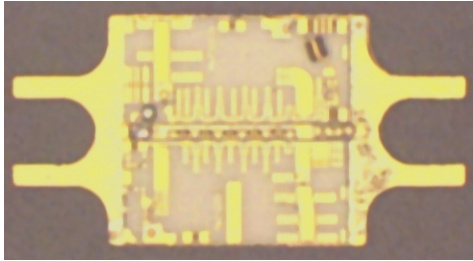




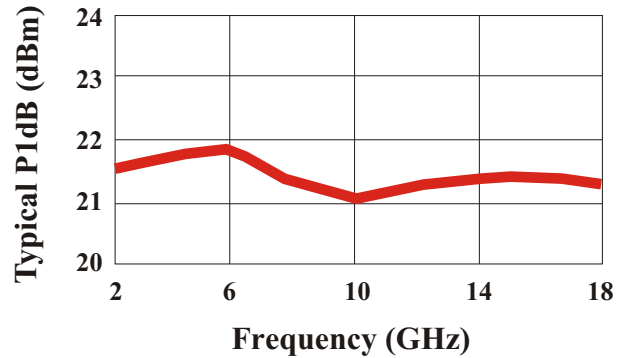
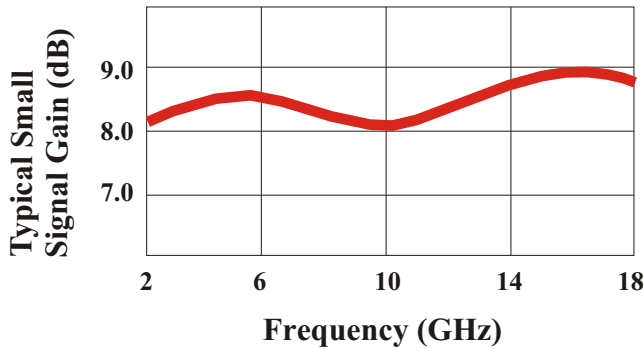
# Distributed Amplifier Module 2.0 - 18.0 Ghz



## Features

- 21 dBm P1dB
- 8.0 dB Small Signal Gain
- 10.0 dB Input/Output Return Loss
- Uses four MwT-7 FET devices

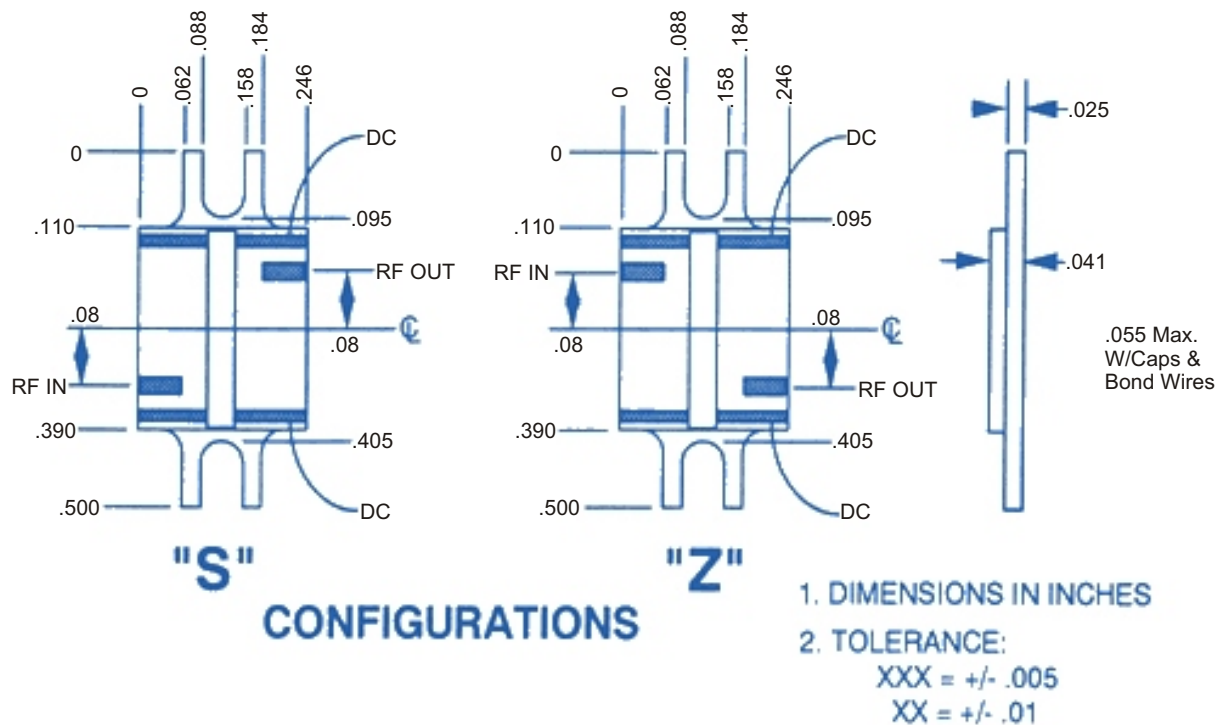
This amplifier module is an ideal building block for broadband(2-18 GHz), medium-power (+21 dBm) microwave assemblies and amplifiers. The miniature drop-in design with low VSWR characteristics makes it convenient to integrate mechanically and easy to cascade electrically. This module requires only a single DC voltage.



## Electrical Specifications (at Ta=25°C)

SYMBOL	PARAMETERS	UNITS	MIN	TYP	MAX
FREQ	Frequency Range	GHz	2.0		18.0
SSG	Small Signal Gain	dB	7.0	8.0	
$\Delta G/\Delta F$	SSG Flatness	+/-dB		0.6	1.0
$\Delta G/\Delta T$	SSG Variation over Temperature	dB/°C		-0.012	
P1dB	Output Power at 1dB Compression	dBm	20.0	21.0	
Psat	Output Power at 6dB Compression	dBm		23.0	
$\Delta P/\Delta T$	P_1dB Variation over Temperature	dB/°C		-0.008	
IP3	Third Order Intercept Point	dBm		31.0	
NF	Noise Figure	dB		6.2	
VSWR, IN	Input VSWR	-----		2.0:1	2.2:1
VSWR, OUT	Output VSWR	-----		2.0:1	2.2:1
ISO	Reverse Isolation	dB		-20.0	
VDD	Power Supply Voltage	+V	7.9	8.0	8.1
IDD	Small Signal Module Current	mA		170	220
Rth*	Thermal Resistance Including FET	°C/W		196	

\*When calculating T<sub>ch</sub>, use FET V<sub>ds</sub>=5.0volts and I<sub>ds</sub>=40mA



## Construction

The 15 mil alumina substrates and 10 mil copper 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 0.400" 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. P1dB 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.