Silicon N-Channel MOS FET



ADE-208-346A 2nd. Edition

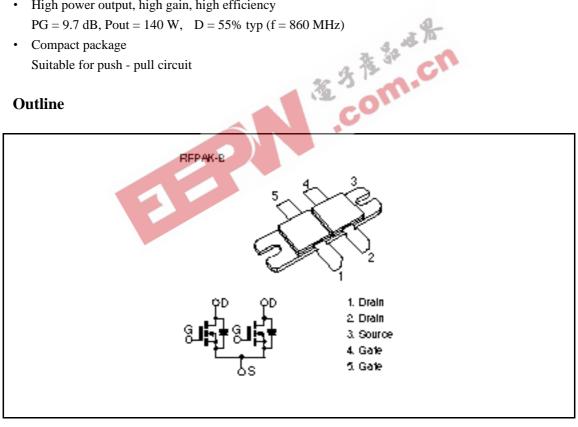
#### Application

UHF power amplifier

#### Features

- High power output, high gain, high efficiency PG = 9.7 dB, Pout = 140 W, D = 55% typ (f = 860 MHz)
- Compact package ٠ Suitable for push - pull circuit

#### Outline





## Absolute Maximum Ratings (Ta = $25^{\circ}$ C)

Item	Symbol	Ratings	Unit
Drain to source voltage	V <sub>DSS</sub>	60	V
Gate to source voltage	V <sub>GSS</sub>	±10	V
Drain current	Ι <sub>D</sub>	20	А
Channel dissipation	Pch*1	150	W
Channel temperature	Tch	150	°C
Storage temperature	Tstg	-55 to +150	°C

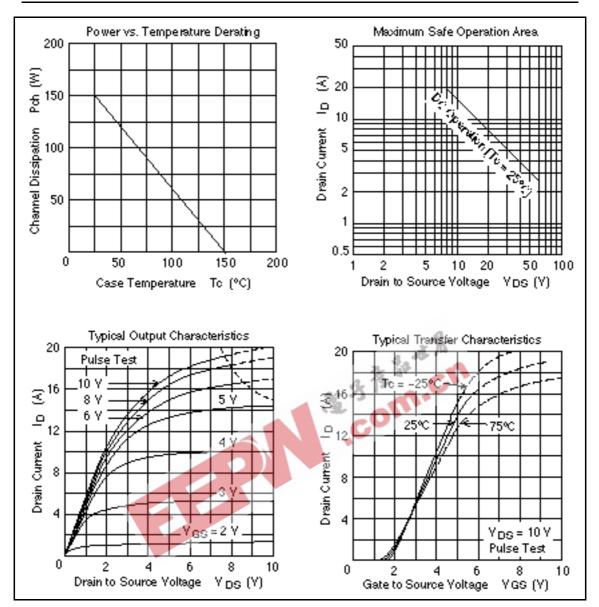
Note: 1. Value at  $T_c = 25^{\circ}C$ 

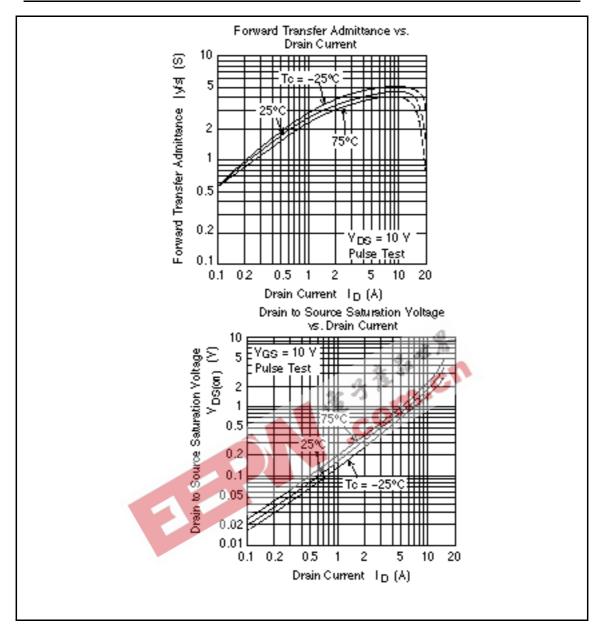
## **Electrical Characteristics** ( $T_c = 25^{\circ}C$ )

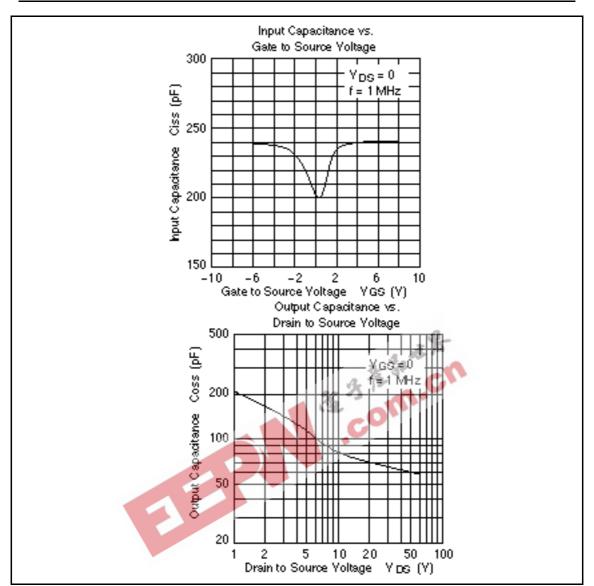
Item	Symbol	Min	Тур	Мах	Unit	Test conditions
Drain leakage current*1	I <sub>DSS</sub>	—		1	mA	$V_{\rm DS} = 60 \text{ V}, \text{ V}_{\rm GS} = 0$
Gate leakage current*1	I <sub>GSS</sub>	_	_	± 3	μA	$V_{GS} = \pm 10 \text{ V}, \text{ V}_{DS} = 0$
Gate to source cutoff voltage*1	$V_{\text{GS(off)}}$	0.3	_	1.6	V	V <sub>DS</sub> = 10 V, I <sub>D</sub> = 1 mA
Drain to source voltage*1	$V_{\text{DS(on)}}$	_	1.2	2.5	V	$V_{\rm GS}$ = 10 V, I <sub>D</sub> = 5 A <sup>*2</sup>
Forward transfer admittance*1	y <sub>fs</sub>	3.0	4.0	-0	S	$V_{\rm DS} = 10 \text{ V}, \text{ I}_{\rm D} = 5 \text{ A}^{*2}$
Input capacitance*1	Ciss		250	G	pF	$V_{GS} = 5 V, V_{DS} = 0$ f = 1MHz
Output capacitance*1	Coss	÷,	85	_	рF	$V_{DS} = 10V, V_{GS} = 0$ f = 1MHz
Output power	Pout	100	140	_	W	$V_{_{DS}} = 28 \text{ V}, \text{ I}_{_{DO}} = 0.4 \text{ A}$
Drain efficiency	D	—	55	—	%	f = 860 MHz, Pin = 15 W
Notes: 1 Shows / unit FET						

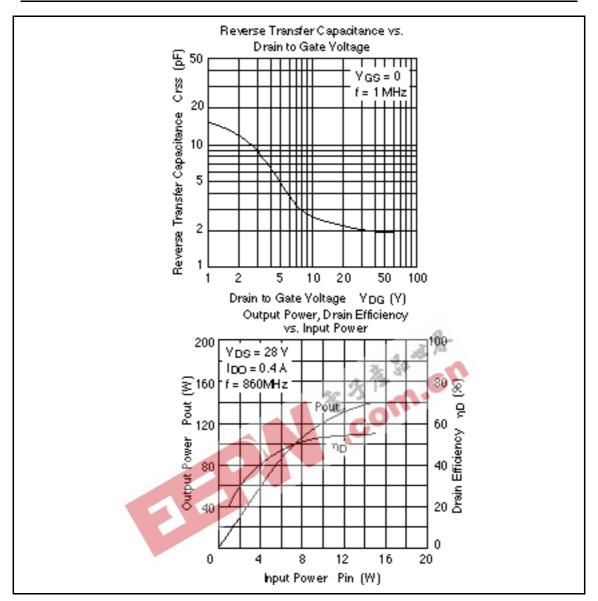
Notes: 1. Shows / unit FET

2. Pulse Test



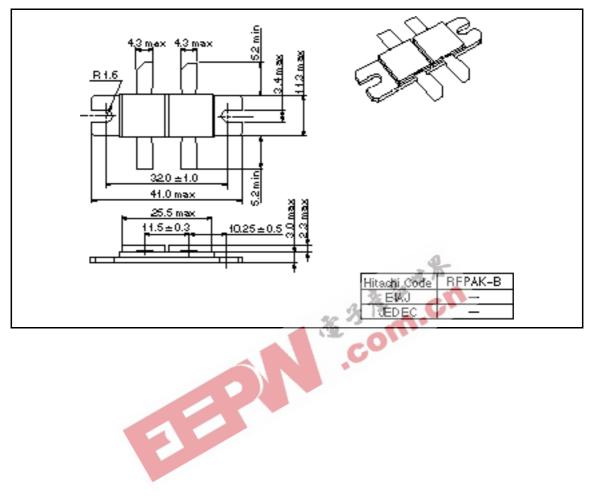






## Package Dimensions





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