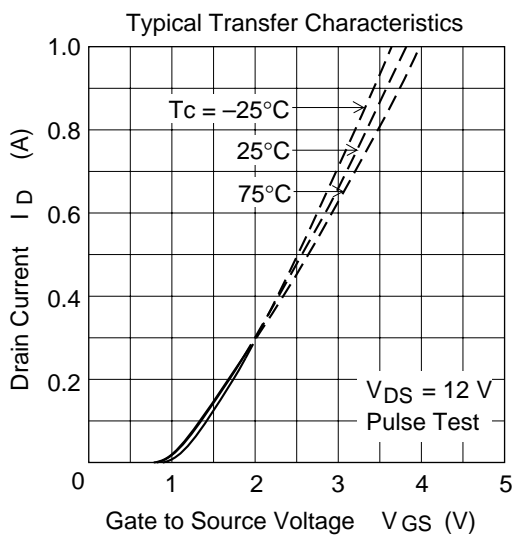
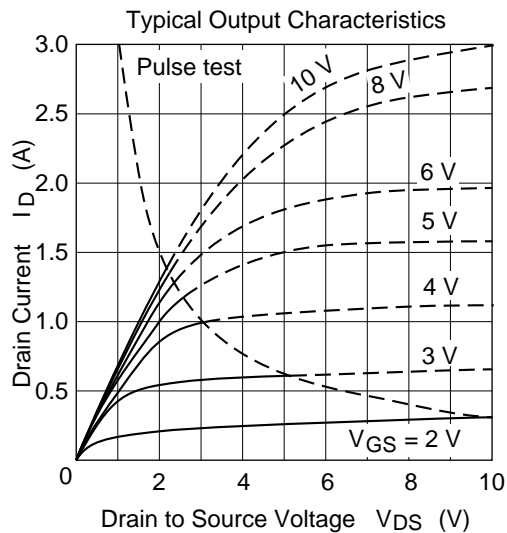
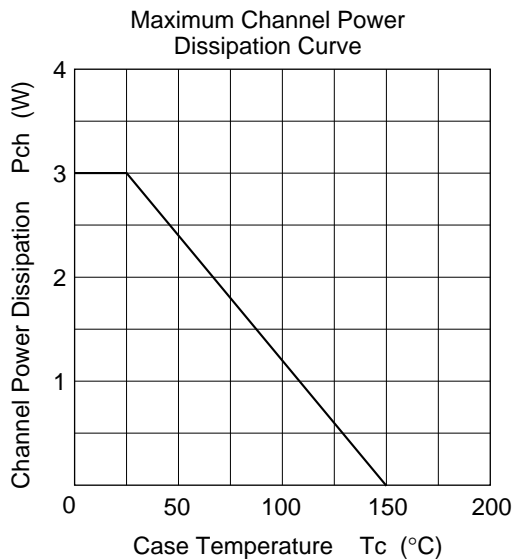
Notes: 1. PW ≤ 10μs, duty cycle ≤ 1 %

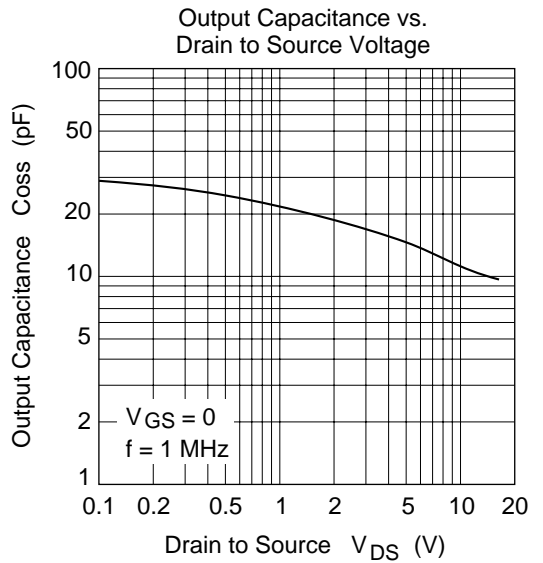
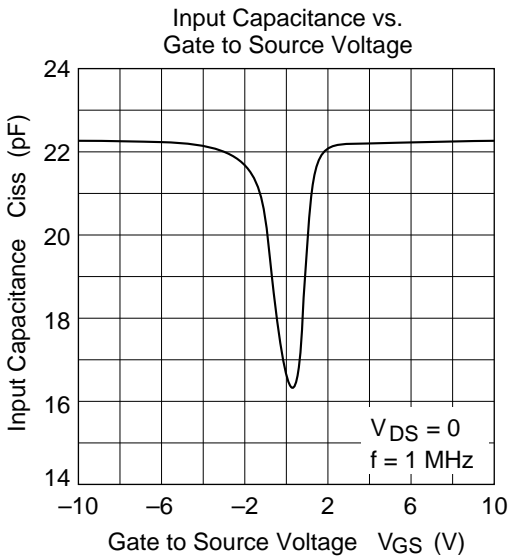
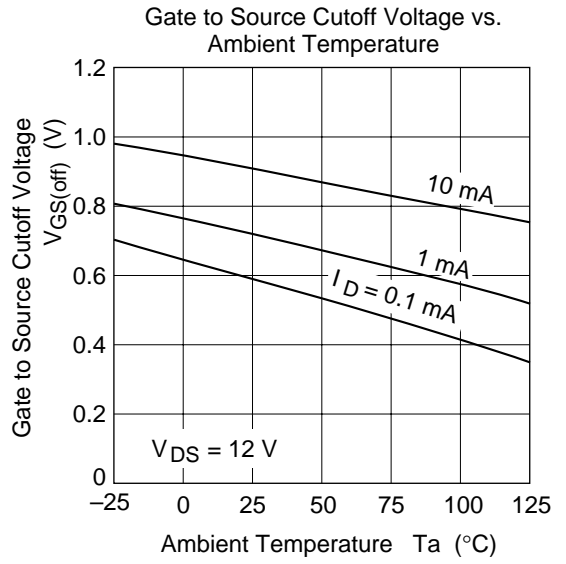
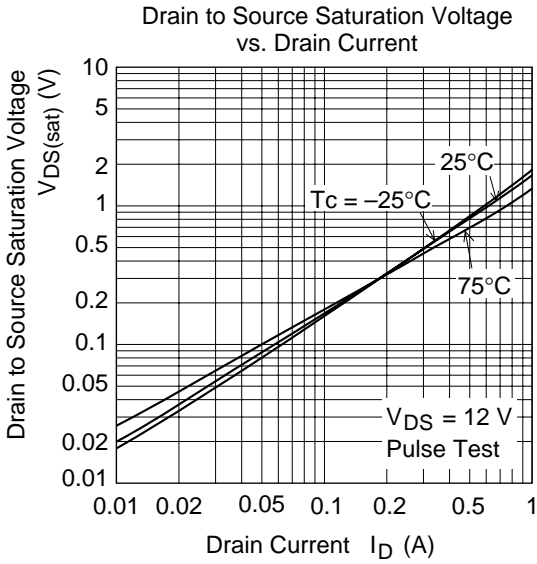
2. Value at Tc = 25°C

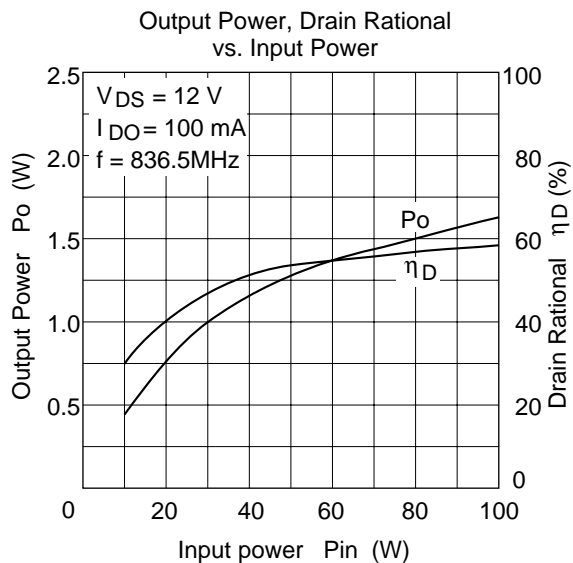
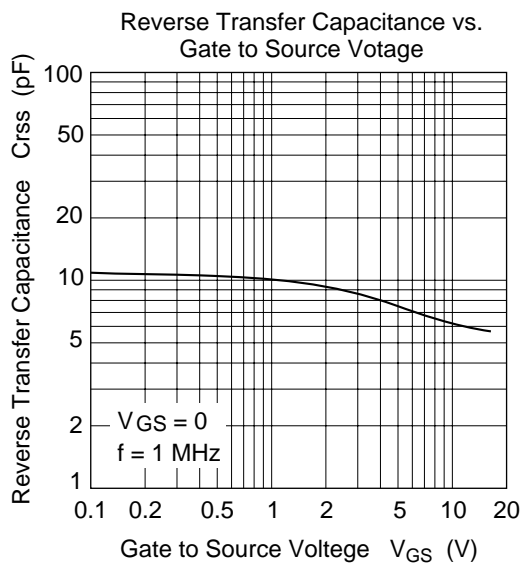
**Electrical Characteristics** (Ta = 25°C)

Item	Symbol	Min.	Typ	Max.	Unit	Test Conditions
Zero gate voltage drain current	I <sub>DSS</sub>	—	—	10	μA	V <sub>DS</sub> = 12 V, V <sub>GS</sub> = 0
Gate to source leak current	I <sub>GSS</sub>	—	—	±5.0	μA	V <sub>GS</sub> = ±10V, V <sub>DS</sub> = 0
Gate to source cutoff voltage	V <sub>GS(off)</sub>	0.4	—	1.1	V	I <sub>D</sub> = 2mA, V <sub>DS</sub> = 12V
Input capacitance	Ciss	—	22	—	pF	V <sub>GS</sub> = 5V, V <sub>DS</sub> = 0 f = 1MHz
Output capacitance	Coss	—	10.5	—	pF	V <sub>DS</sub> = 12V, V <sub>GS</sub> = 0 f = 1MHz
Output Power	Pout	30.2	31.46	—	dBm	V <sub>DS</sub> = 12V f = 836.5MHz Pin = 18dBm
Drain Rational	ηD	45	55	—	%	V <sub>DS</sub> = 12V Pout = 30.2dBm f = 836.5MHz Pin = 18dBm

## Main Characteristics

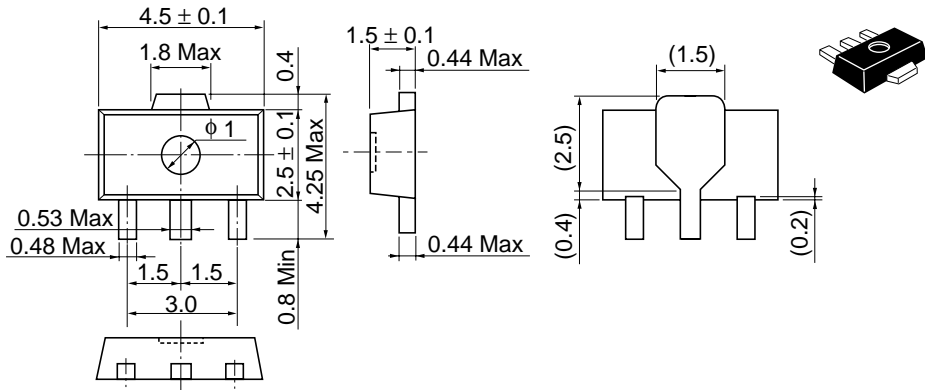






Package Dimensions

As of January, 2001  
Unit: mm



Hitachi Code	UPAK
JEDEC	—
EIAJ	Conforms
Mass (reference value)	0.050 g

## Cautions

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