Silicon N-Channel MOS FET

HITACHI

## ADE-208-347A 2nd. Edition

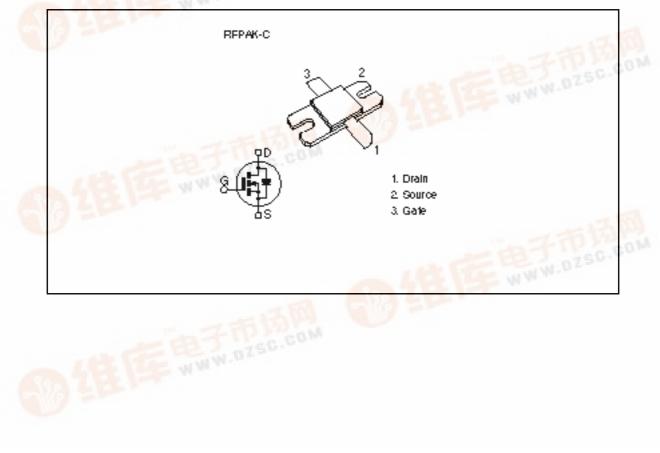
## Application

WWW.DZSC UHF power amplifier

### Features

- High power output, high gain, high efficiency PG = 10 dB, Pout = 60 W, D = 55% typ (f = 860 MHz)
- · Compact package

#### Outline





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

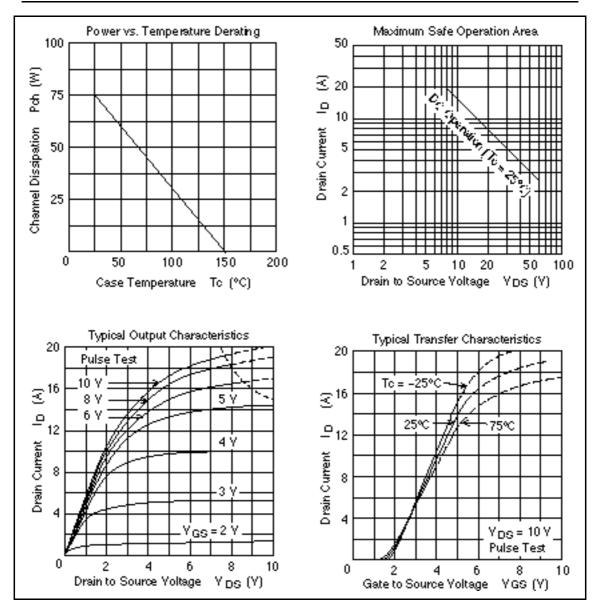
Item	Symbol	Ratings	Unit	
Drain to source voltage	V <sub>DSS</sub>	60	V	
Gate to source voltage	V <sub>GSS</sub>	±10	V	
Drain current	I <sub>D</sub>	10	А	
Channel dissipation	Pch*1	75	W	
Channel temperature	Tch	150	°C	
Storage temperature	Tstg	-55 to +150	°C	

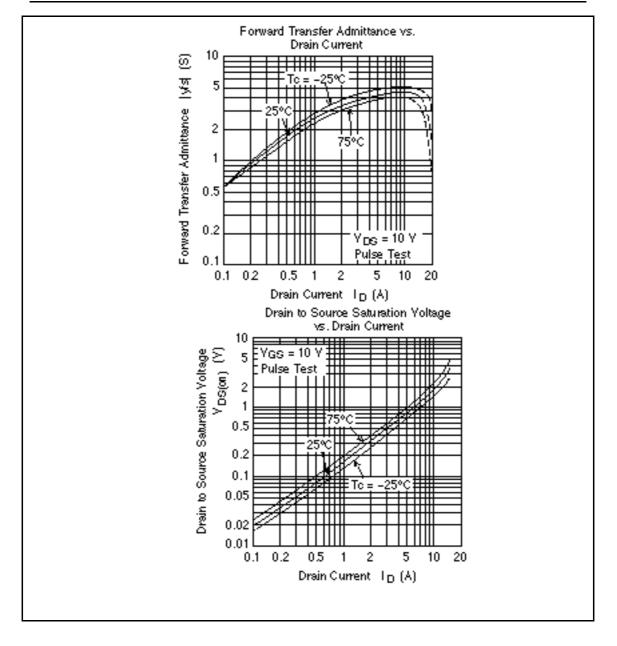
Note: 1. Value at  $T_c = 25^{\circ}C$ 

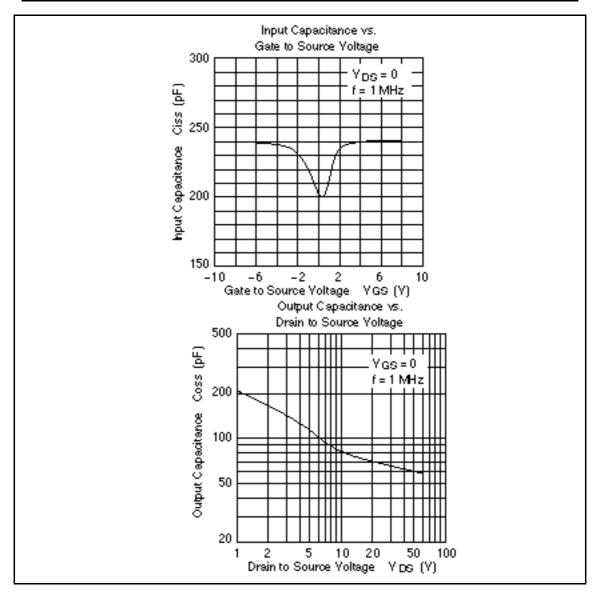
## **Electrical Characteristics** ( $T_c = 25^{\circ}C$ )

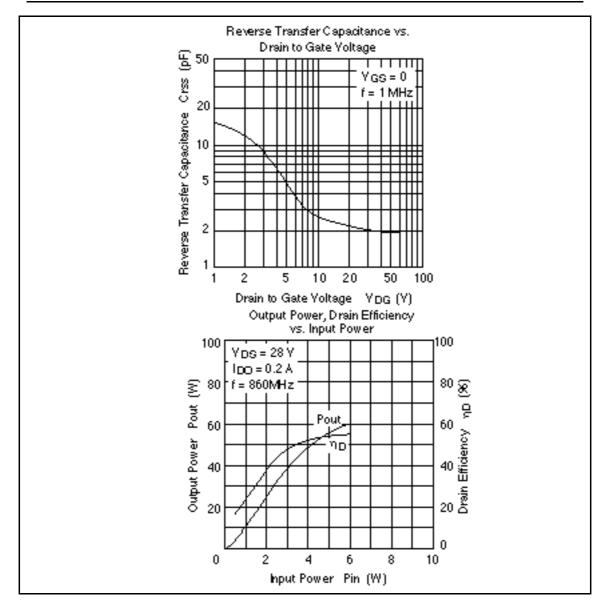
Item	Symbol	Min	Тур	Max	Unit	Test conditions
Drain leakage current	I <sub>DSS</sub>	_	_	1	mA	$V_{\rm DS} = 60 \ V, \ V_{\rm GS} = 0$
Gate leakage current	I <sub>GSS</sub>	_	_	± 3	μΑ	$V_{GS} = \pm 10 \text{ V}, V_{DS} = 0$
Gate to source cutoff voltage	$V_{\text{GS(off)}}$	0.3	_	1.6	V	$V_{\rm DS} = 10 \text{ V}, I_{\rm D} = 1 \text{ mA}$
Drain to source voltage	$V_{\text{DS(on)}}$	_	1.2	2.5	V	$V_{GS} = 10 \text{ V}, \text{ I}_{D} = 5 \text{ A}^{*1}$
Forward transfer admittance	y <sub>fs</sub>	3.0	4.0	_	S	$V_{DS} = 10 \text{ V}, \text{ I}_{D} = 5 \text{ A}^{*1}$
Input capacitance	Ciss	_	250	—	pF	$V_{GS} = 5 V, V_{DS} = 0$ f = 1MHz
Output capacitance	Coss	_	85	_	pF	$V_{\text{DS}} = 10 \text{V}, V_{\text{GS}} = 0$ f = 1MHz
Output power	P <sub>OUT</sub>	40	60		W	$V_{\rm DS} = 28 \text{ V}, I_{\rm DO} = 0.2 \text{ A}$
Drain efficiency	D		55		%	f = 860 MHz, Pin = 6 W

Note: 1. Pulse Test



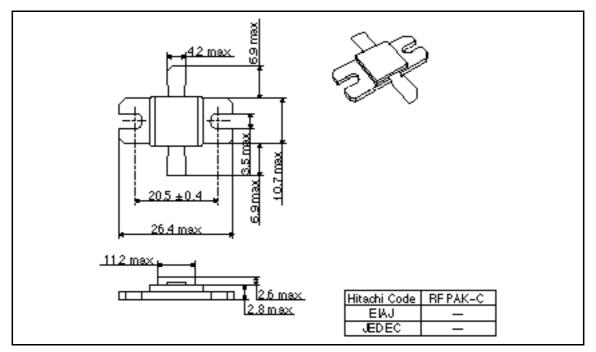






## **Package Dimensions**

Unit: mm



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