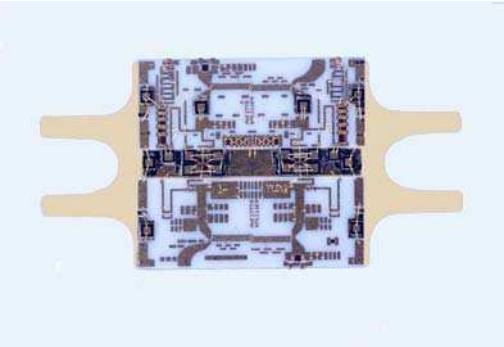
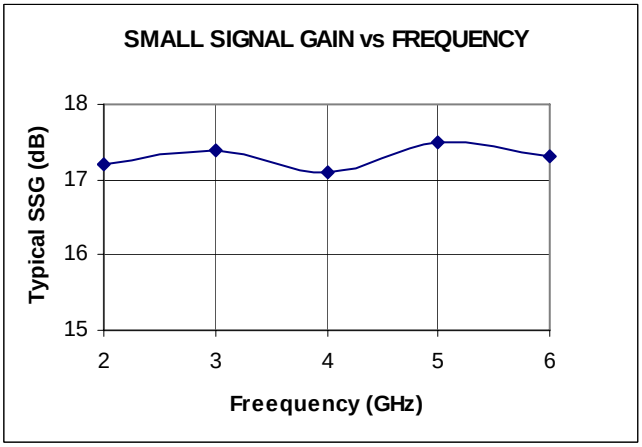
MwT-0206S-A9G1/0206Z-A9G1

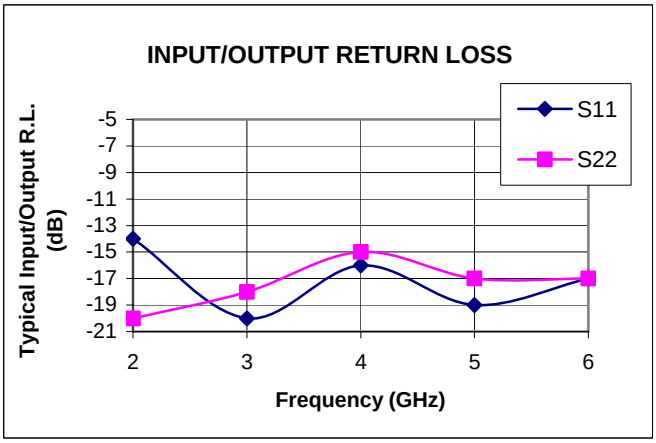
2.0 – 6.0 GHz Balanced Amplifier Module
Data Sheet
June 2006

Features:

- **14.0 dBm P1dB**
- **17.0 dB Small Signal Gain**
- **14.0 dB Input/Output Return Loss**
- **50 mA @ +8V**
- **1.5 dB Noise Figure**







Electrical Specifications:

- ***@ 25℃, Vdd = 7.0 to 8.0 V, Zo = 50 ohms***

SYMBOL	PARAMETERS	Min	Typical	Max	Unit
FREQ	Frequency Range	2.0		6.0	GHz
SSG	Small Signal Gain	16.0	17.0		dB
ΔG/ΔF	SSG Flatness		0.4	0.6	±dB
ΔG/ΔT	SSG Variation over Temperature		-.012		±dB
P1 dB	Pout at 1 dB Comp Point	13.0	14.0		dBm
ΔP/ΔT	P1dB Variation over Temperature		-.008		dB/℃
2nd HAR	2nd Harmonic at Pout=15.0 dBm		-21.0		dBc
2nd HAR	2nd Harmonic at Pout=16.0 dBm		-16.0		dBc
NF	Noise Figure		1.5	1.8	dB
VSWR IN	VSWR Input		1.5:1	1.8:1	----
VSWR OUT	VSWR Output		1.5:1	1.8:1	----
ISO	Reverse Isolation		-20.0		dB
Vdd	Power Supply Voltage	7.9	8.0	8.1	+V
Idd	Small Signal Module Current		50	60	mA
Rth	Thermal Resistance Including FET*		196.0		℃/W

** When calculating Tch, use FET Vds = 5.0 volts and FET Ids = 30mA*

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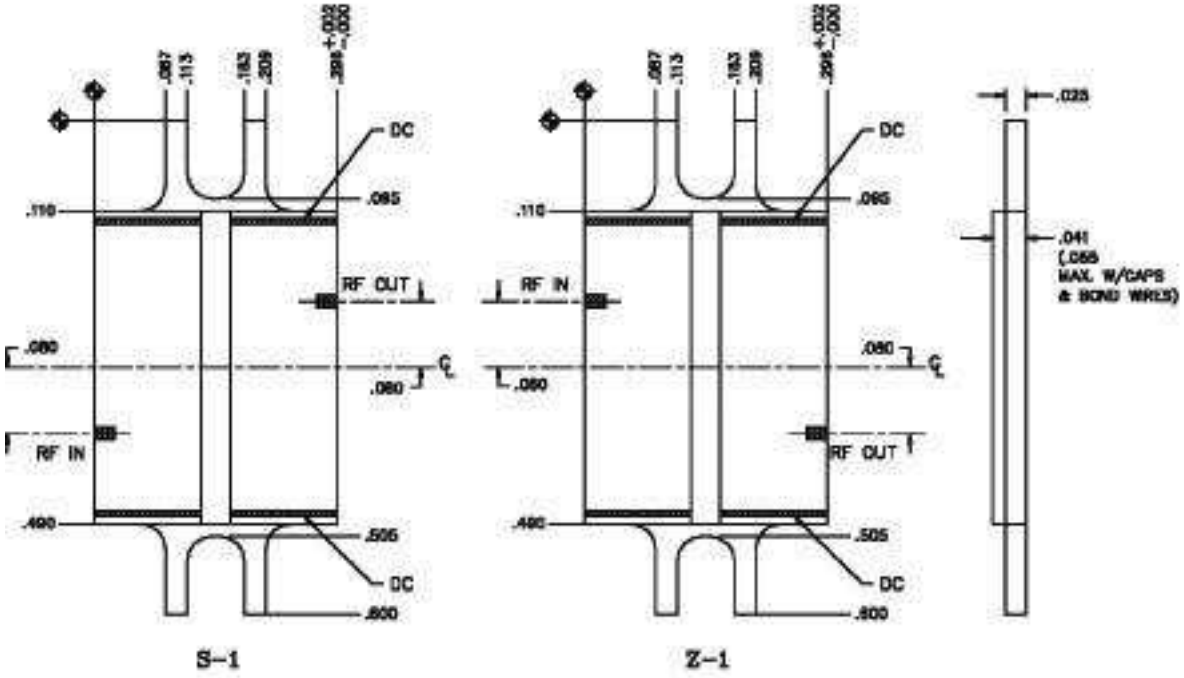
Package Outline:



Construction:

The 15 mil alumina substrates and 10 mil copper FET ridge are brazed onto the 25 mil carrier using AuGe perform. The GaAs FETs are attached to the Cu ridge using AuSn perform. All capacitors are attached using AuSn performs. The flanges are designed to accommodate 0-80 UNF-2A socket or Fillister head screws on .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. Noise figure and 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 specification.

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