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**Overview**

The MHT1803A 300 W CW high efficiency RF power transistor is designed for consumer and commercial cooking applications operating from 1.8 to 50 MHz.

**Features**

- Characterized from 30 to 50 V
- Integrated ESD protection with greater negative gate-source voltage range for improved Class C operation
- 150°C case operating temperature
- 175°C die temperature capability
- RoHS compliant

**Target Applications**

- Consumer cooking
- Commercial cooking

[Data Sheets](#)
[Application Notes](#)
**TO-247-3 Package Image**

**Key Parametrics**

Frequency (Min) (MHz)  
1.8

Frequency (Max) (MHz)  
50

Supply Voltage (Typ) (V)  
50

Output Power (Typ) (W) @ Intermodulation Level at Test Signal  
300.0 @ CW

Power Gain (Typ) (dB) @ f (MHz)  
28.2 @ 41

Efficiency (Typ) (%)  
79

Thermal Resistance (Spec) (°C/W)  
0.55

Class  
AB

Die Technology  
LDMOS

**RF Performance Tables**
**Typical Performance**

$V_{DD} = 50$  Vdc,  $I_{DQ} = 50$  mA

Frequency (MHz)	Signal Type	$P_{out}$ (W)	$G_{ps}$ (dB)	$\eta_D$ (%)
40.68	CW	330	28.2	79.0

**Load Mismatch/Ruggedness**

Frequency (MHz)	Signal Type	VSWR	$P_{in}$ (W)	Test Voltage	Result
40.68	Pulse (100 $\mu$ sec, 20% Duty Cycle)	> 65:1 at all Phase Angles	2 Peak (3 dB Overdrive)	50	No Device Degradation

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