

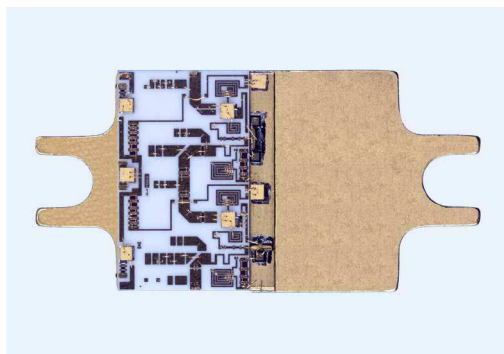


# MwT-0206L-1G1/0206U-1G1

2.0-6.0 GHz Feedback Amplifier Module

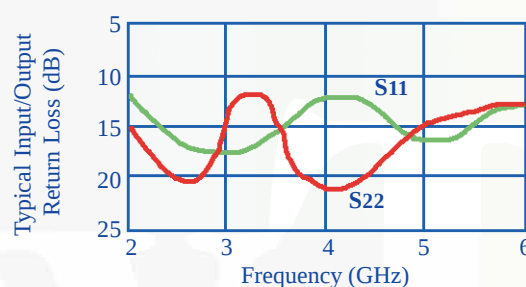
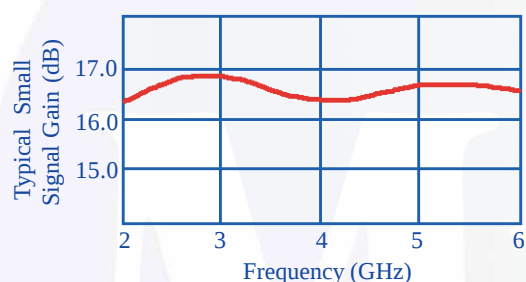
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## TYPICAL SPECIFICATIONS AT 25 °C

- 16.0 dB SMALL SIGNAL GAIN
- 30.0 dB REVERSE ISOLATION
- 17.0 dBm P-1dB
- 4.5 dB NOISE FIGURE
- USES TWO MwT-1 GaAs FET DEVICES



## ELECTRICAL SPECIFICATIONS

(Ta=25°C)

| SYMBOL              | PARAMETERS                        | UNITS | MIN  | TYP    | MAX   |
|---------------------|-----------------------------------|-------|------|--------|-------|
| FREQ                | Frequency Range                   | GHz   | 2.0  |        | 6.0   |
| SSG                 | Small Signal Gain                 | dB    | 15.0 | 16.0   |       |
| $\Delta G/\Delta F$ | SSG Flatness                      | +/-dB |      | 0.6    | 0.6   |
| $\Delta G/\Delta T$ | SSG Variation over Temperature    | dB/°C |      | -0.015 |       |
| P-1dB               | Output Power at 1dB Compression   | dBm   | 16.0 | 17.0   |       |
| PSAT                | Output Power at 6 dB Compression  | dBm   |      | 18.5   |       |
| $\Delta P/\Delta T$ | P-1dB Variation over Temperature  | dB/°C |      | -0.008 |       |
| IP3                 | Third Order Intercept Point       | dBm   |      | 27.0   |       |
| 2nd HAR             | 2nd Harmonic at Pout=17.0 dBm     | dBc   |      | -21.0  |       |
| 2nd HAR             | 2nd Harmonic at Pout=18.5 dBm     | dBc   |      | -16.0  |       |
| NF                  | Noise Figure                      | dB    |      | 4.5    | 5.0   |
| VSWR IN             | Input VSWR                        | ----  |      | 1.8:1  | 2.0:1 |
| VSWR OUT            | Output VSWR                       | ----  |      | 1.8:1  | 2.0:1 |
| ISO                 | Reverse Isolation                 | dB    |      | -30.0  |       |
| VDD                 | Power Supply Voltage              | +V    | 7.9  | 8.0    | 8.1   |
| IDD                 | Small Signal Module Current       | mA    |      | 150.0  | 180.0 |
| RTH                 | Thermal Resistance Including FET* | °C/W  |      | 96.0   |       |

\* When calculating T<sub>ch</sub>, use FET V<sub>ds</sub> = 5.0 volts and FET I<sub>ds</sub> = 75mA

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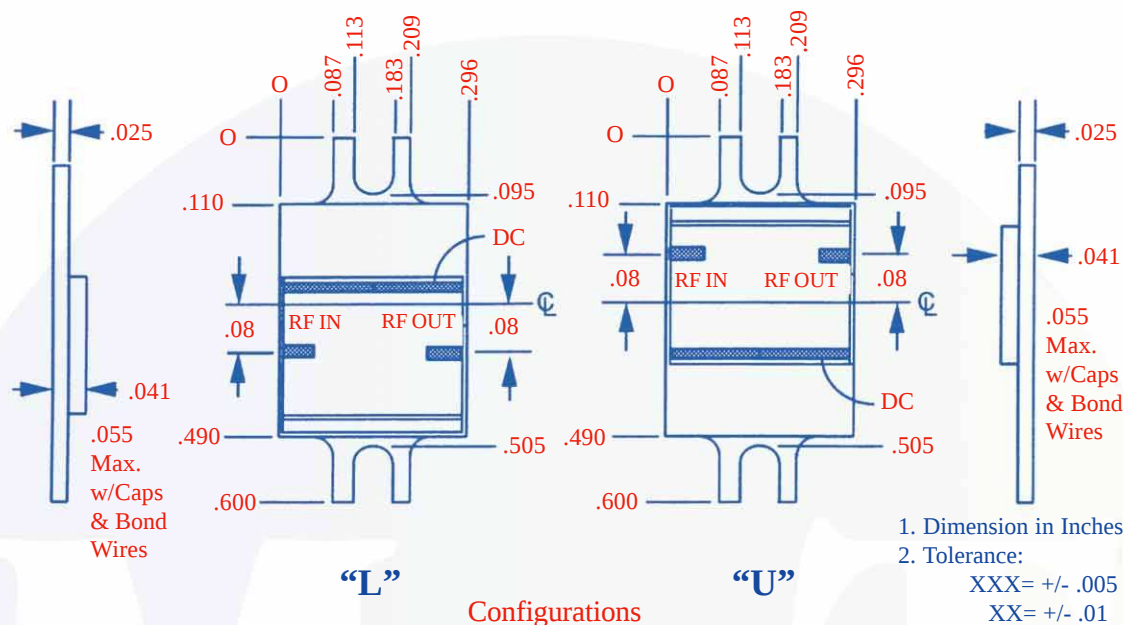


# MWT-0206L-1G1/0206U-1G1

2.0-6.0 GHz Feedback Amplifier Module

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## Construction:

The 15 mil alumina substrates and 10 mil Cu FET ridge are brazed onto the 25 mil carrier using AuGe preform. The GaAs FETs are attached to the Cu ridge using AuSn preform. All capacitors are attached using AuSn preforms. The flanges are designed to accommodate 0-80 UNF-2A socket or Fillister head screws on .500 center-to-center hole spacing. The modules are mechanically and electrically designed to be cascaded.

## Notes:

1. Custom module specifications and/or custom module mechanical configurations are available.
2. Operating Temperature Range is -55 degrees Celsius to +105 degrees Celsius.
3. All modules are serialized and shipped with data measured at 25 degrees Celsius. Data includes swept small signal gain, swept input and output return loss. Noise figure and P-1dB are measured in 1 GHz increments. Special module testing is available.
4. Test Fixtures are available.
5. Microwave Technology reserves the right to ship modules with performance above the typical specifications.

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