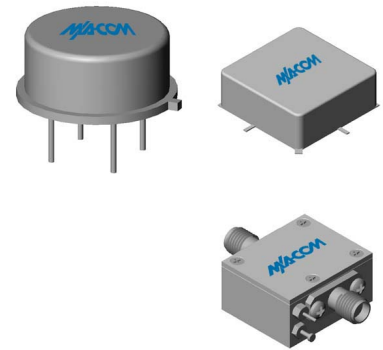




# PA2010/SMPA2010

**200 TO 2000 MHz  
TO-8 CASCADABLE AMPLIFIER**

- HIGH POWER OUTPUT: +25.5 dBm (TYP.)
- HIGH THIRD ORDER IP3: +33 dBm (TYP.)
- MODERATE NOISE FIGURE: 5.0 dB (TYP.)
- LOW VSWR: 1.5:1 (TYP.)



## Specifications (Rev. Date: 2/02)\*

| Characteristics                  | Typical       | Guaranteed    |               |
|----------------------------------|---------------|---------------|---------------|
|                                  |               | 0° to 50°C    | -54° to +85°C |
| Frequency                        | 0.2-2.4 GHz   | 0.2-2.0 GHz   | 0.2-2.0 GHz   |
| Small Signal Gain (min.)         | 10.0 dB       | 9.0 dB        | 8.5 dB        |
| Gain Flatness (max.)             | ±0.3 dB       | ±0.7 dB       | ±1.0 dB       |
| Reverse Isolation                | 20 dB         |               |               |
| Noise Figure (max.)              | 5.0 dB        | 6.5 dB        | 7.0 dB        |
| Power Output @ 1 dB comp. (min.) | 25.5 dBm      | 23.5 dBm      | 23.0 dBm      |
| IP3                              | +33 dBm       |               |               |
| IP2                              | +50 dBm       |               |               |
| Second Order Harmonic IP         | +55 dBm       |               |               |
| VSWR Input / Output (max.)       | 1.8:1 / 1.5:1 | 1.9:1 / 1.7:1 | 2.0:1 / 1.8:1 |
| DC Current @ 15 Volts (max.)     | 179 mA        | 187 mA        | 189 mA        |

\* CPA2010 is a standard PA2010 installed in an SMA connectorized housing and is guaranteed over 0°C to 50°C with the PA2010's specifications limits of -54°C to +85°C. Measured in a 50-ohm system at +15 Vdc Nominal. Subject to change without notice.

## Absolute Maximum Ratings

|                                                |                |
|------------------------------------------------|----------------|
| Storage Temperature                            | -62° to +150°C |
| Max. Case Temperature                          | 85°C           |
| Max. DC Voltage                                | +17 Volts      |
| Max. Continuous RF Input Power                 | +17 dBm        |
| Max. Short Term RF Input Power (1 minute max.) | 100 mW         |
| Max. Peak Power (3 μsec max.)                  | 0.5 W          |
| "S" Series Burn-in Temperature (Case)          | 85°C           |

## Thermal Data: $V_{CC} = 15$ Vdc

|                                               |        |
|-----------------------------------------------|--------|
| Thermal Resistance $\theta_{JC}$              | 50°C/W |
| Transistor Power Dissipation $P_d$            | 1.25 W |
| Junction Temperature Rise Above Case $T_{JC}$ | 63°C   |

## Outline Drawings

|         |        |               |                   |
|---------|--------|---------------|-------------------|
| Package | TO-8   | Surface Mount | SMA Connectorized |
| Figure  | BG     | AA            | CE                |
| Model   | PA2010 | SMPA2010      | CPA2010           |

## Typical Performance @ 25°C

