# WP485P03025MH

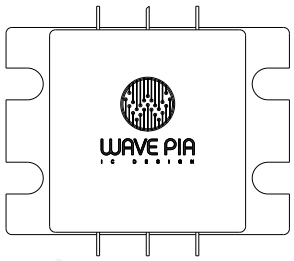
## Matched GaN HEMT

### Product Features

- 50Ω Matched GaN HEMT for 5.03 to 5.09GHz
- 14.5dB Small Signal Gain at 5.06 GHz
- 25W Typical $P_{SAT}$ at 5.06 GHz (CW)
- 26% Efficiency at $P_{SAT}$ at 5.06 GHz (CW)
- 48V Operation

### Applications

- Broadband Amplifiers
- Test Instrumentation
- Radar Application



Package Type: One-PKG

### DC Characteristics[1] (TA=25˚C)

| Parameter | Symbol | MIN | TYP | MAX | Units | Conditions |
|---|---|---|---|---|---|---|
| Gate Threshold Voltage | $V_{GS(th)}$ | | -3.1 | | $V_{DC}$ | VDS = 48V |
| Gate Quiescent Voltage | $V_{GS(Q)}$ | | -2.79 | | $V_{DC}$ | VDS = 48V, ID = 300mA |

### RF Characteristics (TA = 25˚C, F0 = 5.06GHz, VDD = 48V, IDQ = 200mA, unless otherwise noted)

| Parameter | Symbol | MIN | TYP | MAX | Units | Conditions |
|---|---|---|---|---|---|---|
| Saturated Output Power | $P_{SAT}$ | | 26 | | W | CW |
| Pulsed Drain Efficiency[1] | n | | 26 | | % | CW |

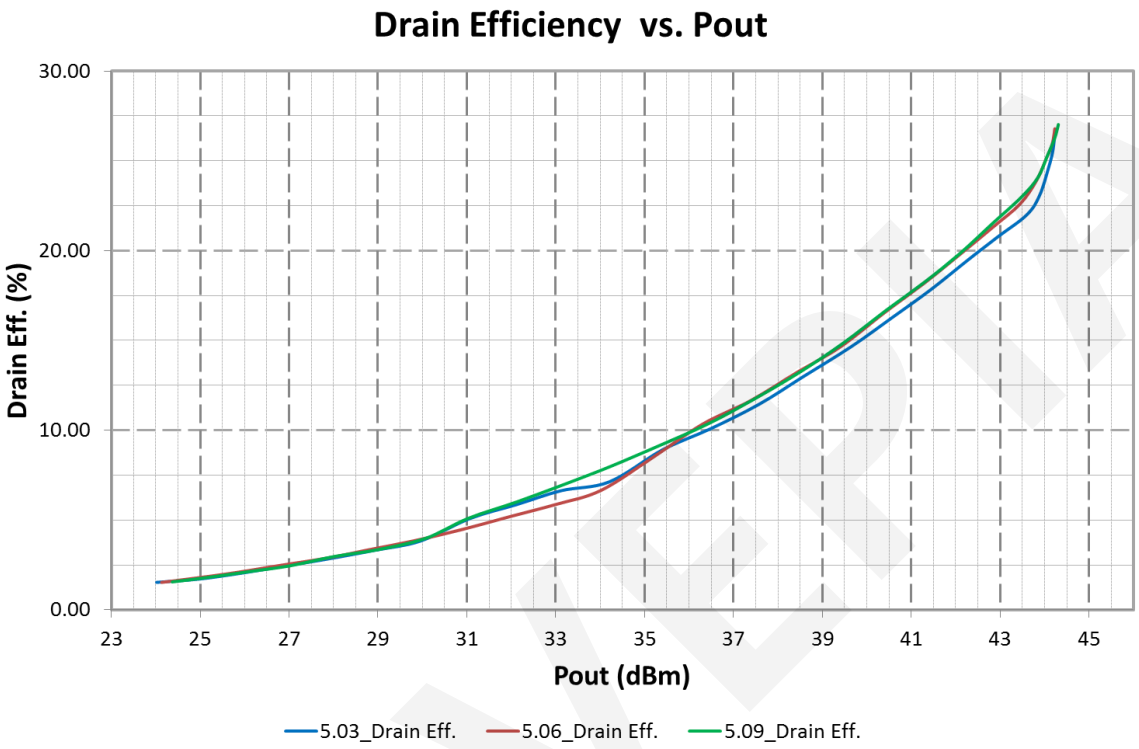
1. Drain Efficiency = $P_{OUT}$ / $P_{DC}$



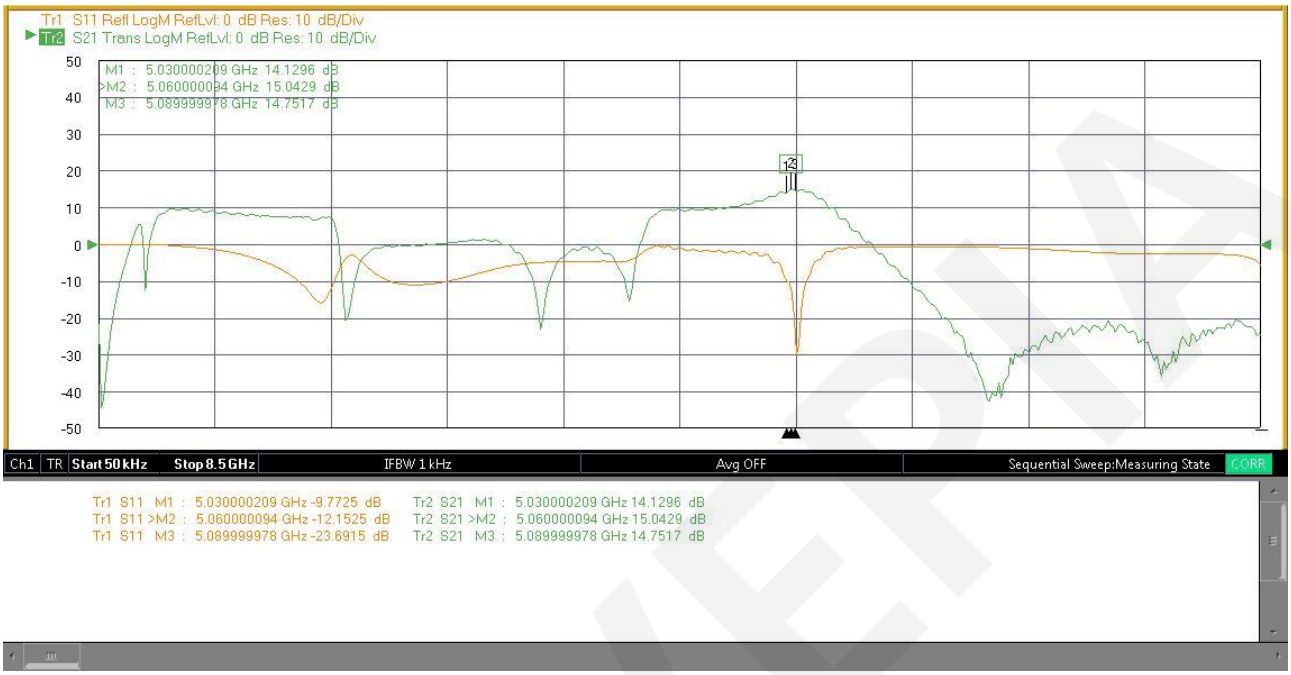


WAVEPIA Co., LTD.
sales@wavepia.com
http://www.wavepia.com

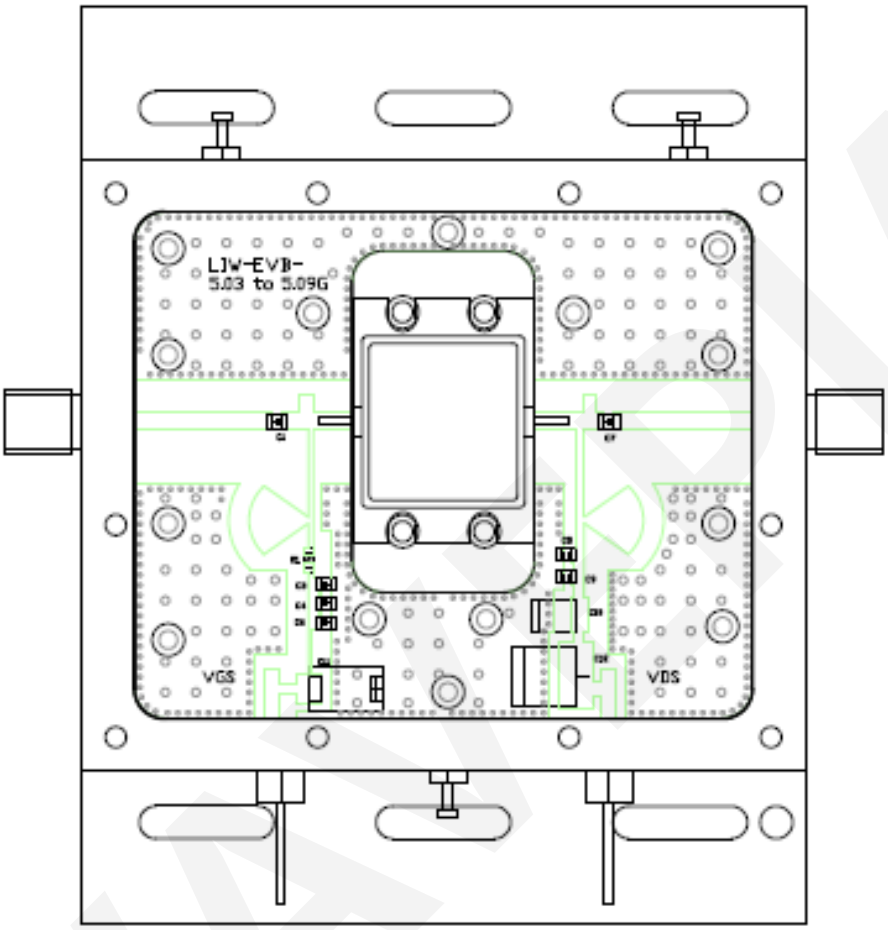
**CW Signal Performance (TA=25℃, Measured in the test board amplifier circuit)**
VDD = 48V, IDQ = 300mA



**Small Signal Performance (TA=25℃, Measured in the test board amplifier circuit)**
VDD = 48V, IDQ = 300mA



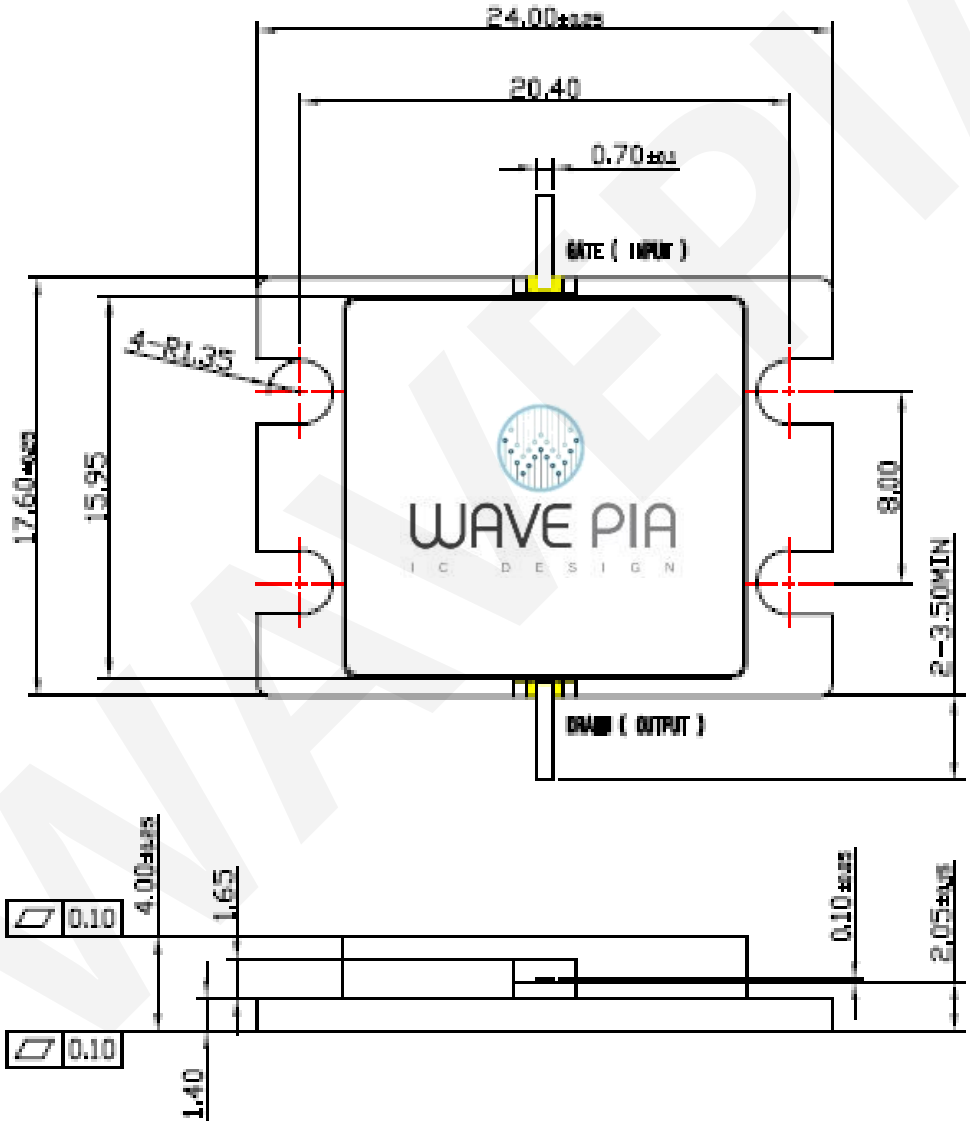
**Evaluation Board**



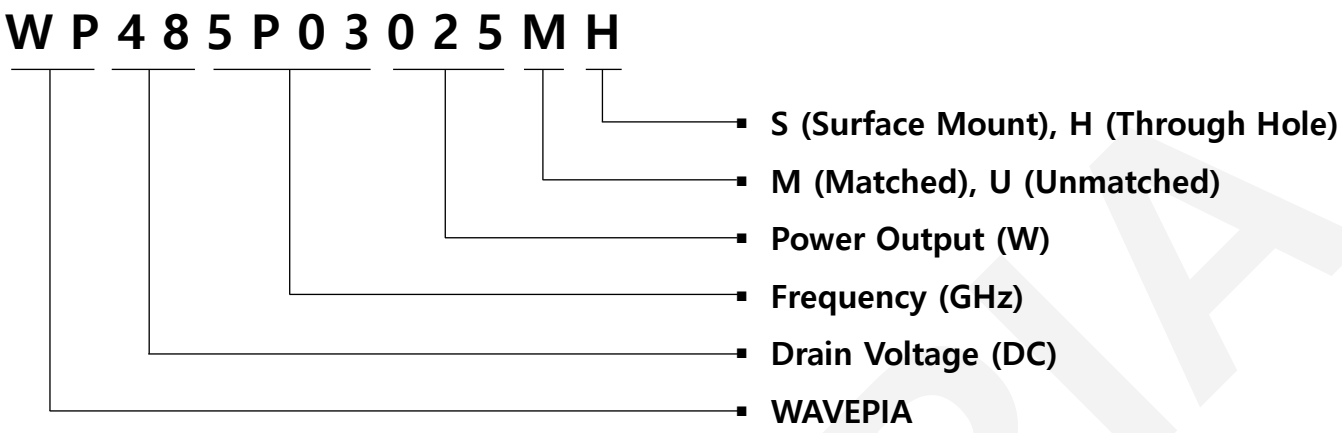

| Reference Number | Value | Items | Package | Manufacturer |
|---|---|---|---|---|
| C1,C7 | 3.0pF | High Q Capacitor | CHA | TEMEX |
| C3,C8 | 5.6pF | High Q Capacitor | CHA | TEMEX |
| C4 | 100pF | Ceramic Capacitor | 2010 | Murata |
| C5 | 100nF | Ceramic Capacitor | 2010 | Murata |
| C11 | 22uF/16V | Tantalum Capacitor | - | - |
| C9 | 100pF | High Q Capacitor | CHA | TEMEX |
| C10 | 10pF | High Q Capacitor | CHA | TEMEX |
| C11 | 470nF | High V Capacitor | 3528 | Johanson Dielectrics |
| C12 | 47uF/100V | High V Tantalum Capacitor | - | - |
| R1 | 50Ω | Chip Resistor | 2010 | Walsin |

**Product Dimension**

- Package Type: One-PKG
- Unit: mm



**Part Number System**




| Parameter | Value | Units |
|---|---|---|
| Drain Voltage | 48 | V |
| Lower Frequency | 5.03 | GHz |
| Upper Frequency | 5.09 | GHz |
| Output Power | 25 | W |
| Transistor Type | Matched | - |
| Package | Through Hole | - |