# 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

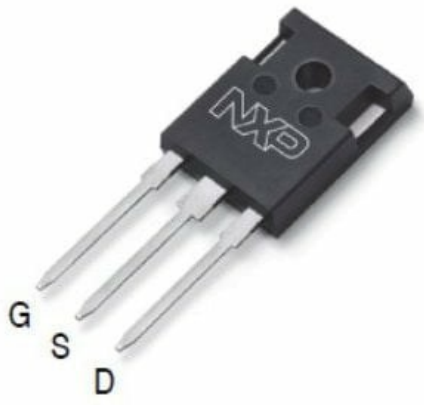
- Characterized from 30 to 50 V
- Integrated ESD protection with greater negative gate-source voltage range for improved Class C operation
- 150°C case operating temperature
- 175°C die temperature capability
- RoHS compliant

**Target Applications**

- Consumer cooking
- Commercial cooking

DATA SHEETS | APPLICATION NOTES | BUY

## 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 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 µsec, 20% Duty Cycle) | > 65:1 at all Phase Angles | 2 Peak (3 dB Overdrive) | 50 | No Device Degradat |