Silicon N-Channel MOS FET UHF Power Amplifier

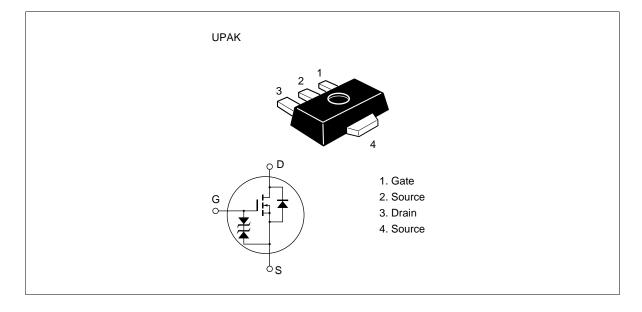
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ADE-208-466A (Z) 2nd. Edition Nov. 1996

#### Features

- High power output, High gain, High effeciency  $PG = 11 dB, Pout = 24 dBm, \eta D = 40 \ \% min. \ (f = 836.5 MHz)$
- Compact package capable of surface mounting

#### Outline



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>	10	V	
Gate to source voltage	V <sub>GSS</sub>	±6	V	
Drain current	I <sub>D</sub>	0.17	А	
Drain peak current	I <sub>D(pulse)</sub> *1	0.3	А	
Channel dissipation	Pch*2	1	W	
Channel temperature	Tch	150	°C	
Storage temperature	Tstg	-45 to +150	°C	

Notes: 1.  $PW \le 10ms$ , duty cycle  $\le 50 \%$ 

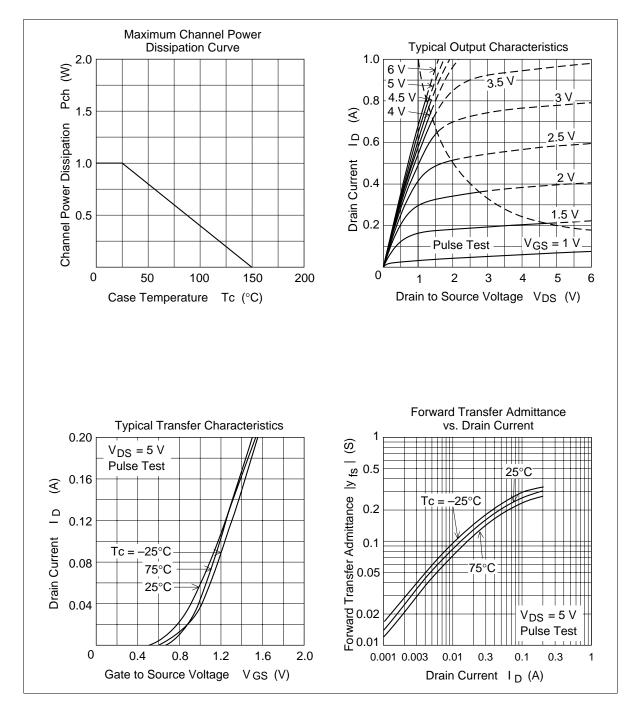
2. Value at Tc =  $25^{\circ}$ C

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

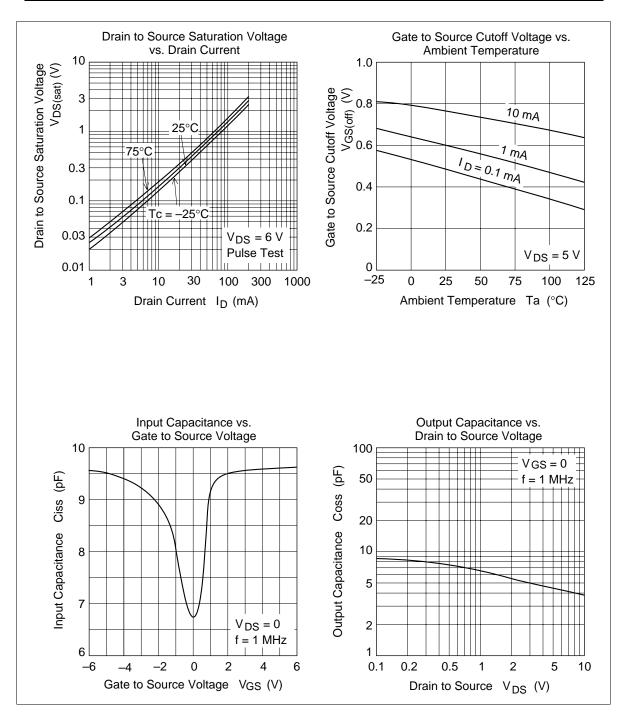
Item	Symbol	Min	Тур	Max	Unit	Test Conditions
Zero gate voltege drain current	I <sub>DSS</sub>	_	_	10	μA	$V_{DS} = 10 \text{ V}, \text{ V}_{GS} = 0$
Gate to source leak current	I <sub>GSS</sub>	_	—	±5.0	μA	$V_{GS} = \pm 6V, V_{DS} = 0$
Gate to source cutoff voltage	$V_{\text{GS(off)}}$	0.3	—	1.0	V	$I_{\rm D} = 1$ mA, $V_{\rm DS} = 5$ V
Input capacitance	Ciss	—	9.5	—	pF	$V_{GS} = 2V, V_{DS} = 0$ f = 1MHz
Output capacitance	Coss	—	4.5	—	pF	$V_{DS} = 5$ , $V_{GS} = 0$ f = 1MHz
Output Power	Pout	24	—	—	dBm	V <sub>DS</sub> = 4.7V f = 836.5MHz Pin = 13dBm
Drain Rational	ηD	40	_	—	%	V <sub>DS</sub> = 4.7V f = 836.5MHz Pin = 13dBm

Note: 1. Marking is " DX ".

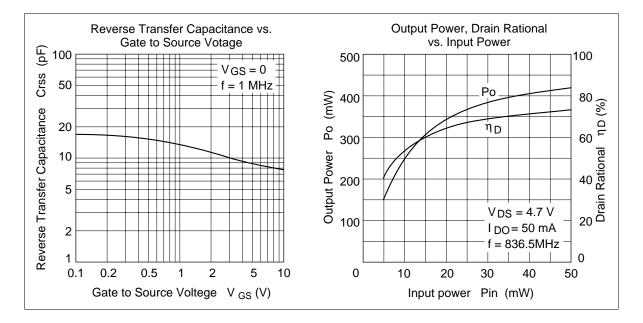
#### Main Characteristics



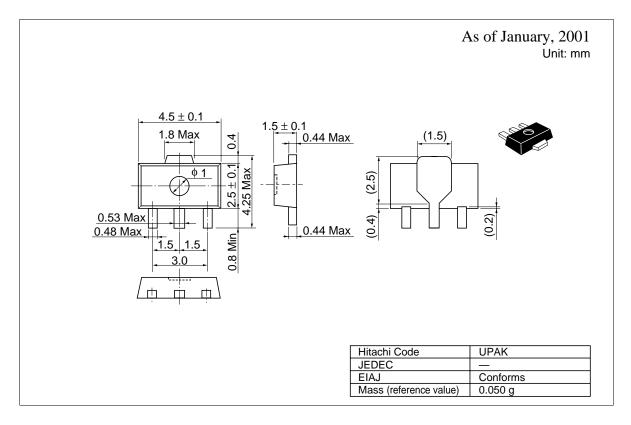
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#### **Package Dimensions**



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