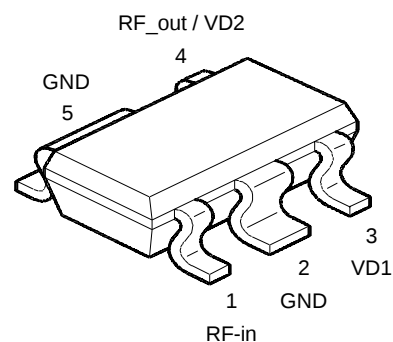


*Tentative Data*

- Power amplifier for DECT application,
- single voltage supply
- Operating voltage range: 2.7 to 6 V
- $P_{out} = 26\text{dBm}$  at  $V_d=3.3\text{V}$
- Overall power added efficiency 44 %

ESD: **E**lectrostatic **d**ischarge sensitive device,  
observe handling precautions!



VPW05980

| Type    | Marking | Ordering code<br>(taped) | Package 1) |
|---------|---------|--------------------------|------------|
| CGY 195 | t.b.d.  | t.b.d.                   | MW 5       |

**Maximum ratings**

| Characteristics                                                                                             | Symbol      | max. Value | Unit |
|-------------------------------------------------------------------------------------------------------------|-------------|------------|------|
| Positive supply voltage                                                                                     | $V_D$       | 8          | V    |
| Supply current                                                                                              | $I_D$       | t.b.d.     | A    |
| Maximum input power                                                                                         | $P_{inmax}$ | t.b.d.     | dBm  |
| Channel temperature                                                                                         | $T_{Ch}$    | 150        | °C   |
| Storage temperature                                                                                         | $T_{stg}$   | -55...+150 | °C   |
| Total power dissipation ( $T_s \leq 81\text{ °C}$ )<br><i>T<sub>s</sub>: Temperature at soldering point</i> | $P_{tot}$   | t.b.d.     | W    |
| Pulse peak power                                                                                            | $P_{Pulse}$ | t.b.d.     | W    |

**Thermal Resistance**

|                         |             |        |     |
|-------------------------|-------------|--------|-----|
| Channel-soldering point | $R_{thChS}$ | t.b.d. | K/W |
|-------------------------|-------------|--------|-----|

1) Plastic body identical to MW-6

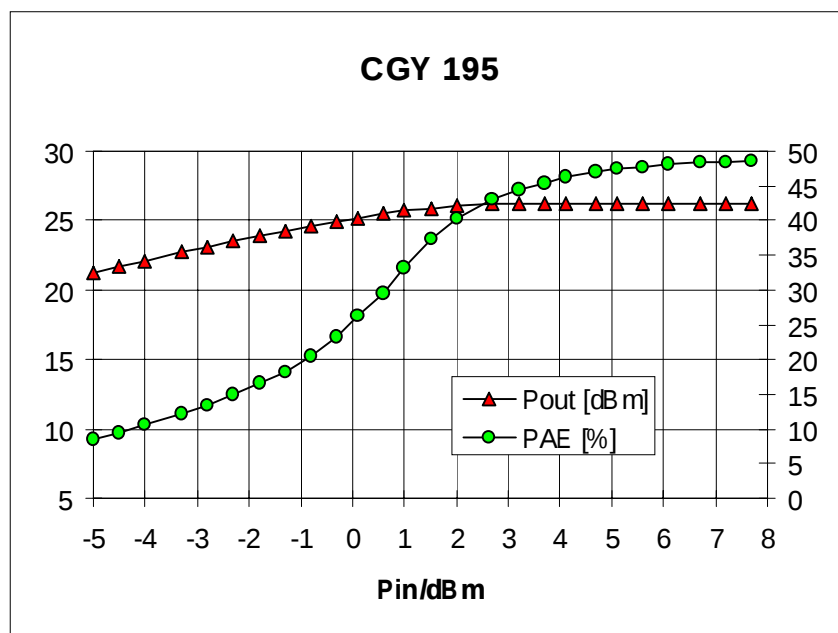
## Electrical characteristics

( $T_A = 25^\circ\text{C}$  ,  $f=1.89\text{ GHz}$ ,  $Z_S=Z_L=50\text{ Ohm}$  , unless otherwise specified)

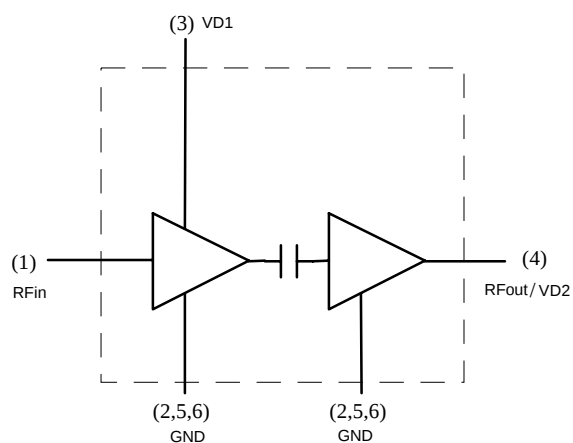
| Characteristics                                                               | Symbol   | min | typ | max | Unit |
|-------------------------------------------------------------------------------|----------|-----|-----|-----|------|
| Supply current<br>$V_D=3.3\text{V}$ ; $P_{in} = +3\text{ dBm}$                | $I_{DD}$ | -   | 270 | -   | mA   |
| Gain<br>$V_D=3.3\text{V}$ ; $P_{in} = -10\text{ dBm}$                         | $G$      | -   | 26  | -   | dB   |
| Output Power<br>$V_D=3.3\text{V}$ ; $P_{in} = 3\text{ dBm}$                   | $P_O$    | -   | 26  | -   | dBm  |
| Output Power<br>$V_D=4.8\text{V}$ ; $P_{in} = 5\text{ dBm}$                   | $P_O$    | -   | 28  | -   | dBm  |
| Overall Power added Efficiency<br>$V_D=3.3\text{V}$ ; $P_{in} = 3\text{ dBm}$ | $PAE$    |     | 42  | -   | %    |

## Output power and power added efficiency

pulsed mode:  $T=577\mu\text{s}$ , duty cycle 12.5%



## Functional Block Diagram



| Pin # |                  | Configuration                                         |
|-------|------------------|-------------------------------------------------------|
| 1     | <b>RFin</b>      | RF input power                                        |
| 2     | <b>GND</b>       | RF and DC ground                                      |
| 3     | <b>VD1</b>       | Pos. drain voltage of the 1st stage                   |
| 4     | <b>RFout/VD2</b> | RF output power / Pos. drain voltage of the 2nd stage |
| 5     | <b>GND</b>       | RF and DC ground                                      |
| 6     | <b>GND</b>       | RF and DC ground                                      |