

MHT1803A: 1.8-50 MHz, 300 W CW, 50 V RF LDMOS Transistor for Consumer and Commercial Cooking

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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

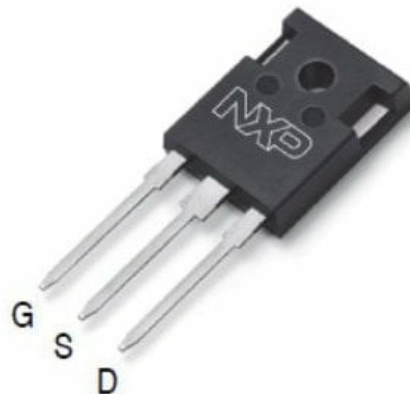
- Characterized from 30 to 50 V
- Integrated ESD protection with greater negative gate-source voltage range for improved Class C operation
- 150°C case operating temperature
- 175°C die temperature capability
- RoHS compliant

Target Applications

- Consumer cooking
- Commercial cooking

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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
CW @ 300

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

Efficiency (Typ) (%)
79

Thermal Resistance (Spec) (°C/W)
0.55

Class
AB

Die Technology
LDMOS

RF Performance Tables

Typical Performance

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

Frequency (MHz)	Signal Type	P _{out} (W)	G _{ps} (dB)	η _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 μsec, 20% Duty Cycle)	> 65:1 at all Phase Angles	2 Peak (3 dB Overdrive)	50	No Device Degradat

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