MYMMIC

low Noise Amplier

GaAs Product Catalog

GaAs low noise amplifier

Model	Freq (GHz)	Gain (dB)	Gain flatness (dB)	N/F (Typ.dB)	N/F (Max.dB)	P-1dB (dBm)	Input/output return loss (dB)	Power Supply (V/mA)	Pkg
MYM2000A	DC-20	18	±0.75	2.0	3.5	17	22/20	8/80	DIE
MYM2101D	1-12	19	±1.0	1.6	2.2	16.5	20/15	5/65	DIE
MYM1801B	1-18	16	±1.0	1.6	2.0	9	15/15	5/50	DIE
MYM0804B	4-8	27	±0.25	0.7	0.8	12	20/20	5/30	DIE
MYM1806-1.5	6-18	21.5	±0.3	1.5	1.7	12	15/12	5/30	DIE
MYM1806C	6-18	24	±1.5	1.5	1.55	14.5	12/12	5/35	DIE
MYM1806E	6-18	21	±0.5	1.5	1.7	17	16/15	5/85	DIE
MYM2006-2.0	6-20	19	±1.0	2.0	2.6	15	12/12	5/60	DIE
MYM1208-0.9	8-12	21	±0.2	0.9	0.9	8	15/25	5/30	DIE
MYM2318-1.8	18-23	21	±0.75	1.8	1.8	6.5	13/19	5/40	DIE
MYM3218-2.0	18-32	14	±0.5	2.0	2.4	6	10/0	5/30	DIE
MYM4018C	18-40	8	±1.25	3.0	3.5	5	18/30	5/25	DIE
MYM4018D	18-40	9.5	±1.0	3.0	3.2	12	20/25	5/40	DIE
MYM4018E	18-40	15	±2.0	3.0	3.0	5	18/25	5/45	DIE

* Most of the single-supply LNAs in the core valley have gain and power debug ports. Please consult the manufacturer if necessary.

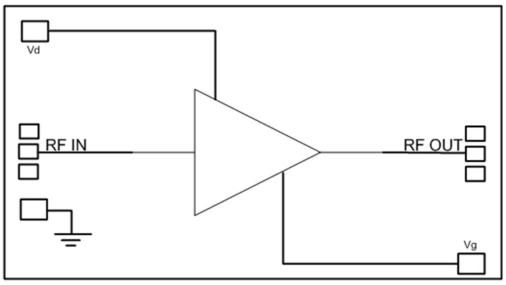
MyMMIC

GaAs MMIC Low Noise Amplifier Die, DC-20GHz

Feature:

- Frequency range: DC-20GHz
- Small signal gain: 18dB
- Noise figure: 2.0dB typ./3.5dB max.
- P-1dB: 16dBm
- Power supply: +8V/80mA
- 50Ohm input/output
- 100% on-Die test
- Die size: 3.3 x 1.3 x 0.1mm

Functional Diagram:



General Description:

MYM2000A is a broadband low noise distributed amplifier Die with a frequency range covering DC~20GHz, a small signal gain of 18dB, a P-1dB output power of 16dBm, and an in-band typical noise figure of 2.0dB. The MYM2000A uses a +8V, +0.65V dual power supply. There are no power-up timing requirements for this product.

Absolute Max. Ratings

Max drain voltage	+12V
Max input power	+18dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

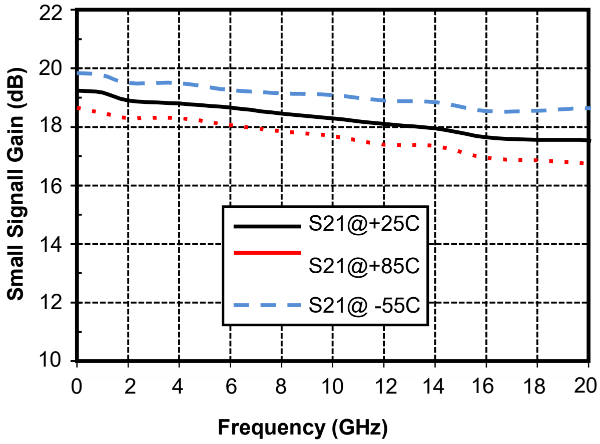
[1] Exceeding any of the above Max limits may cause permanent damage.

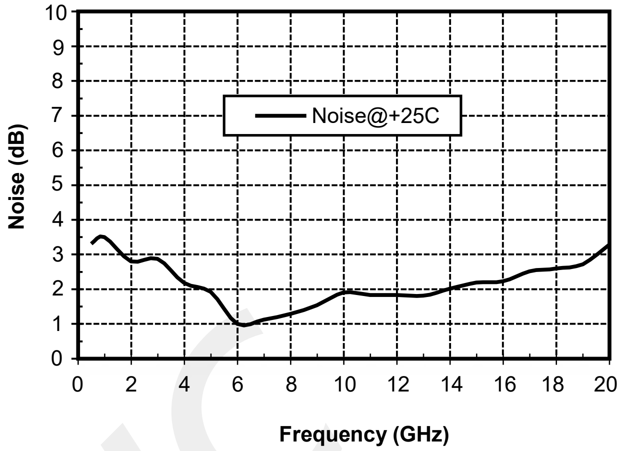
Electrical Specifications (TA= +25°C, Vd=+8V)

Parameter	Min	Typ	Max	Unit
Frequency Range		DC-20		GHz
Small signal gain	17.5	18	19	dB
Gain flatness		±0.75		dB
Noise Figure	-	2.0	3.5	dB
P-1dB	15.5	16	17	dBm
Input return loss		22		dB
Output return loss		20		dB
Quiescent Current		80		mA

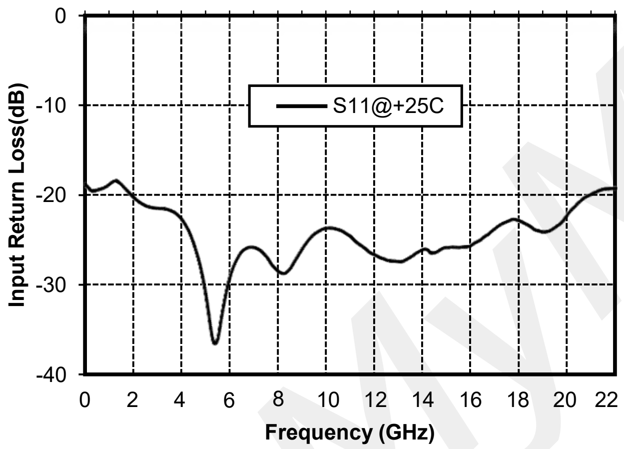
GaAs MMIC Low Noise Amplifier Die, DC-20GHz

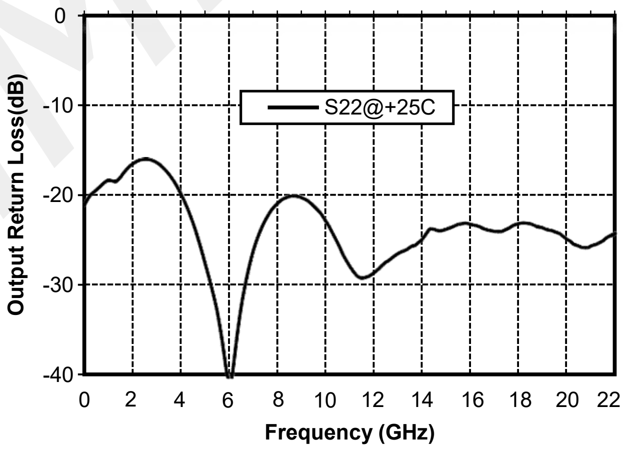
Gain vs. Temperature Noise Figure vs. Frequency



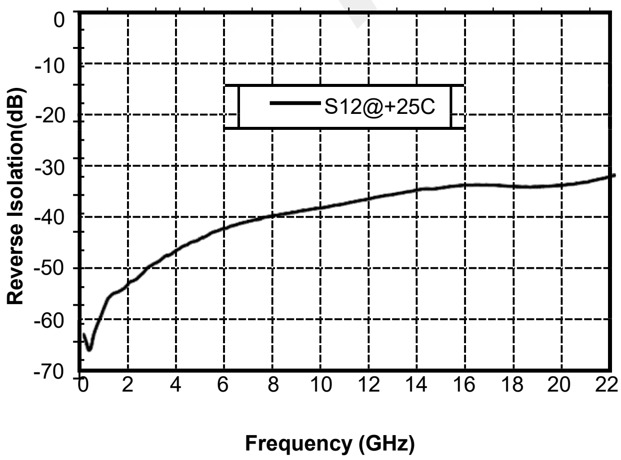


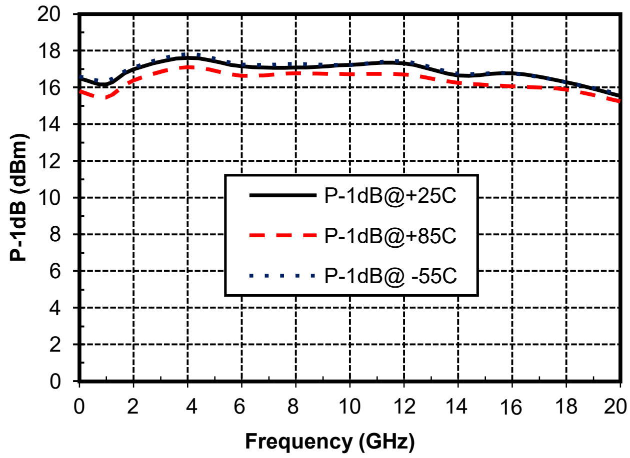
Input Return Loss vs. Frequency Output Return Loss vs. Frequency





Reverse Isolation vs. Frequency P-1dB vs. Temperature





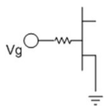
MYMMIC

GaAs MMIC Low Noise Amplifier Die, DC-20GHz

Outline drawing

[2] The figures are all micrometers

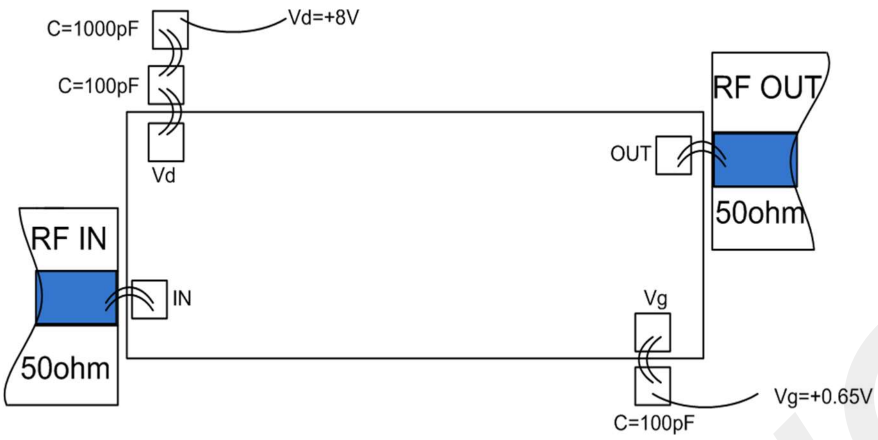
Pad Descriptions

Pad number	Function	Description	Interface schematic
1	RF IN	RF signal input, need to block direct capacitance	
2	RF OUT	RF signal output, need to block direct capacitance	
3	VD	Amplifier drain bias requires an external 100pF bypass capacitor	
4	VG	Amplifier gate bias requires an external 100pF bypass capacitor	
Die bottom	GND	The bottom of the Die needs good grounding with RF and DC	

MYMMIC

GaAs MMIC Low Noise Amplifier Die, DC-20GHz

Recommended assembly drawing



Notes

- The Die needs to be stored in a container with antistatic function and stored in a nitrogen atmosphere.
- It is prohibited to attempt to wet the surface of the bare Die by wet chemistry.
- Please strictly comply with ESD protection requirements to avoid electrostatic damage to the bare Die.
- Regular operation: Use a precision pointed tweezers to pick up the bare Die. Avoid tools or fingers touching the surface of the Die during operation.
- Rack Mounting Recommendations: Bare Die mounting can use AuSn solder eutectic sintering or conductive adhesive bonding processes. The mounting surface must be clean and flat.
- Sintering process: It is recommended to use an AuSn solder sheet with a gold/tin ratio of 80/20. The working surface temperature reached 255°C and the tool (vacuum chuck) temperature reached 265°C. When the high-temperature gas mixture (nitrogen-hydrogen gas ratio is 90/10) is blown into the Die, the temperature at the top of the tool is increased to 290°C. Do not leave the Die at temperatures above 320°C for more than 20 seconds. Do not rub for more than 3 seconds.
- Adhesion process: The amount of conductive glue to be dispensed should be as small as possible. After the Die is placed in the installation position, the conductive adhesive can be seen around it. For the curing conditions, please follow the information provided by the manufacturer of the conductive adhesive.
- Bonding recommendations: Φ0.025mm (1mil) gold wire is used for both spherical and wedge bonding. Thermosonic bonding temperature 150°C. Spherical bonding file pressure 40~50gf, wedge bond file pressure 18~22gf. Use as little ultrasonic energy as possible. Bonding starts at the pad on the Die and ends at the package (or substrate).

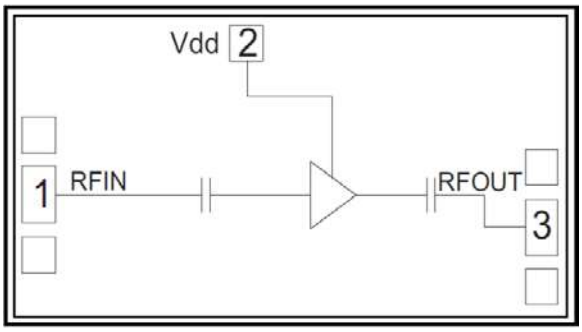
MYMMIC

GaAs MMIC Low Noise Amplifier Die, 1-12GHz

Feature:

- Frequency range: 1-12GHz
- Small signal gain: 19dB
- Noise figure: 1.6dB typ. / 2.2dB max.
- P-1dB: 16.5dBm
- Power supply: +5V/65mA
- 50Ohm input/output
- 100% on-Die test
- Die size: 2.1 x 1.04 x 0.09 mm

Functional Diagram:



General Description:

The MYM2101D is a broadband low noise amplifier Die with a frequency range of 1 GHz to 12 GHz, a small signal gain of 19 dB, and an in-band noise figure of 1.6 dB. The MYM2101D operates from a single +5V supply.

Absolute Max. Ratings

Max drain voltage	+7V
Max input power	+10dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

[1] Exceeding any of the above Max limits may cause permanent damage.

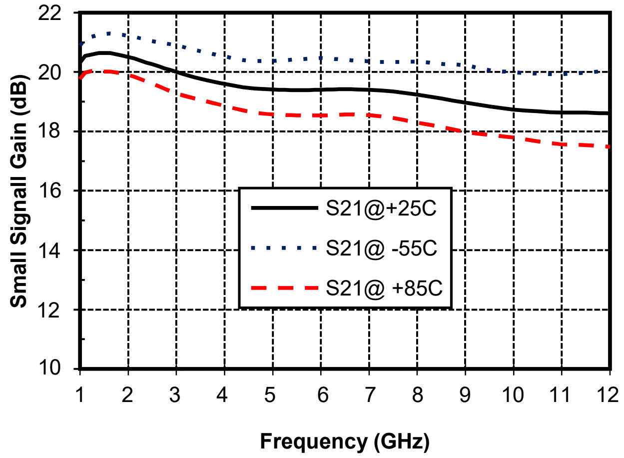
Electrical Specifications (TA= +25°C, Vd=+5V)

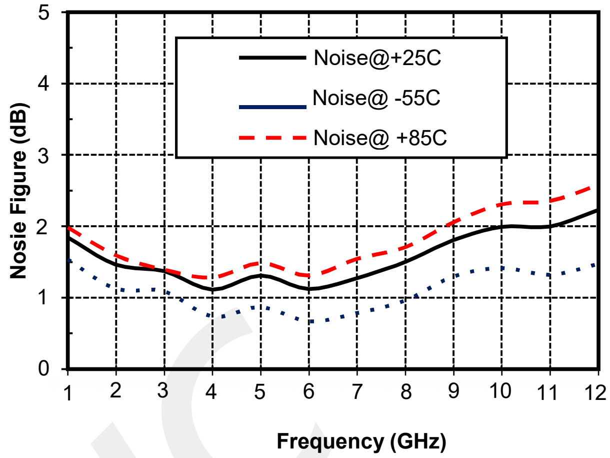
Parameter	Min	Typ	Max	Unit
Frequency Range		1-12		GHz
Small signal gain	18.5	19	20.5	dB
Gain flatness		±1.0		dB
Noise Figure	-	1.6	2.2	dB
P-1dB	15.5	16.5	18.5	dBm
Psat	17	18	19	dBm
Input return loss	15	20	-	dB
Output return loss	10	15	-	dB
Quiescent Current		65		mA

MYMMIC

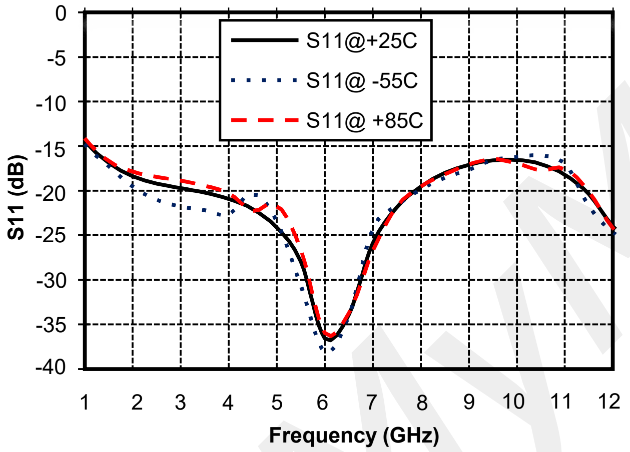
GaAs MMIC Low Noise Amplifier Die, 1-12GHz

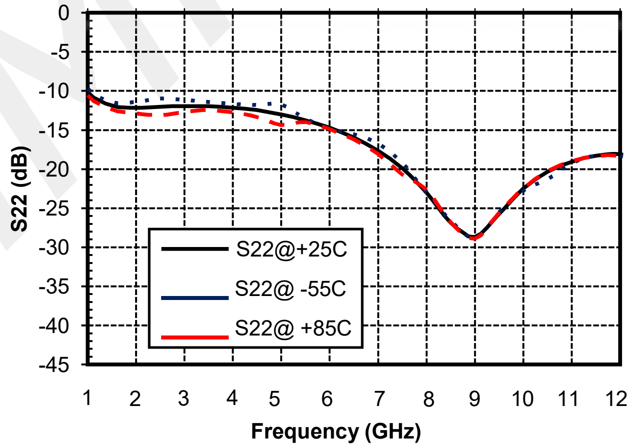
Gain vs. Frequency Noise Figure vs. Frequency



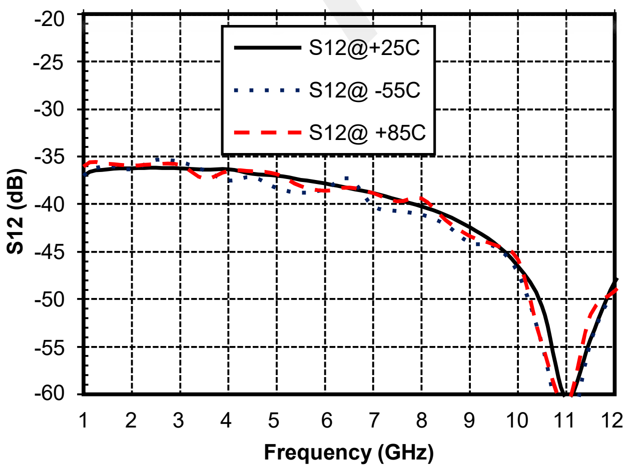


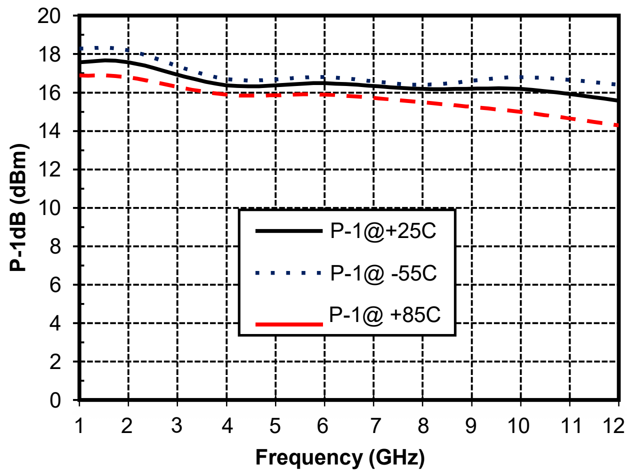
Input Return Loss vs. Frequency Output Return Loss vs. Frequency





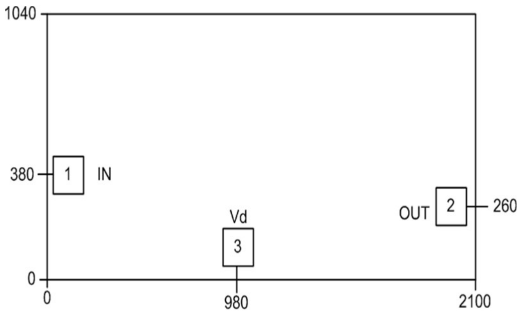
Reverse Isolation vs. Frequency P-1dB vs. Frequency





GaAs MMIC Low Noise Amplifier Die, 1-12GHz

Outline drawing

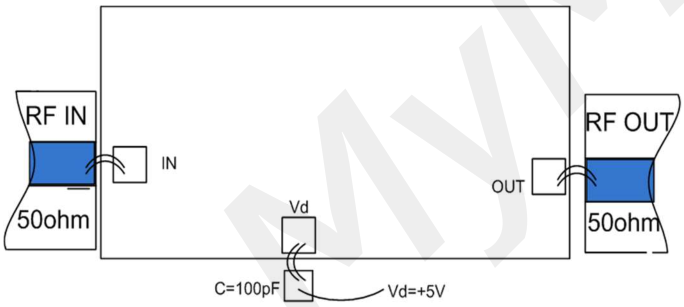


[2] The figures are all micrometers

Pad Descriptions

Pad number	Function	Description
1	RFIN	RF signal input, no need for DC blocking capacitors
2	RFOUT	RF signal output without DC blocking capacitors
3	VDD	Amplifier drain bias requires an external 100pF bypass capacitor
Die bottom	GND	The bottom of the Die needs good grounding with RF and DC

Recommended asse



MYMMIC

Notes

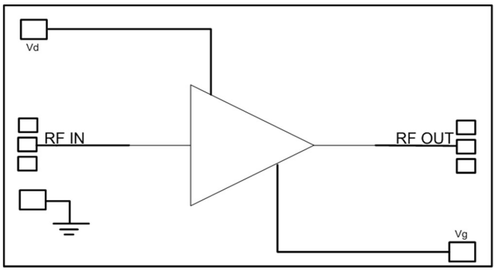
- Regular operation: Use a precision pointed tweezers to pick up the bare Die. Avoid tools or fingers touching the surface of the Die during operation.
- Rack Mounting Recommendations: Bare Die mounting can use AuSn solder eutectic sintering or conductive adhesive bonding processes. The mounting surface must be clean and flat.
- Sintering process: It is recommended to use an AuSn solder sheet with a gold/tin ratio of 80/20. The working surface temperature reached 255°C and the tool (vacuum chuck) temperature reached 265°C. When the high-temperature gas mixture (nitrogen-hydrogen gas ratio is 90/10) is blown into the Die, the temperature at the top of the tool is increased to 290°C. Do not leave the Die at temperatures above 320°C for more than 20 seconds. Do not rub for more than 3 seconds.
- Adhesion process: The amount of conductive glue to be dispensed should be as small as possible. After the Die is placed in the installation position, the conductive adhesive can be seen around it. For the curing conditions, please follow the information provided by the manufacturer of the conductive adhesive.
- Bonding recommendations: Φ0.025mm (1mil) gold wire is used for both spherical and wedge bonding. Thermosonic bonding temperature 150°C. Ball bond guillotine pressure 40~50gf, wedge bond guillotine pressure 18~22gf. Use as little ultrasonic energy as possible. Bonding starts at the Die The pad on the end of the package (or substrate).

GaAs MMIC Low Noise Amplifier Die, 1-18GHz

Feature:

- Frequency range: 1-18GHz
- Small signal gain: 16.5dB
- Noise figure: 1.5dB typ. / 2.2dB max.
- P-1dB: 10dBm
- Power supply: +5V/60mA
- 50Ohm input/output
- 100% on-Die test
- Die size: 2.1 x 1.85 x 0.09 mm

Functional Diagram:



General Description:

MYM1801B is a wideband low noise amplifier Die with a frequency range of 1GHz~18GHz, small signal gain of 16.5dB, and in-band noise figure.1.5dB. The MYM1801B operates from a single +5V supply.

Absolute Max. Ratings

Max drain voltage	+7V
Max input power	+10dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

[1] Exceeding any of the above Max limits may cause permanent damage.

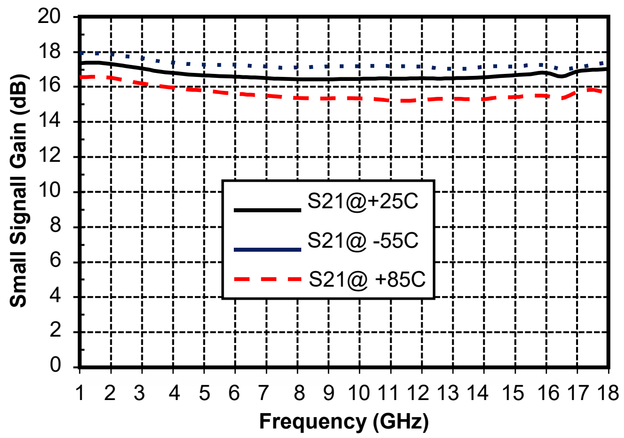
Electrical Specifications (TA= +25°C, Vd=+5V)

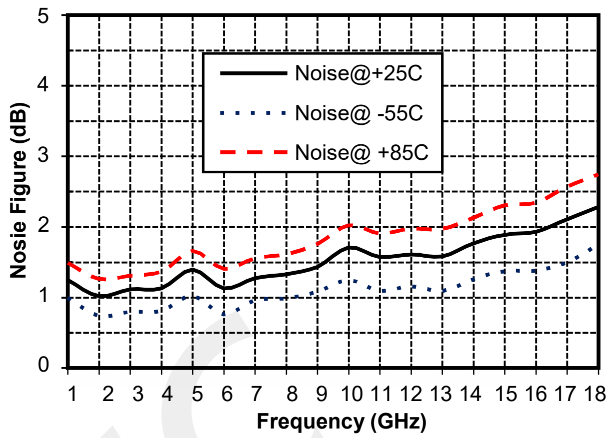
Parameter	Min	Typ	Max	Unit
Frequency Range		1-18		GHz
Small signal gain	16	16.5	17.5	dB
Gain flatness		±0.75		dB
Noise Figure	-	1.5	2.2	dB
P-1dB	9.5	10	11.5	dBm
Psat	11	12	13	dBm
Input return loss	13	20	-	dB
Output return loss	17	19	-	dB
Quiescent Current		60		mA

MYMMIC

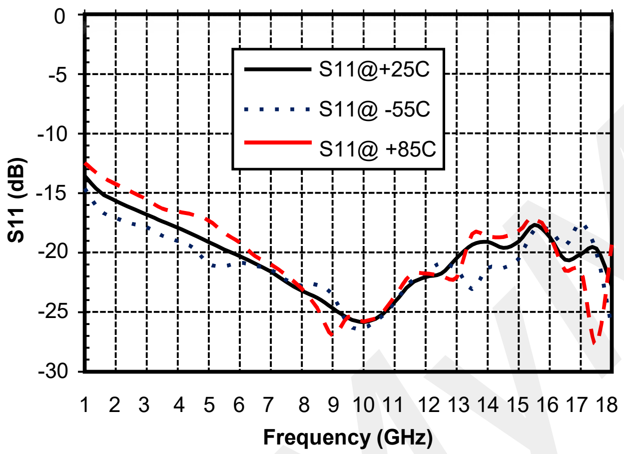
GaAs MMIC Low Noise Amplifier Die, 1-18GHz

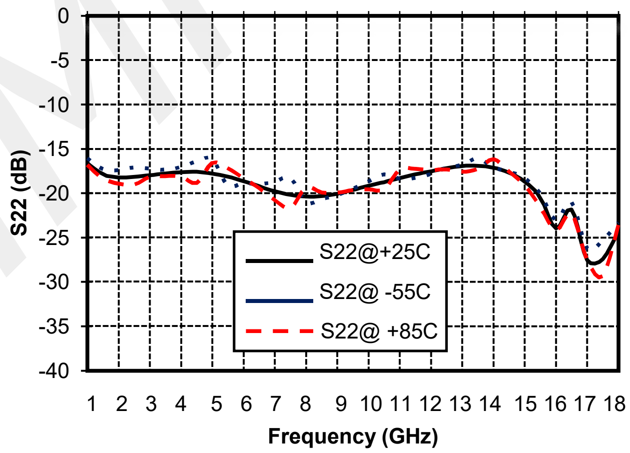
Gain vs. Temperature Noise Figure vs. Temperature



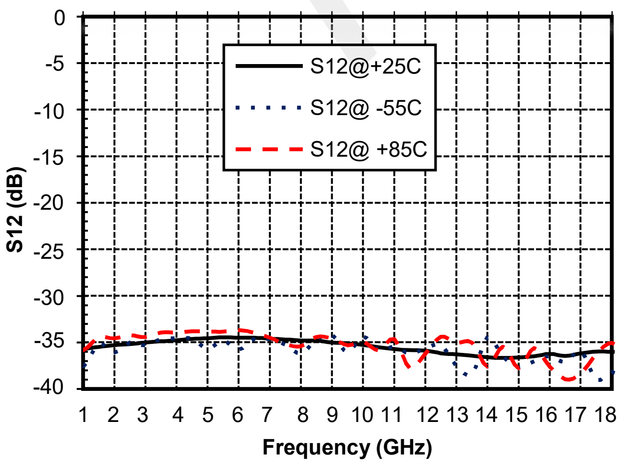


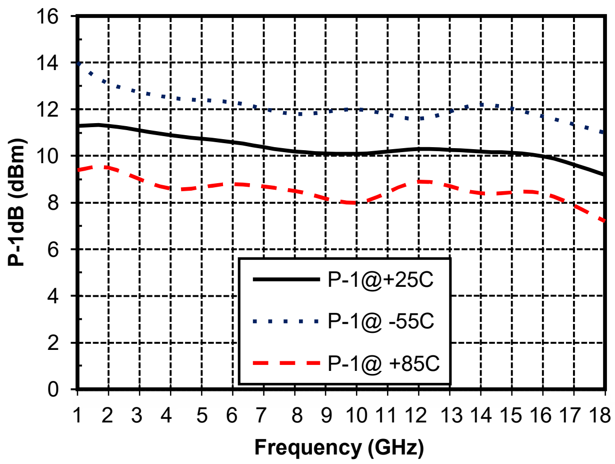
Input Return Loss vs. Frequency Output Return Loss vs. Frequency





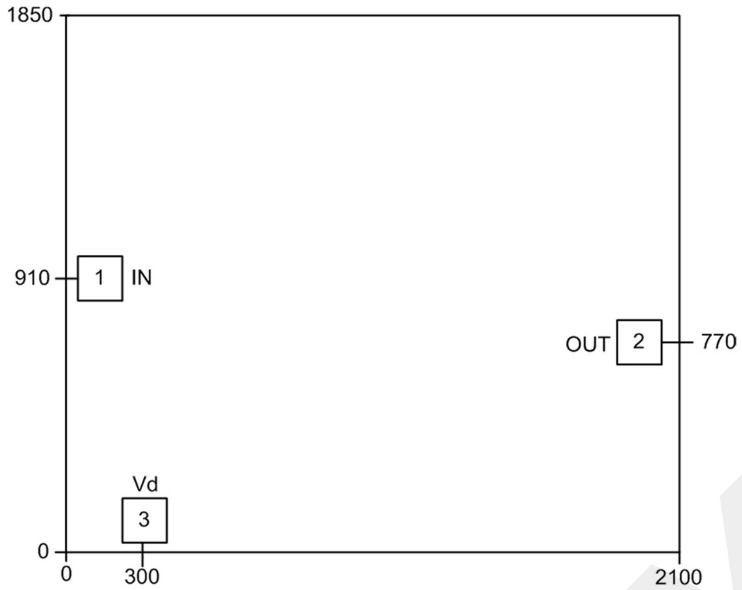
Reverse Isolation vs. Frequency P-1dB vs. Temperature





GaAs MMIC Low Noise Amplifier Die, 1-18GHz

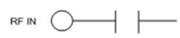
Outline drawing



[2] The figures are all micrometers

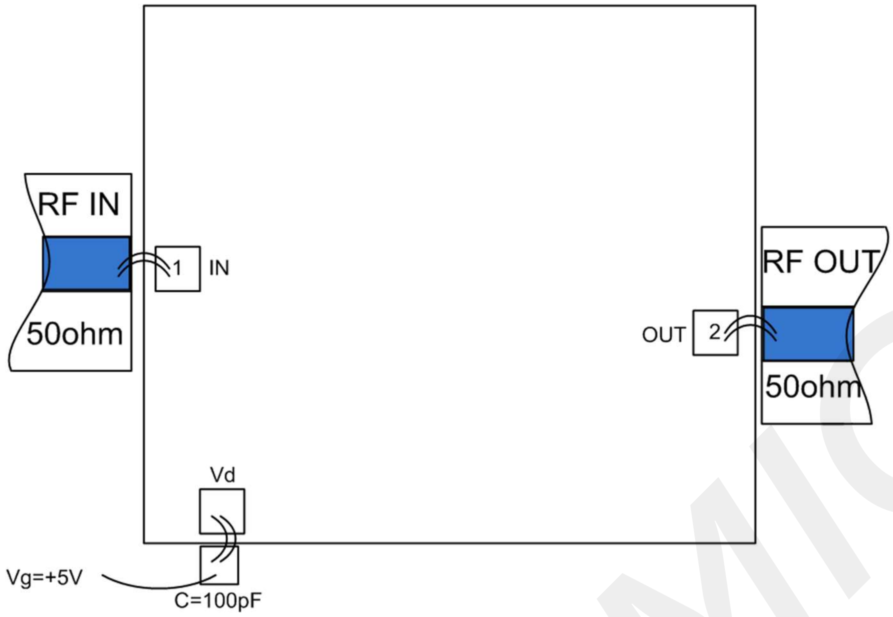
MyMMIC

Pad Descriptions

Pad number	Function	Description	Interface schematic
1	RFIN	RF signal input, no need for DC blocking capacitors	
2	RFOUT	RF signal output without DC blocking capacitors	
3	VD1	Amplifier drain bias requires an external 100pF bypass capacitor	
Die bottom	GND	The bottom of the Die needs good grounding with RF and DC	

GaAs MMIC Low Noise Amplifier Die, 1-18GHz

Recommended assembly drawing



Notes

- The Die needs to be stored in a container with antistatic function and stored in a nitrogen atmosphere.
- It is prohibited to attempt to wet the surface of the bare Die by wet chemistry.
- Please strictly comply with ESD protection requirements to avoid electrostatic damage to the bare Die.
- Regular operation: Use a precision pointed tweezers to pick up the bare Die. Avoid tools or fingers touching the surface of the Die during operation.
- Rack Mounting Recommendations: Bare Die mounting can use AuSn solder eutectic sintering or conductive adhesive bonding processes. The mounting surface must be clean and flat.
- Sintering process: It is recommended to use an AuSn solder sheet with a gold/tin ratio of 80/20. The working surface temperature reached 255°C and the tool (vacuum chuck) temperature reached 265°C. When the high-temperature gas mixture (nitrogen-hydrogen gas ratio is 90/10) is blown into the Die, the temperature at the top of the tool is increased to 290°C. Do not leave the Die at temperatures above 320°C for more than 20 seconds. Do not rub for more than 3 seconds.
- Adhesion process: The amount of conductive glue to be dispensed should be as small as possible. After the Die is placed in the installation position, the conductive adhesive can be seen around it. For the curing conditions, please follow the information provided by the manufacturer of the conductive adhesive.
- Bonding recommendations: Φ0.025mm (1mil) gold wire is used for both spherical and wedge bonding. Thermosonic bonding temperature 150°C. Ball bond guillotine pressure 40~50gf, wedge bond guillotine pressure 18~22gf. Use as little ultrasonic energy as possible. Bonding starts at the Die the pad on the end of the package (or substrate).

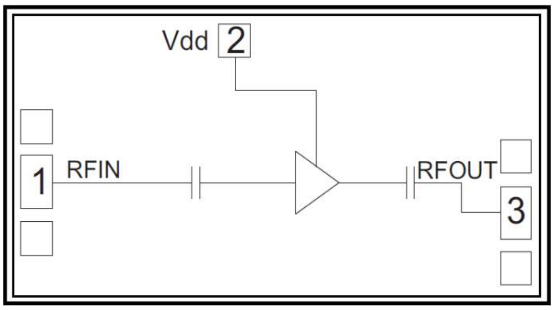
MYMMIC

GaAs MMIC Low Noise Amplifier Die, 4-8GHz

Feature:

- Frequency range: 4-8GHz
- Small signal gain: 27dB
- Noise figure: 0.7dB typ. / 0.8dB max.
- P-1dB: 12dBm
- Power supply: +5V/30mA
- 50Ohm input/output
- 100% on-Die test
- Die size: 1.75 x 1.25 x 0.09 mm

Functional Diagram:



General Description:

The MYM0804B is a broadband low noise amplifier Die with a frequency range of 4 GHz to 8 GHz, a small signal gain of 27 dB, and an in-band noise figure of 0.7 dB. The MYM0804B operates from a single +5V supply.

Absolute Max. Ratings

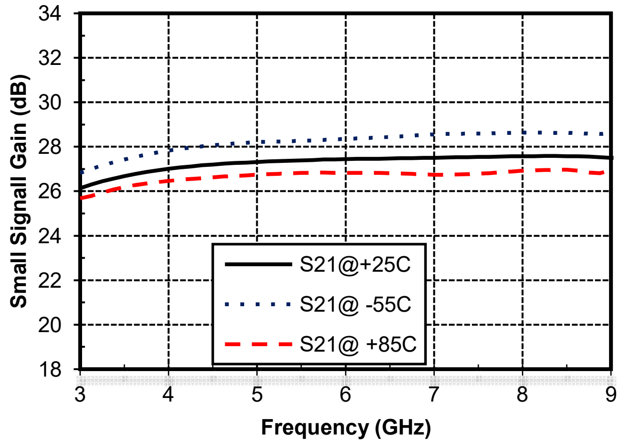
Max drain voltage	+7V
Max input power	+10dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

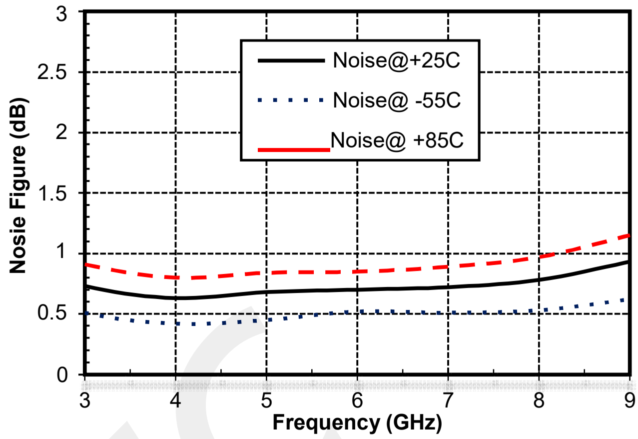
[1] Exceeding any of the above Max limits may cause permanent damage.

Electrical Specifications (TA = +25°C, Vd = +5V)

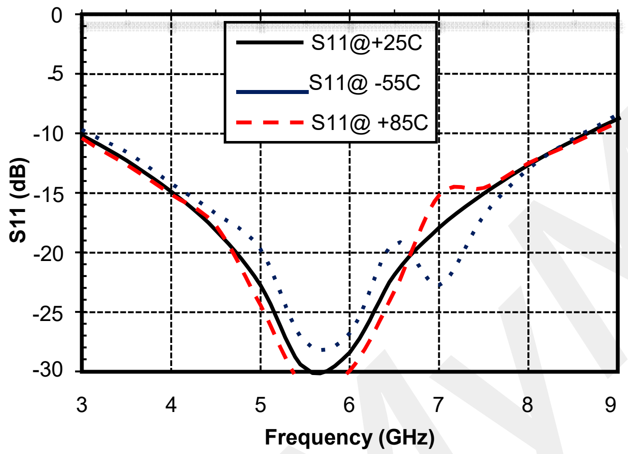
Parameter	Min	Typ	Max	Unit
Frequency Range		4-8		GHz
Small signal gain	-	27	27.5	dB
Gain flatness		±0.25		dB
Noise Figure	-	0.7	0.8	dB
P-1dB	11.5	12	13	dBm
PsatdB	12.5	13	14.5	dBm
Input return loss	12	20	-	dB
Output return loss	16	20	-	dB
Quiescent Current		30		mA

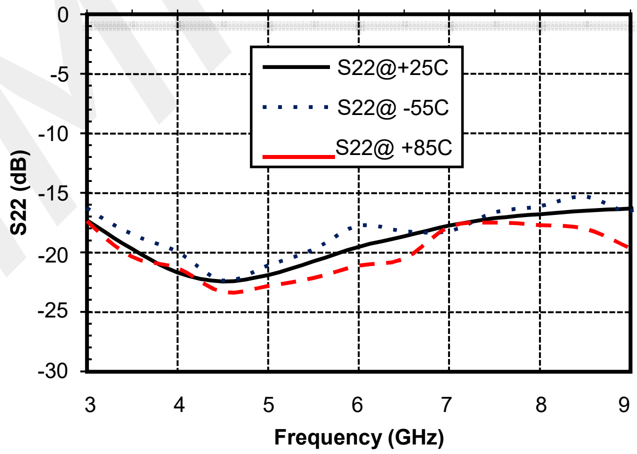
Gain vs. Frequency Noise Figure vs. Frequency



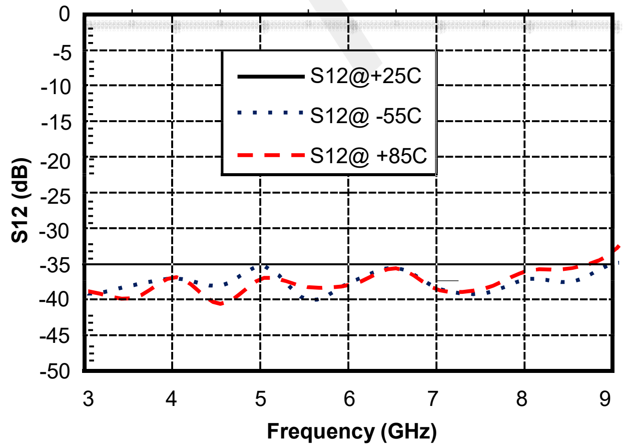


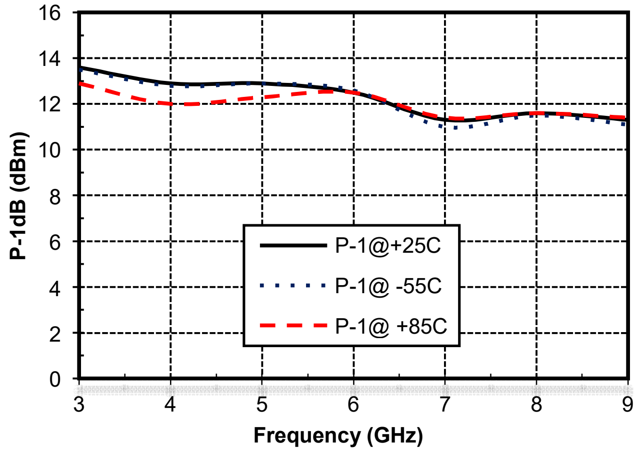
Input Return Loss vs. Frequency Output Return Loss vs. Frequency





Reverse Isolation vs. Frequency P-1dB vs. Frequency

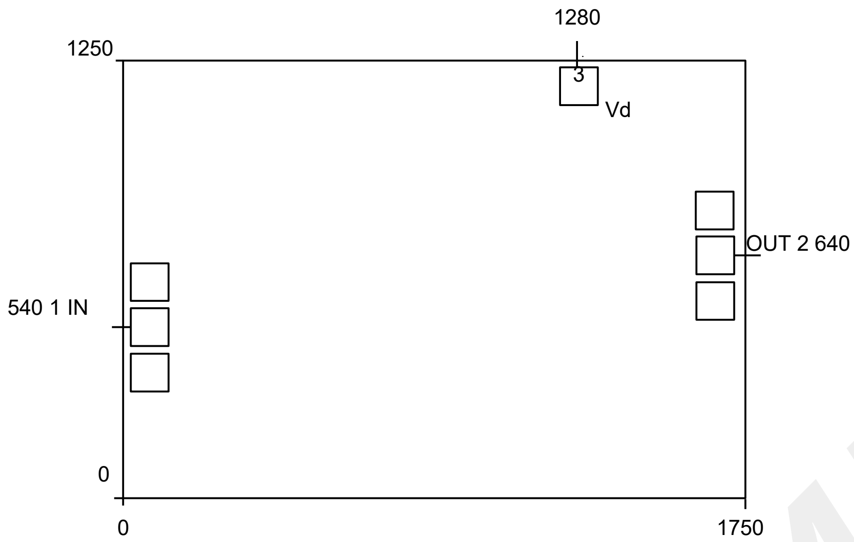




MYMMIC

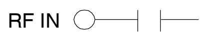
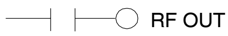
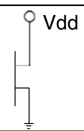
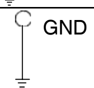
GaAs MMIC Low Noise Amplifier Die, 4-8GHz

Outline drawing



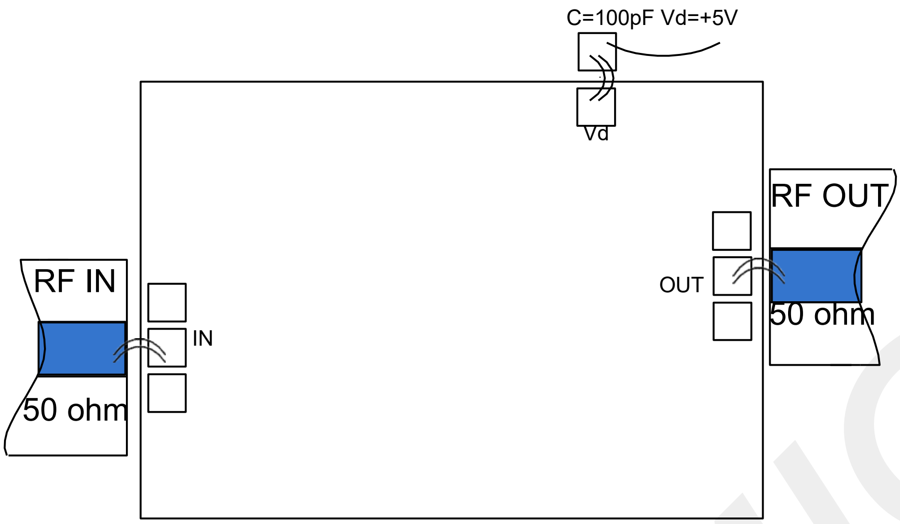
[2] The figures are all micrometers

Pad Descriptions

Pad number	Function	Description	Interface schematic
1	RFIN	RF signal input, no need for DC blocking capacitors	
2	RFOUT	RF signal output without DC blocking capacitors	
3	VDD	Amplifier drain bias, external 100pF required Bypass capacitor	
Die bottom	GND	The bottom of the Die requires RF and DC grounding good	

GaAs MMIC Low Noise Amplifier Die, 4-8GHz

Recommended assembly drawing



Notes

- The Die needs to be stored in a container with antistatic function and stored in a nitrogen atmosphere.
- It is prohibited to attempt to wet the surface of the bare Die by wet chemistry.
- Please strictly comply with ESD protection requirements to avoid electrostatic damage to the bare Die.
- Regular operation: Use a precision pointed tweezers to pick up the bare Die. Avoid tools or fingers touching the surface of the Die during operation.
- Rack Mounting Recommendations: Bare Die mounting can use AuSn solder eutectic sintering or conductive adhesive bonding processes. The mounting surface must be clean and flat.
- Sintering process: It is recommended to use an AuSn solder sheet with a gold/tin ratio of 80/20. The working surface temperature reached 255°C and the tool (vacuum chuck) temperature reached 265°C. When the high-temperature gas mixture (nitrogen-hydrogen gas ratio is 90/10) is blown into the Die, the temperature at the top of the tool is increased to 290°C. Do not leave the Die at temperatures above 320°C for more than 20 seconds. Rubbing time should not exceed 3 seconds.
- Adhesion process: The amount of conductive glue to be dispensed should be as small as possible. After the Die is placed in the installation position, the conductive adhesive can be seen around it. For the curing conditions, please follow the information provided by the manufacturer of the conductive adhesive.
- Bonding recommendations: Use Φ0.025mm (1mil) gold wire for either spherical or wedge-type bonding. Thermosonic bonding temperature 150°C. Ball bond guillotine pressure 40~50gf, wedge bond guillotine pressure 18~22gf. Use as little ultrasonic energy as possible. Bonding starts at the Die
  The pad on the end of the package (or substrate).

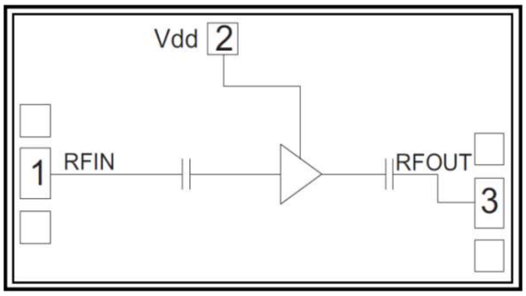
MYMMIC

GaAs MMIC Low Noise Amplifier Die, 6-18GHz

Feature:

- Frequency range: 6-18GHz
- Small signal gain: 21.5dB
- Noise figure: 1.5dB typ. / 1.7dB max.
- P-1dB: 12dBm
- Power supply: +5V/30mA
- 50Ohm input/output
- 100% on-Die test
- Die size: 1.5 x 0.95 x 0.1 mm

Functional Diagram:



General Description:

MYM1806-1.5 is a wideband low noise amplifier Die with a frequency range of 6GHz~18GHz, a small signal gain of 21.5dB, and an in-band noise figure.1.5dB. The MYM1806-1.5 operates from a single +5V supply.

Absolute Max. Ratings

Max drain voltage	+7V
Max input power	+10dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

[1] Exceeding any of the above Max limits may cause permanent damage.

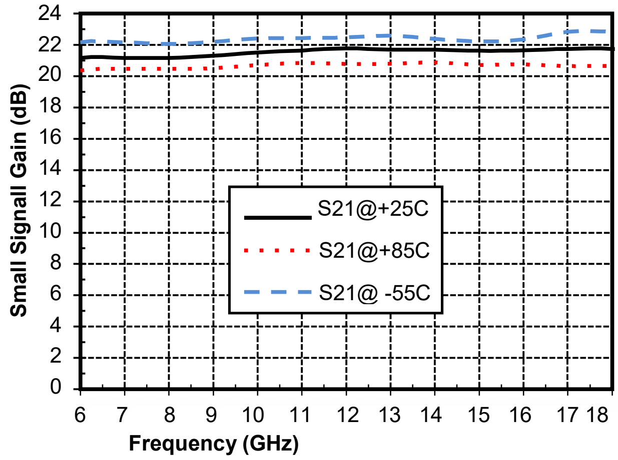
Electrical Specifications (TA= +25°C, Vd=+5V)

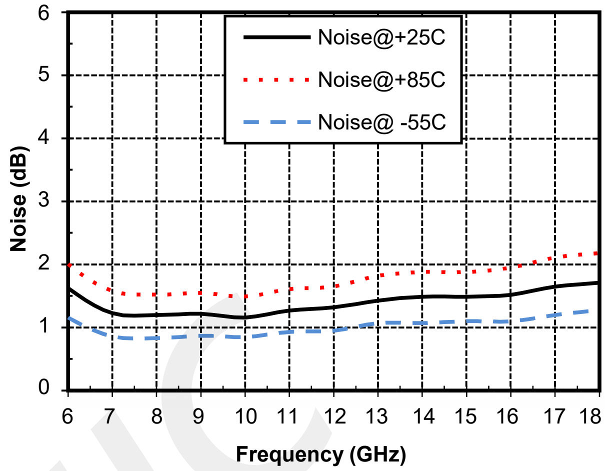
Parameter	Min	Typ	Max	Unit
Frequency Range		6-18		GHz
Small signal gain	21	21.5	22	dB
Gain flatness		±0.3		dB
Noise Figure	-	1.5	1.7	dB
P-1dB	11.5	12	13.0	dBm
Input return loss	12	15	-	dB
Output return loss	11	12	-	dB
Quiescent Current		30		mA

MYMMiC

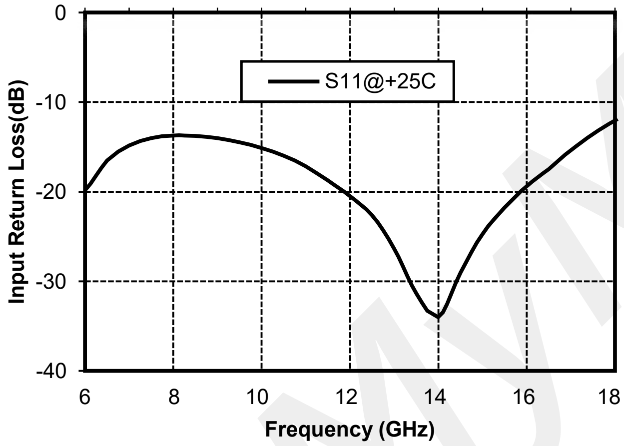
GaAs MMIC Low Noise Amplifier Die, 6-18GHz

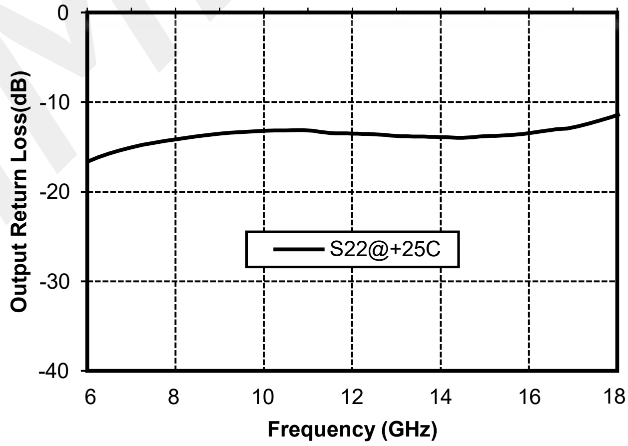
Gain vs. Temperature Noise Figure vs. Temperature



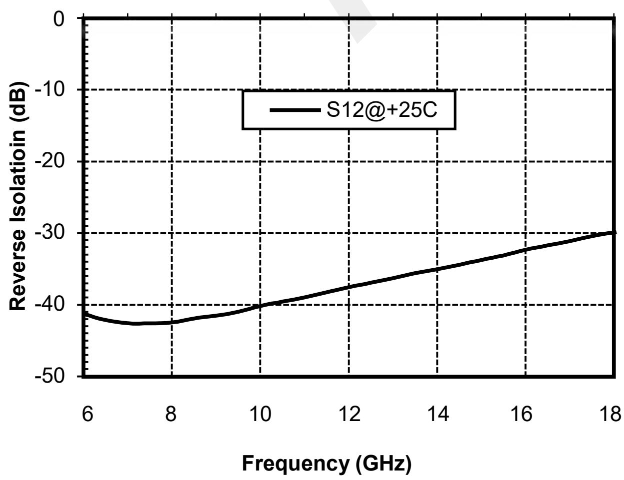


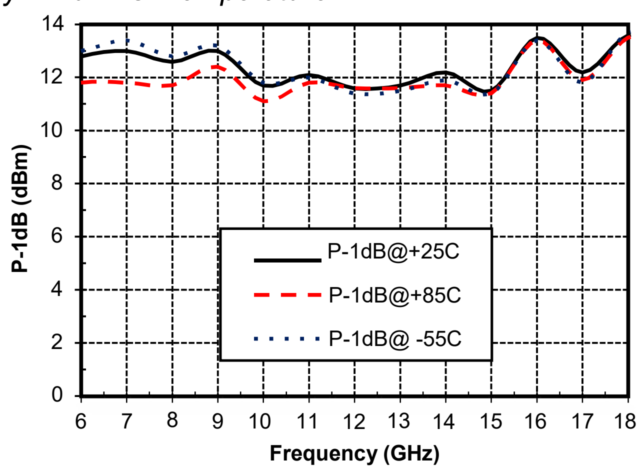
Input Return Loss vs. Frequency Output Return Loss vs. Frequency





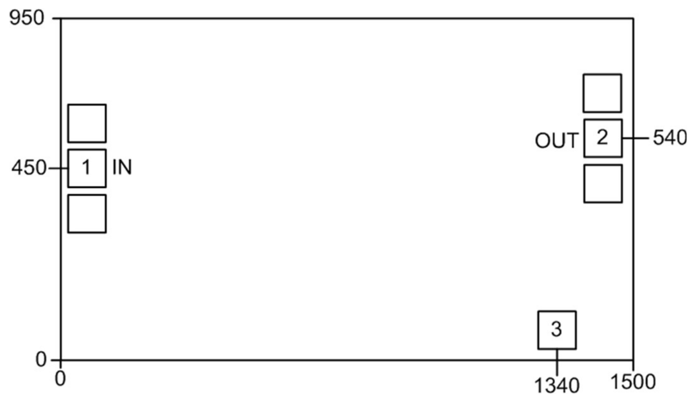
Reverse Isolation vs. Frequency P-1dB vs. Temperature





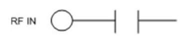
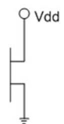
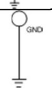
GaAs MMIC Low Noise Amplifier Die, 6-18GHz

Outline drawing



[2] The figures are all micrometers

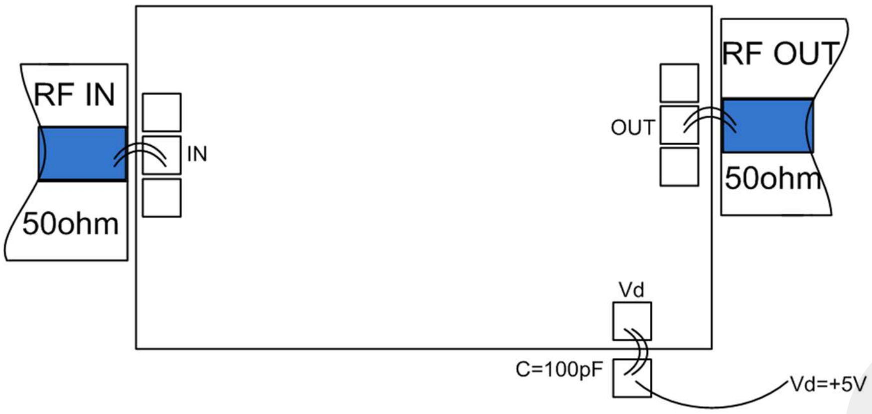
Pad Descriptions

Pad number	Function	Description	Interface schematic
1	RFIN	RF signal input, no need for DC blocking capacitors	
2	RFOUT	RF signal output without DC blocking capacitors	
3	VDD	Amplifier drain bias, external 100pF required Bypass capacitor	
Die bottom	GND	The bottom of the Die requires RF and DC grounding good	

MYMMIC

GaAs MMIC Low Noise Amplifier Die, 6-18GHz

Recommended assembly drawing



Notes

- The Die needs to be stored in a container with antistatic function and stored in a nitrogen atmosphere.
- It is prohibited to attempt to wet the surface of the bare Die by wet chemistry.
- Please strictly comply with ESD protection requirements to avoid electrostatic damage to the bare Die.
- Regular operation: Use a precision pointed tweezers to pick up the bare Die. Avoid tools or fingers touching the surface of the Die during operation.
- Rack Mounting Recommendations: Bare Die mounting can use AuSn solder eutectic sintering or conductive adhesive bonding processes. The mounting surface must be clean and flat.
- Sintering process: It is recommended to use an AuSn solder sheet with a gold/tin ratio of 80/20. The working surface temperature reached 255°C and the tool (vacuum chuck) temperature reached 265°C. When the high-temperature gas mixture (nitrogen-hydrogen gas ratio is 90/10) is blown into the Die, the temperature at the top of the tool is increased to 290°C. Do not leave the Die at temperatures above 320°C for more than 20 seconds. Do not rub for more than 3 seconds.
- Adhesion process: The amount of conductive glue to be dispensed should be as small as possible. After the Die is placed in the installation position, the conductive adhesive can be seen around it. For the curing conditions, please follow the information provided by the manufacturer of the conductive adhesive.
- Bonding recommendations: Φ0.025mm (1mil) gold wire is used for both spherical and wedge bonding. Thermosonic bonding temperature 150°C. Ball bond guillotine pressure 40~50gf, wedge bond guillotine pressure 18~22gf. Use as little ultrasonic energy as possible. Bonding starts at the Die
  The pad on the end of the package (or substrate).

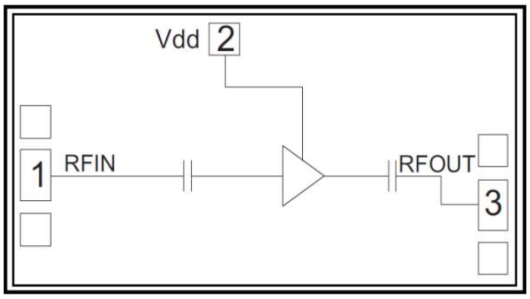
MYMMIC

GaAs MMIC Low Noise Amplifier Die, 6-18GHz

Feature:

- Frequency range: 6-18GHz
- Small signal gain: 24dB (positive slope)
- Noise figure: 1.5dB max.
- P-1dB: 14.0dBm
- Power supply: +5V/35mA
- 50Ohm input/output
- 100% on-Die test
- Die size: 1.55 x 0.8 x 0.09 mm

Functional Diagram:



General Description:

MYM1806C is a wideband low noise amplifier Die with a frequency range of 6GHz~18GHz, small signal gain of 24dB, and in-band noise figure.1.55dB (Max). The MYM1806C operates from a single +5V supply.

Absolute Max. Ratings

Max drain voltage	+7V
Max input power	+10dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

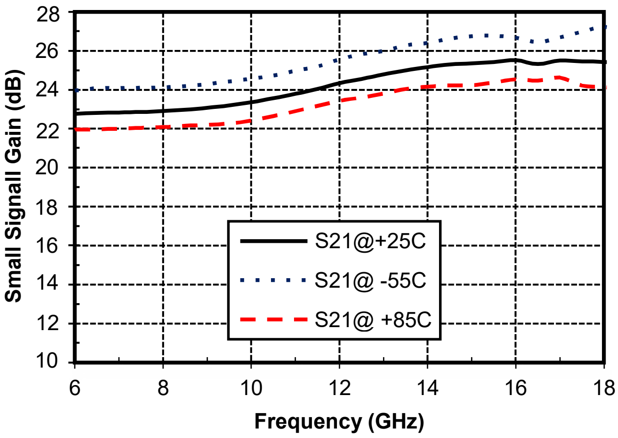
[1] Exceeding any of the above Max limits may cause permanent damage.

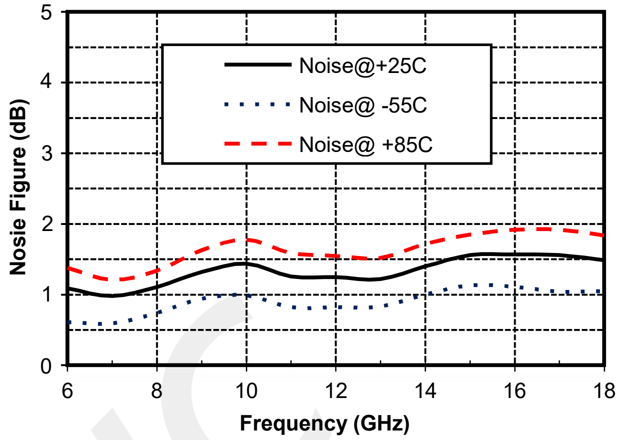
Electrical Specifications (TA= +25°C, Vd=+5V)

Parameter	Min	Typ	Max	Unit
Frequency Range		6-18		GHz
Small signal gain	22.5	24	25.5	dB
Gain flatness		±1.5		dB
Noise Figure	-	1.5	1.55	dB
P-1dB	13	14	15	dBm
Psat	15	15.5	16	dBm
Input return loss	8	12	-	dB
Output return loss	9	12	-	dB
Quiescent Current		35		mA

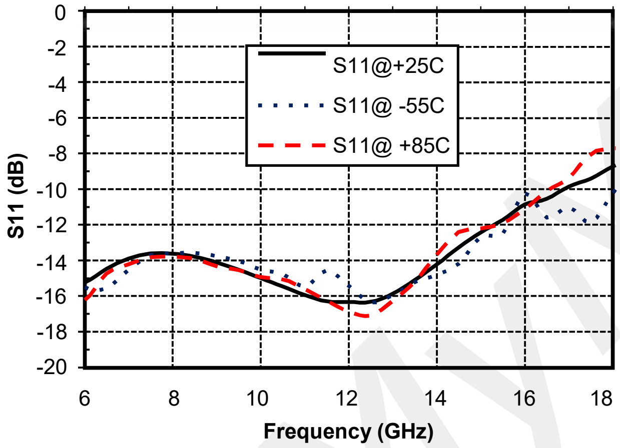
GaAs MMIC Low Noise Amplifier Die, 6-18GHz

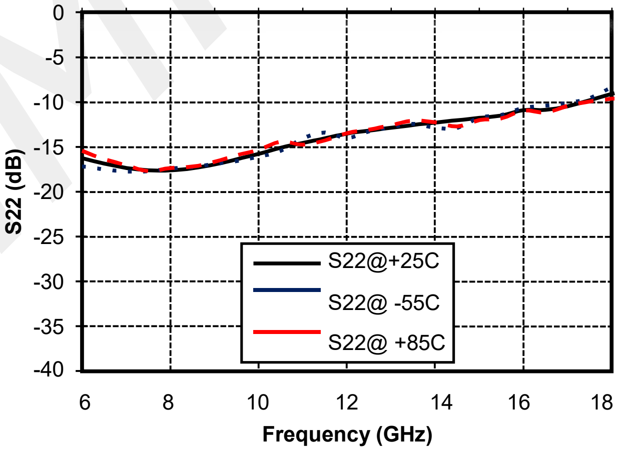
Gain vs. Frequency Noise Figure vs. Frequency



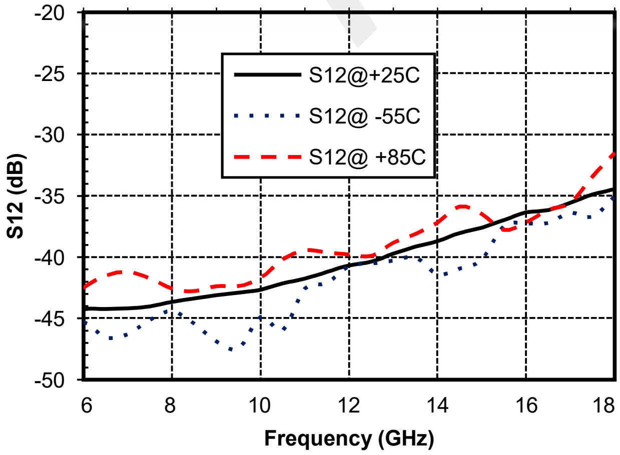


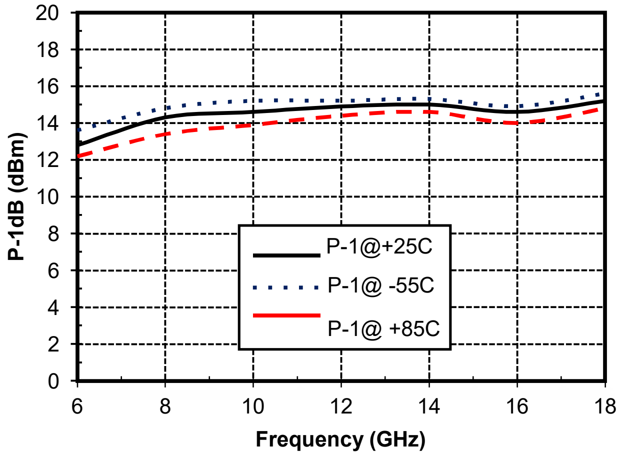
Input Return Loss vs. Frequency Output Return Loss vs. Frequency





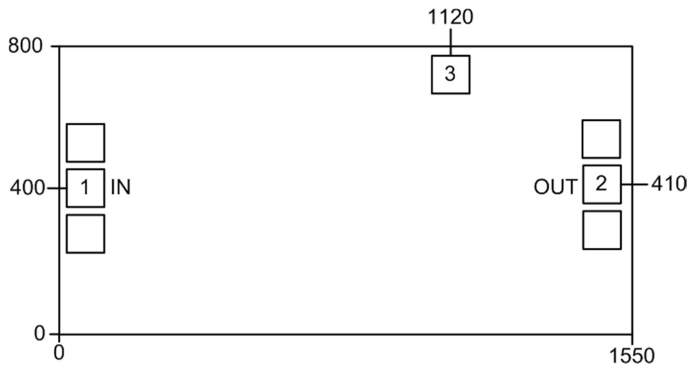
Reverse Isolation vs. Frequency P-1dB vs. Frequency





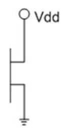
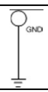
GaAs MMIC Low Noise Amplifier Die, 6-18GHz

Outline drawing



[2] The figures are all micrometers

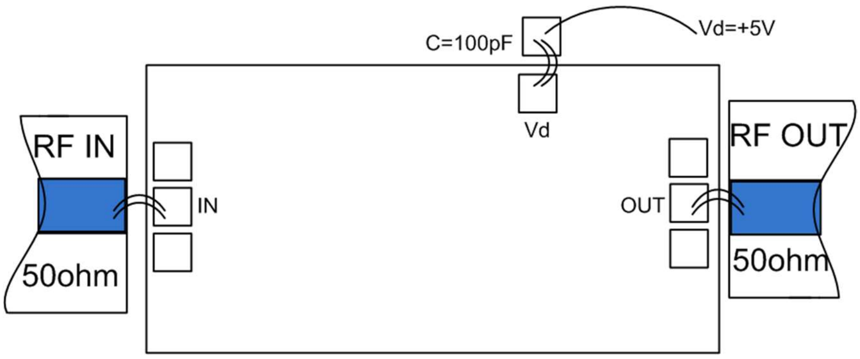
Pad Descriptions

Pad number	Function	Description	Interface schematic
1	RFIN	RF signal input, no need for DC blocking capacitors	
2	RFOUT	RF signal output without DC blocking capacitors	
3	VDD	Amplifier drain bias, external 100pF required Bypass capacitor	
Die bottom	GND	The bottom of the Die requires RF and DC grounding good	

MYMMIC

GaAs MMIC Low Noise Amplifier Die, 6-18GHz

Recommended assembly drawing



Notes

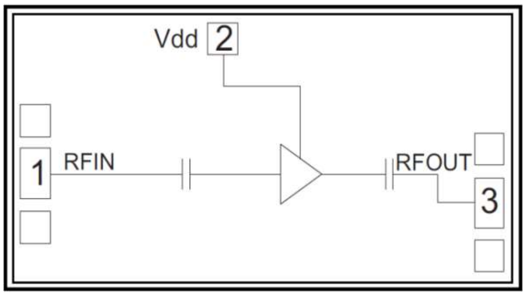
- The Die needs to be stored in a container with antistatic function and stored in a nitrogen atmosphere.
- It is prohibited to attempt to wet the surface of the bare Die by wet chemistry.
- Please strictly comply with ESD protection requirements to avoid electrostatic damage to the bare Die.
- Regular operation: Use a precision pointed tweezers to pick up the bare Die. Avoid tools or fingers touching the surface of the Die during operation.
- Rack Mounting Recommendations: Bare Die mounting can use AuSn solder eutectic sintering or conductive adhesive bonding processes. The mounting surface must be clean and flat.
- Sintering process: It is recommended to use an AuSn solder sheet with a gold/tin ratio of 80/20. The working surface temperature reached 255°C and the tool (vacuum chuck) temperature reached 265°C. When the high-temperature gas mixture (nitrogen-hydrogen gas ratio is 90/10) is blown into the Die, the temperature at the top of the tool is increased to 290°C. Do not leave the Die at temperatures above 320°C for more than 20 seconds. Do not rub for more than 3 seconds.
- Adhesion process: The amount of conductive glue to be dispensed should be as small as possible. After the Die is placed in the installation position, the conductive adhesive can be seen around it. For the curing conditions, please follow the information provided by the manufacturer of the conductive adhesive.
- Bonding recommendations: Φ0.025mm (1mil) gold wire is used for both spherical and wedge bonding. Thermosonic bonding temperature 150°C. Ball bond guillotine pressure 40~50gf, wedge bond guillotine pressure 18~22gf. Use as little ultrasonic energy as possible. Bonding starts at the Die the pad on the end of the package (or substrate).

GaAs MMIC Low Noise Amplifier Die, 6-18GHz

Feature:

- Frequency range: 6-18GHz
- Small signal gain: 21dB
- Noise figure: 1.5dB typ., 1.7dB max.
- P-1dB: 17dBm
- Power supply: +5V/85mA
- 50Ohm input/output
- 100% on-Die test
- Die size: 1.55 x 0.8 x 0.09 mm

Functional Diagram:



General Description:

MYM1806E is a broadband low noise amplifier Die with a frequency range of 6GHz~18GHz, a small signal gain of 21dB, and an in-band noise figure of 1.5dB. The MYM1806E operates from a single +5V supply.

Absolute Max. Ratings

Max drain voltage	+7V
Max input power	+10dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

[1] Exceeding any of the above Max limits may cause permanent damage.

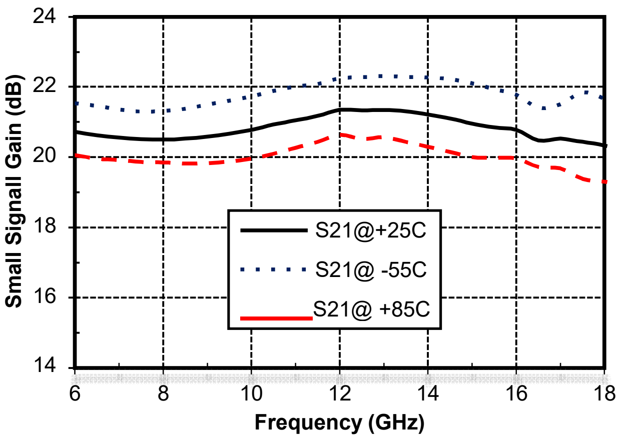
Electrical Specifications (TA = +25°C, Vd = +5V)

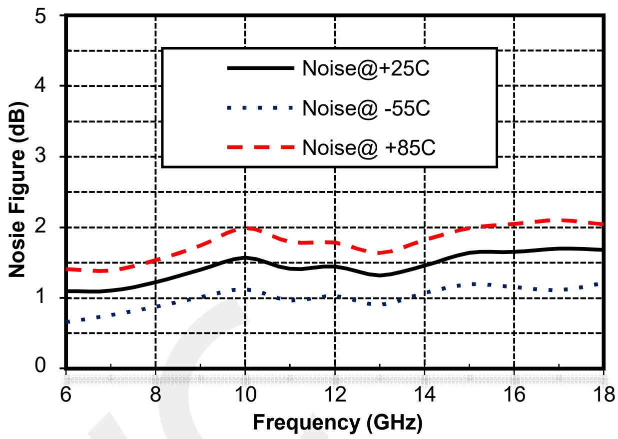
Parameter	Min	Typ	Max	Unit
Frequency Range		6-18		GHz
Small signal gain	20.	21	21.5	dB
Gain flatness		±0.5		dB
Noise Figure	-	1.5	1.7	Db
P-1dB	16.5	17	17.5	dBm
Psat	17.5	18	18.5	dBm
Input return loss	13	16	-	dB
Output return loss	12	15	-	dB
Quiescent Current		85		mA

MYMMIC

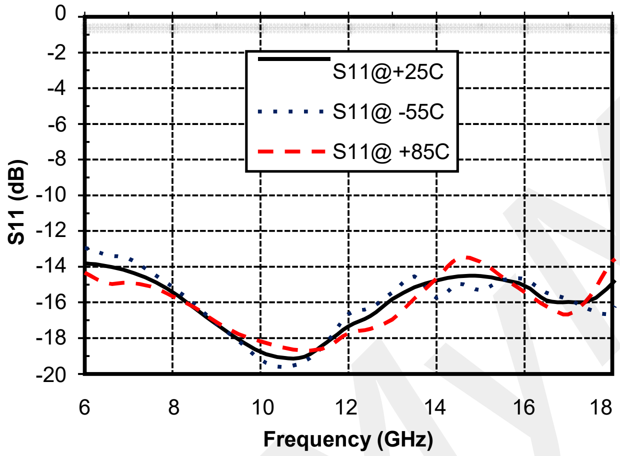
GaAs MMIC Low Noise Amplifier Die, 6-18GHz

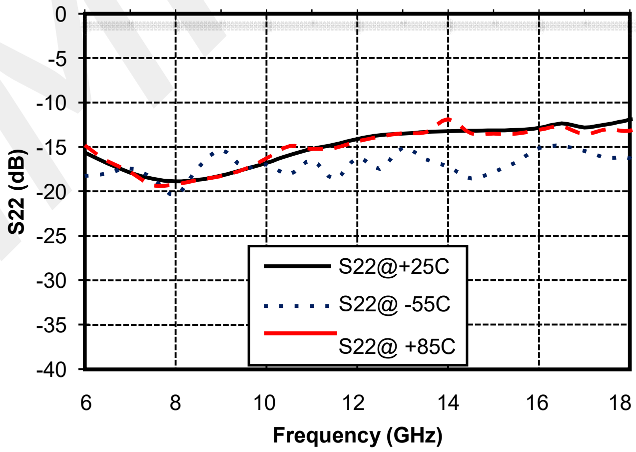
Gain vs. Frequency Noise Figure vs. Frequency



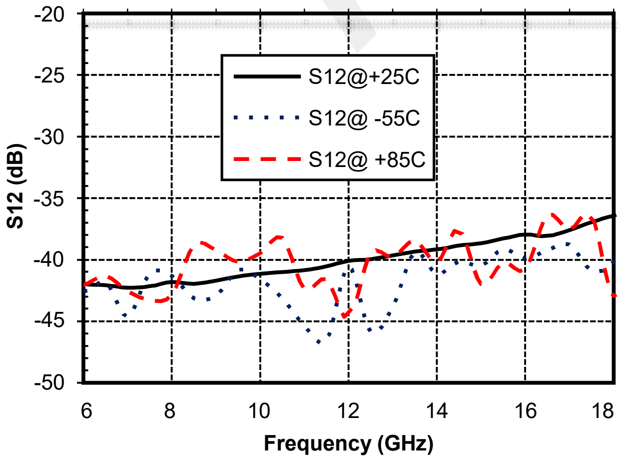


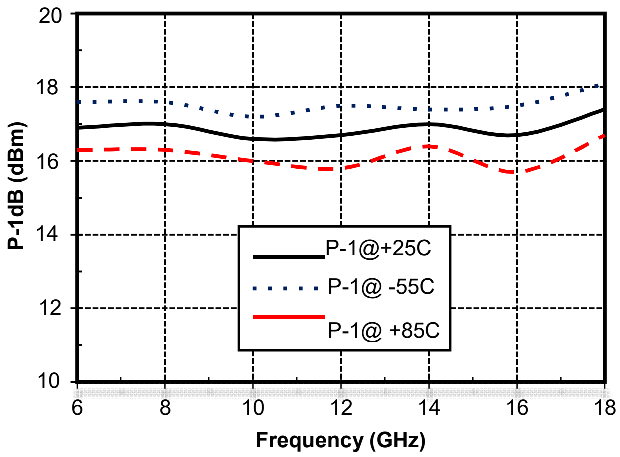
Input Return Loss vs. Frequency Output Return Loss vs. Frequency





Reverse Isolation vs. Frequency P-1dB vs. Frequency

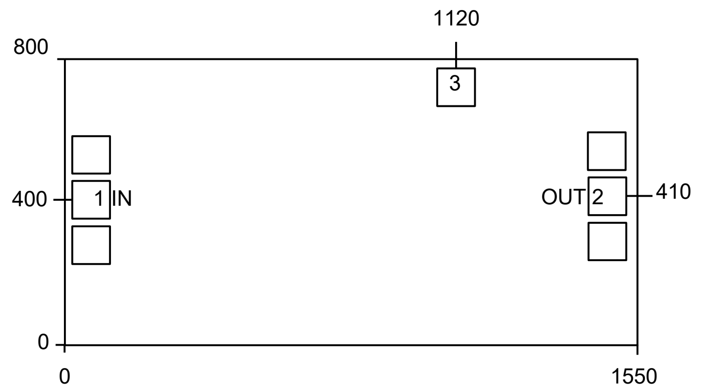




MYMMIC

GaAs MMIC Low Noise Amplifier Die, 6-18GHz

Outline drawing



[2] The figures are all micrometers

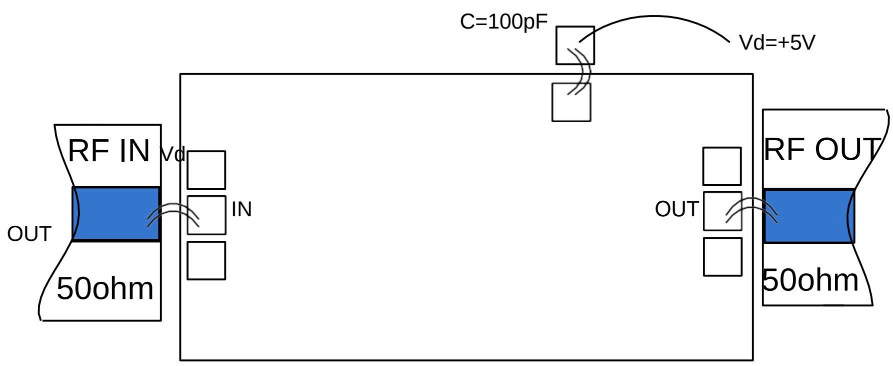
Pad Descriptions

Pad number	Function	Description	Interface schematic
1	RFIN	RF signal input, no need for DC blocking capacitors	RF IN
2	RFOUT	RF signal output without DC blocking capacitors	RF OUT
3	VDD	Amplifier drain bias, external 100pF required Bypass capacitor	Vdd
Die bottom	GND	The bottom of the Die requires RF and DC grounding good	GND

MYMMIC

GaAs MMIC Low Noise Amplifier Die, 6-18GHz

Recommended assembly drawing



Notes

- The Die needs to be stored in a container with antistatic function and stored in a nitrogen atmosphere.
- It is prohibited to attempt to wet the surface of the bare Die by wet chemistry.
- Please strictly comply with ESD protection requirements to avoid electrostatic damage to the bare Die.
- Regular operation: Use a precision pointed tweezers to pick up the bare Die. Avoid tools or fingers touching the surface of the Die during operation.
- Rack Mounting Recommendations: Bare Die mounting can use AuSn solder eutectic sintering or conductive adhesive bonding processes. The mounting surface must be clean and flat.
- Sintering process: It is recommended to use an AuSn solder sheet with a gold/tin ratio of 80/20. The working surface temperature reached 255°C and the tool (vacuum chuck) temperature reached 265°C. When the high-temperature gas mixture (nitrogen-hydrogen gas ratio is 90/10) is blown into the Die, the temperature at the top of the tool is increased to 290°C. Do not leave the Die at temperatures above 320°C for more than 20 seconds. Rubbing time should not exceed 3 seconds.
- Adhesion process: The amount of conductive glue to be dispensed should be as small as possible. After the Die is placed in the installation position, the conductive adhesive can be seen around it. For the curing conditions, please follow the information provided by the manufacturer of the conductive adhesive.
- Bonding recommendations: Use Φ0.025mm (1mil) gold wire for either spherical or wedge-type bonding. Thermosonic bonding temperature 150°C. Ball bond guillotine pressure 40~50gf, wedge bond guillotine pressure 18~22gf. Use as little ultrasonic energy as possible. Bonding starts at the Die the pad on the end of the package (or substrate).

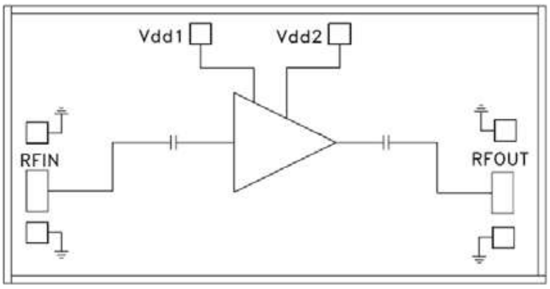
MYMMIC

GaAs MMIC Low Noise Amplifier Die, 6-20GHz

Feature:

- Frequency range: 6-20GHz
- Small signal gain: 19dB
- Noise figure: 2.0dB typ.
- Noise figure: 2.6dB max.
- P-1dB: 15dBm
- Power supply: +5V/60mA
- 50Ohm input/output
- 100% on-Die test
- Die size: 2.0 x 1.0 x 0.1 mm

Functional Diagram:



General Description:

MYM2006-2.0 is a wideband low noise amplifier Die with a frequency range of 6GHz~20GHz, small signal gain of 19dB, and in-band noise figure.2.0dB. The MYM2006-2.0 is powered from a single +5V supply.

Absolute Max. Ratings

Max drain voltage	+7V
Max input power	+20dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

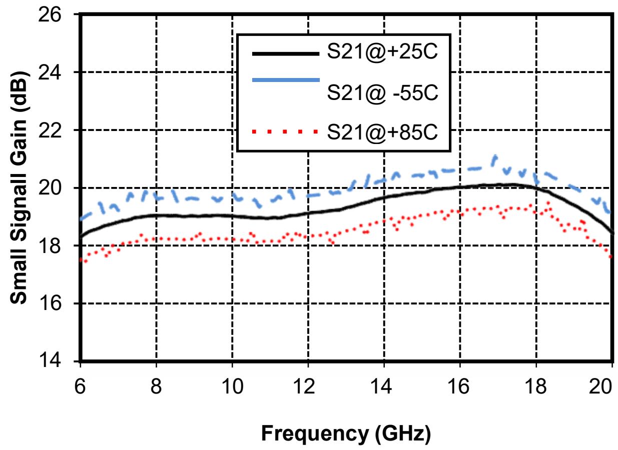
[1] Exceeding any of the above Max limits may cause permanent damage.

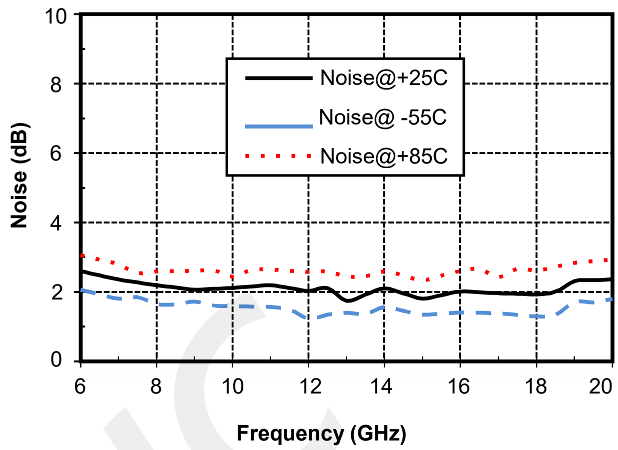
Electrical Specifications (TA= +25°C, Vd=+5V)

Parameter	Min	Typ	Max	Unit
Frequency Range		6-20		GHz
Small signal gain	18.5	19	20.5	dB
Gain flatness		±1.0		dB
Noise Figure	1.8	2.0	2.6	dB
P-1dB	12.5	16	17	dBm
Psat	16.9	18	18.7	dBm
OIP3	22.5	25	26.5	dBm
Input return loss		12		dB
Output return loss		12		dB
Quiescent Current		60		mA

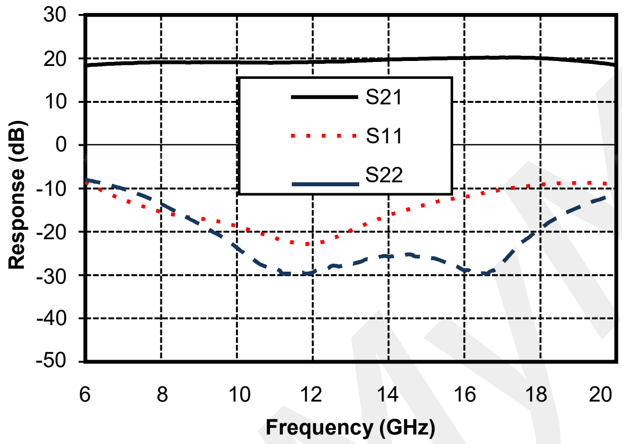
GaAs MMIC Low Noise Amplifier Die, 6-20GHz

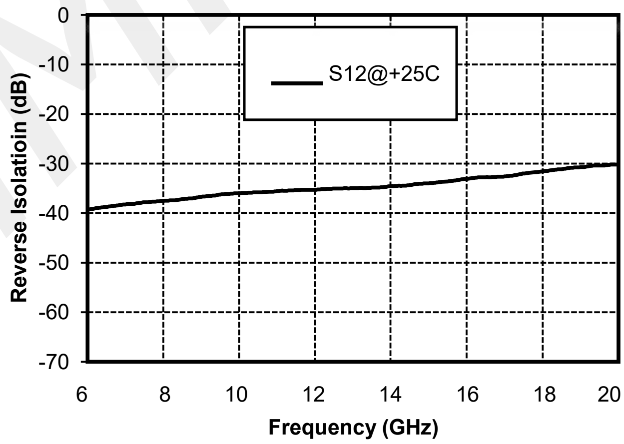
Gain vs. Temperature Noise Figure vs. Temperature



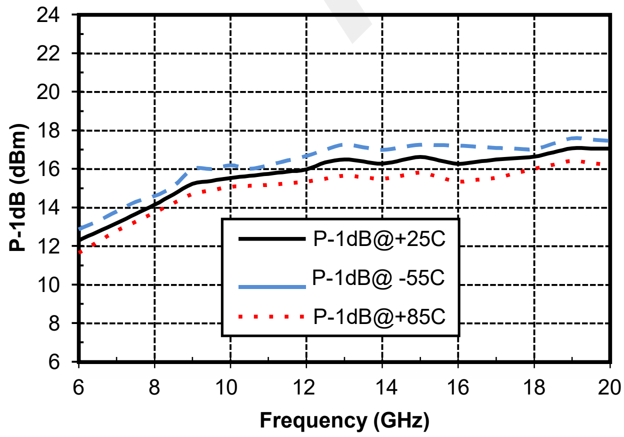


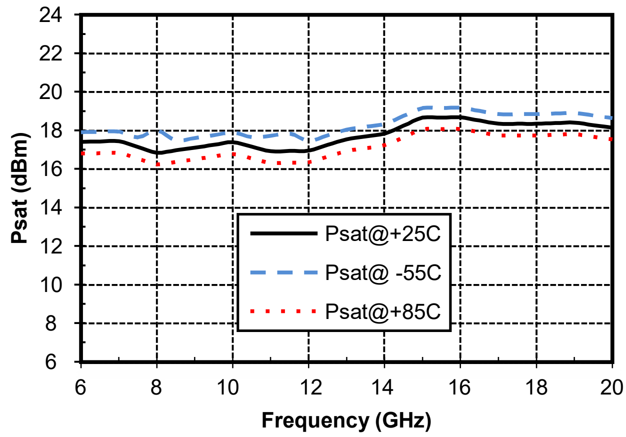
Gain & Input/Output Return Loss vs. Frequency Reverse Isolation vs. Frequency





P-1dB vs. Temperature Psat vs. Temperature

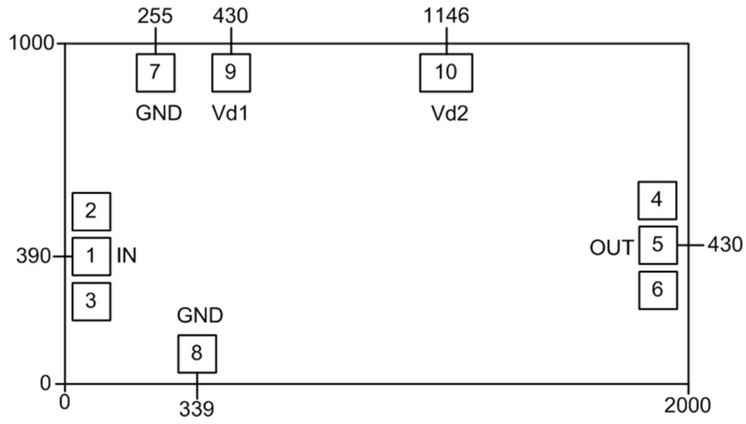




MYMMIC

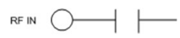
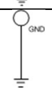
GaAs MMIC Low Noise Amplifier Die, 6-20GHz

Outline drawing



[2] The figures are all micrometers

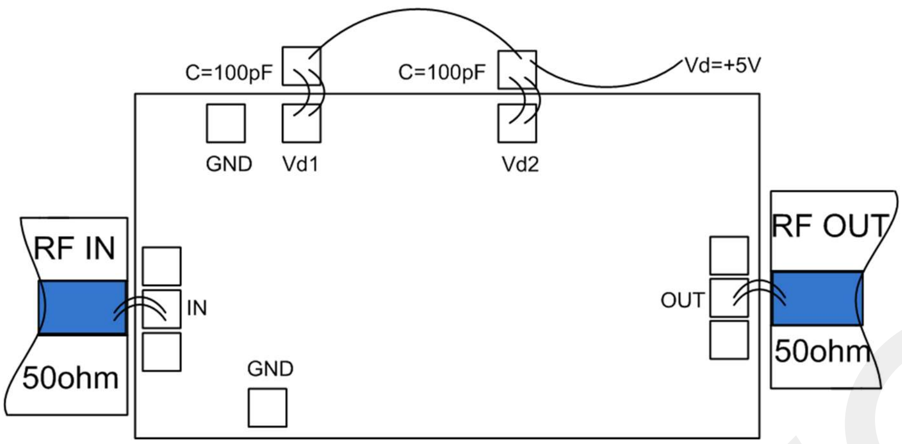
Pad Descriptions

Pad number	Function	Description	Interface schematic
1	RFIN	RF signal input, no need for DC blocking capacitors	
5	RFOUT	RF signal output without DC blocking capacitors	
9	Vd1	Amplifier drain bias requires an external 100pF bypass capacitor	
10	Vd2	Amplifier drain bias requires an external 100pF bypass capacitor	
2, 3, 4, 6, 7, 8	GND	Ground pressure point for probe test	
Die bottom	GND	The bottom of the Die needs good grounding with RF and DC	

MYMMIC

GaAs MMIC Low Noise Amplifier Die, 6-20GHz

Recommended assembly drawing



Notes

- The Die needs to be stored in a container with antistatic function and stored in a nitrogen atmosphere.
- It is prohibited to attempt to wet the surface of the bare Die by wet chemistry.
- Please strictly comply with ESD protection requirements to avoid electrostatic damage to the bare Die.
- Regular operation: Use a precision pointed tweezers to pick up the bare Die. Avoid tools or fingers touching the surface of the Die during operation.
- Rack Mounting Recommendations: Bare Die mounting can use AuSn solder eutectic sintering or conductive adhesive bonding processes. The mounting surface must be clean and flat.
- Sintering process: It is recommended to use an AuSn solder sheet with a gold/tin ratio of 80/20. The working surface temperature reached 255°C and the tool (vacuum chuck) temperature reached 265°C. When the high-temperature gas mixture (nitrogen-hydrogen gas ratio is 90/10) is blown into the Die, the temperature at the top of the tool is increased to 290°C. Do not leave the Die at temperatures above 320°C for more than 20 seconds. Do not rub for more than 3 seconds.
- Adhesion process: The amount of conductive glue to be dispensed should be as small as possible. After the Die is placed in the installation position, the conductive adhesive can be seen around it. For the curing conditions, please follow the information provided by the manufacturer of the conductive adhesive.
- Bonding recommendations: Φ0.025mm (1mil) gold wire is used for both spherical and wedge bonding. Thermosonic bonding temperature 150°C. Spherical bonding file pressure 40~50gf, wedge bond file pressure 18~22gf. Use as little ultrasonic energy as possible. Bonding starts at the pad on the Die and ends at the package (or substrate).

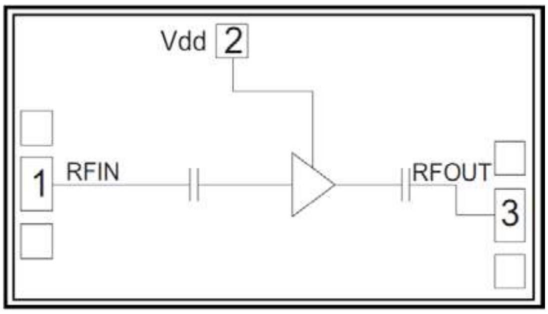
MYMMIC

GaAs MMIC Low Noise Amplifier Die, 8-12GHz

Feature:

- Frequency range: 8-12GHz
- Small signal gain: 21.5dB
- Noise figure: 0.9dB max.
- P-1dB: 8dBm
- Power supply: +5V/30mA
- 50Ohm input/output
- 100% on-Die test
- Die size: 2.0 x 1.1 x 0.1mm

Functional Diagram:



MYM1208-0.9 is a broadband low noise amplifier Die with a frequency range covering 8GHz~12GHz, a small signal gain of 21dB, and an inband noise figure. 0.9dB. The MYM1208-0.9 operates from a single +5V supply.

Absolute Max. Ratings

Max drain voltage	+7V
Max input power	+10dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

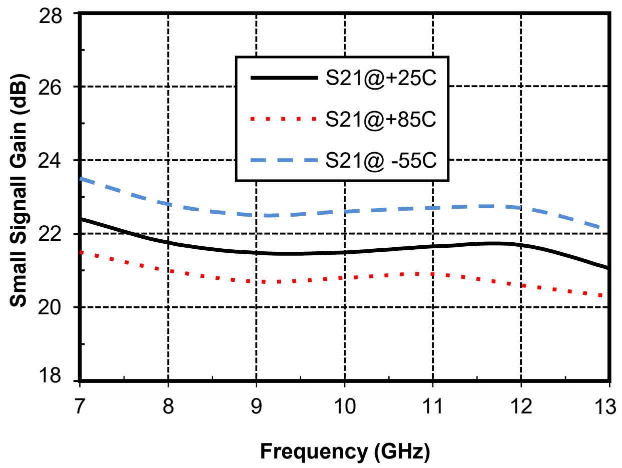
[1] Exceeding any of the above Max limits may cause permanent damage.

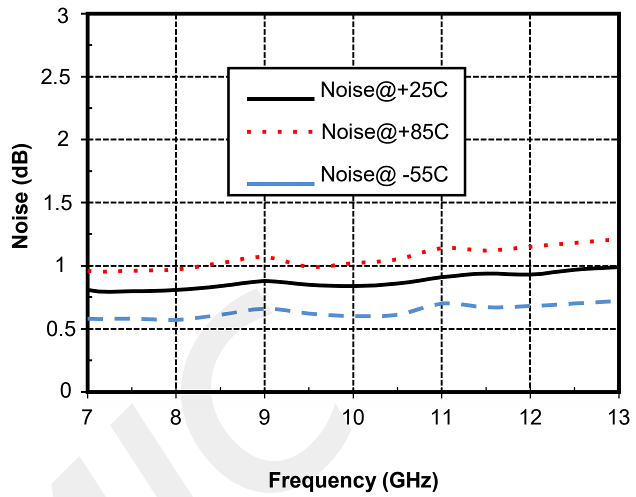
Electrical Specifications (TA= +25°C, Vd=+5V)

Parameter	Min	Typ	Max	Unit
Frequency Range		8-12		GHz
Small signal gain	-	21.5	-	dB
Gain flatness		±0.2		dB
Noise Figure	-	-	0.9	dB
P-1dB	6.5	8	9	dBm
Input return loss	11	15	-	dB
Output return loss	20	25	-	dB
Quiescent Current		32		mA

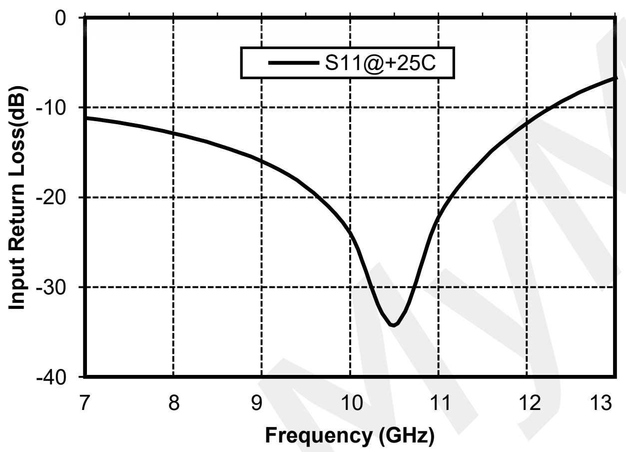
GaAs MMIC Low Noise Amplifier Die, 8-12GHz

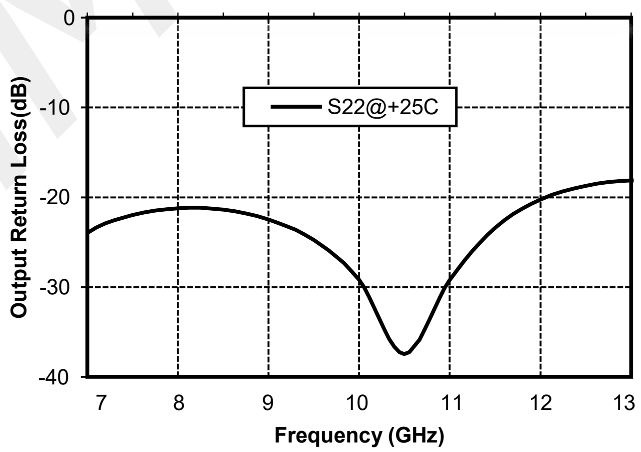
Gain vs. Temperature Noise Figure vs. Temperature



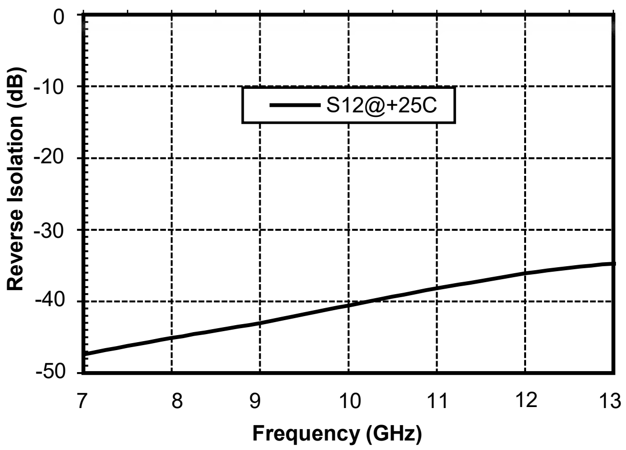


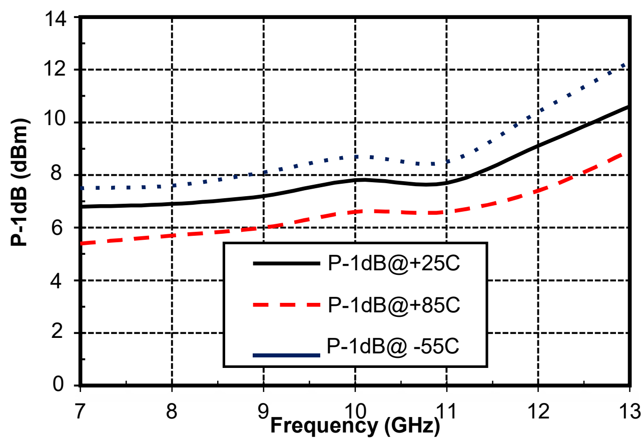
Input Return Loss vs. Frequency Output Return Loss vs. Frequency





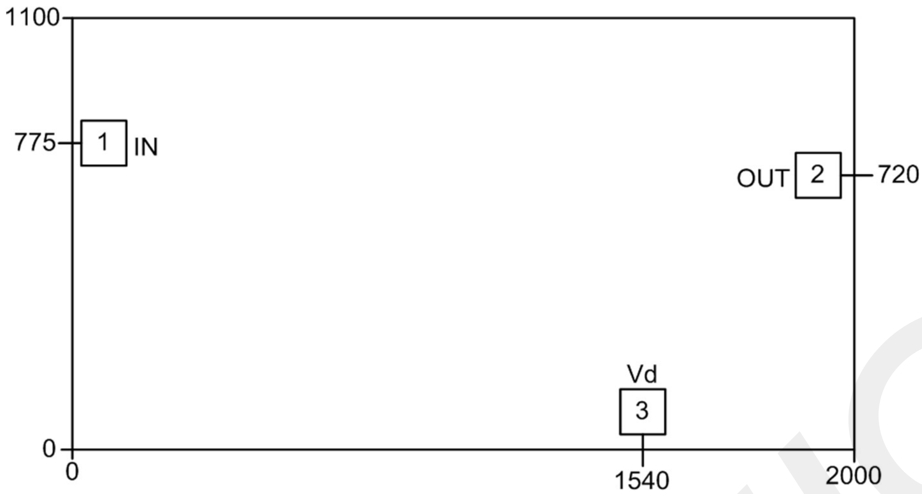
Reverse Isolation vs. Frequency P-1dB vs. Temperature





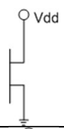
GaAs MMIC Low Noise Amplifier Die, 8-12GHz

Outline drawing



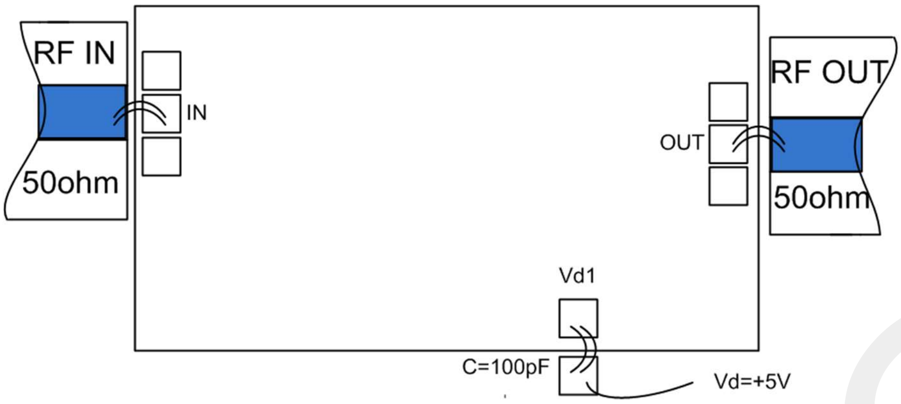
[2] The figures are all micrometers

Pad Descriptions

Pad number	Function	Description	Interface schematic
1	RFIN	RF signal input, no need for DC blocking capacitors	
2	RFOUT	RF signal output without DC blocking capacitors	
3	VDD	Amplifier drain bias requires an external 100pF bypass capacitor	
Die bottom	GND	The bottom of the Die needs good grounding with RF and DC	

MYMMIC

Recommended assembly drawing



Notes

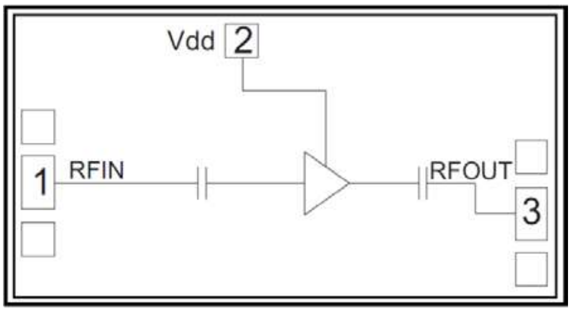
- The Die needs to be stored in a container with antistatic function and stored in a nitrogen atmosphere.
- It is prohibited to attempt to wet the surface of the bare Die by wet chemistry.
- Please strictly comply with ESD protection requirements to avoid electrostatic damage to the bare Die.
- Regular operation: Use a precision pointed tweezers to pick up the bare Die. Avoid tools or fingers touching the surface of the Die during operation.
- Rack Mounting Recommendations: Bare Die mounting can use AuSn solder eutectic sintering or conductive adhesive bonding processes. The mounting surface must be clean and flat.
- Sintering process: It is recommended to use an AuSn solder sheet with a gold/tin ratio of 80/20. The working surface temperature reached 255°C and the tool (vacuum chuck) temperature reached 265°C. When the high-temperature gas mixture (nitrogen-hydrogen gas ratio is 90/10) is blown into the Die, the temperature at the top of the tool is increased to 290°C. Do not leave the Die at temperatures above 320°C for more than 20 seconds. Do not rub for more than 3 seconds.
- Adhesion process: The amount of conductive glue to be dispensed should be as small as possible. After the Die is placed in the installation position, the conductive adhesive can be seen around it. For the curing conditions, please follow the information provided by the manufacturer of the conductive adhesive.
- Bonding recommendations: Φ0.025mm (1mil) gold wire is used for both spherical and wedge bonding. Thermosonic bonding temperature 150°C. Spherical bonding file pressure 40~50gf, wedge bond file pressure 18~22gf. Use as little ultrasonic energy as possible. Bonding starts at the pad on the Die and ends at the package (or substrate).

GaAs MMIC Low Noise Amplifier Die, 18-23GHz

Feature:

- Frequency range: 18-23GHz
- Small signal gain: 21dB
- Noise figure: 1.8dB max.
- P-1dB: 5dBm
- Power supply: +5V/40mA
- 50Ohm input/output
- 100% on-Die test
- Die size: 2.4 x 1.2 x 0.1 mm

Functional Diagram:



General Description:

MYM2318-1.8 is a broadband low noise amplifier Die with a frequency range covering 18GHz~23GHz, a small signal gain of 21dB, and an in-band Max noise figure of 1.8dB. The MYM2318-1.8 operates from a single +5V supply.

Absolute Max. Ratings

Max drain voltage	+7V
Max input power	+10dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

[1] Exceeding any of the above Max limits may cause permanent damage.

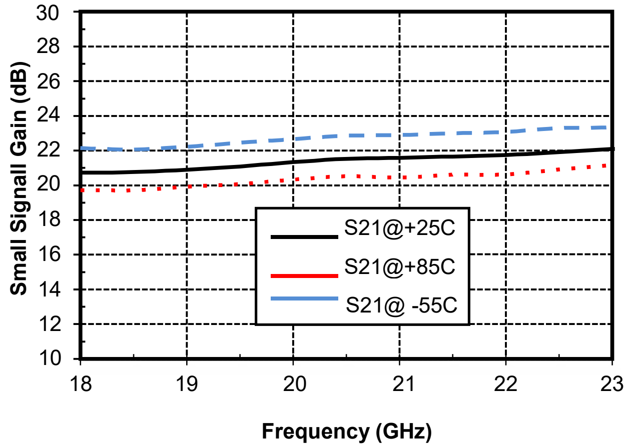
Electrical Specifications (TA= +25°C, Vd=+5V)

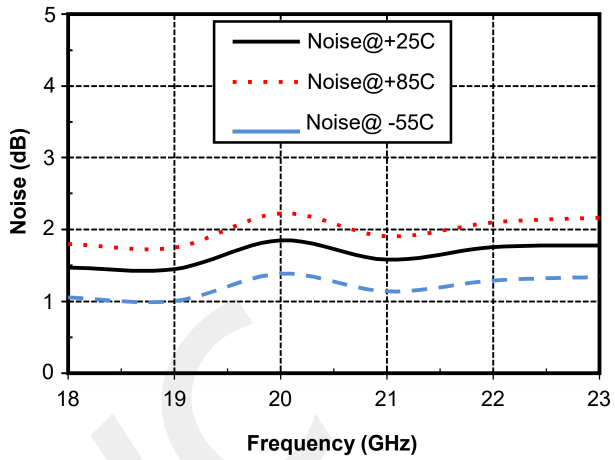
Parameter	Min	Typ	Max	Unit
Frequency Range		18-23		GHz
Small signal gain	20.5	21	22	dB
Gain flatness		±0.75		dB
Noise Figure	-	-	1.8	dB
P-1dB	4	5	7	dBm
Input return loss	10	13	-	dB
Output return loss	17	19	-	dB
Quiescent Current		40		mA

MYMMIC

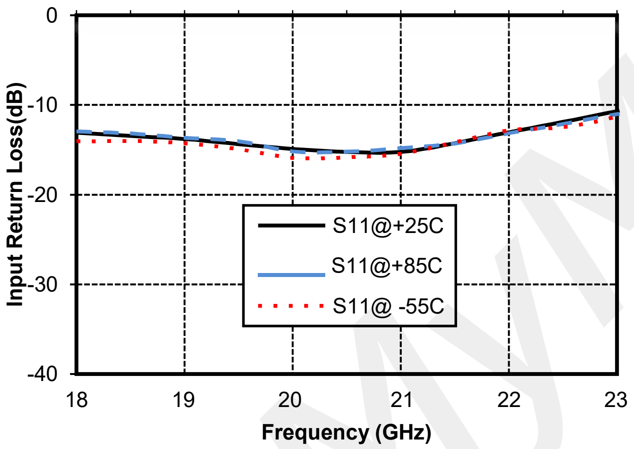
GaAs MMIC Low Noise Amplifier Die, 18-23GHz

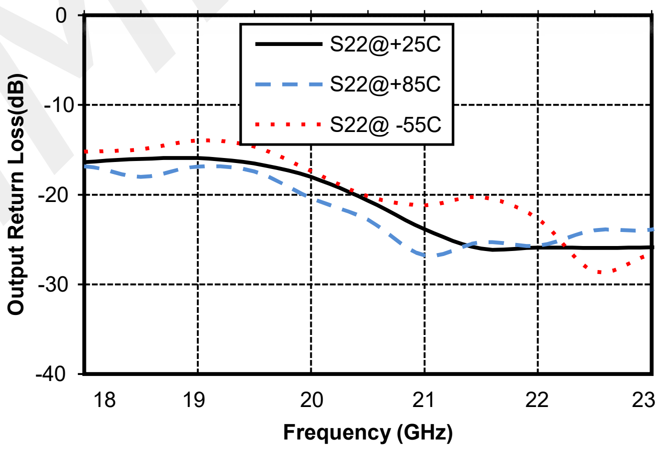
Gain vs. Temperature Noise Figure vs. Temperature



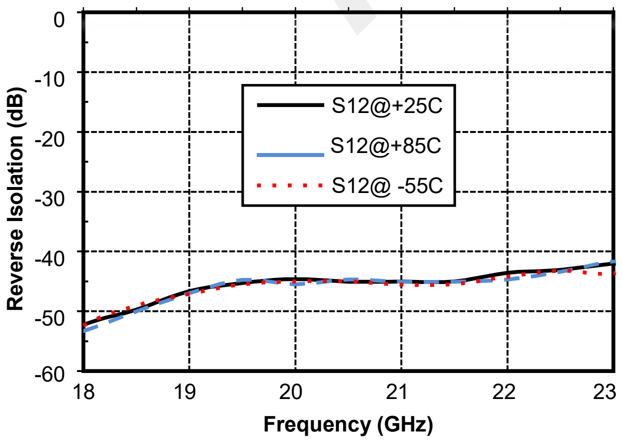


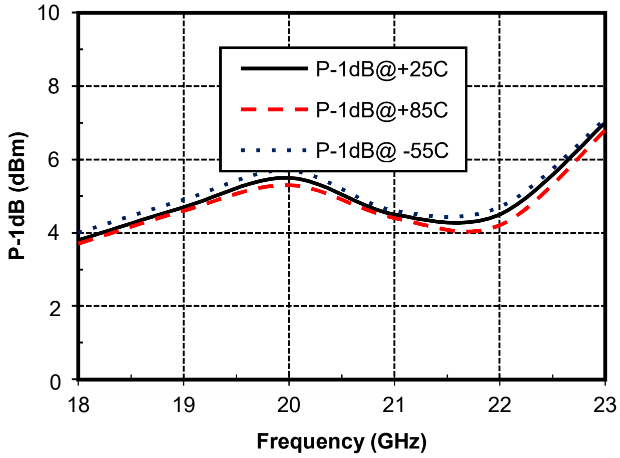
Input Return Loss vs. Temperature Output Return Loss vs. Temperature





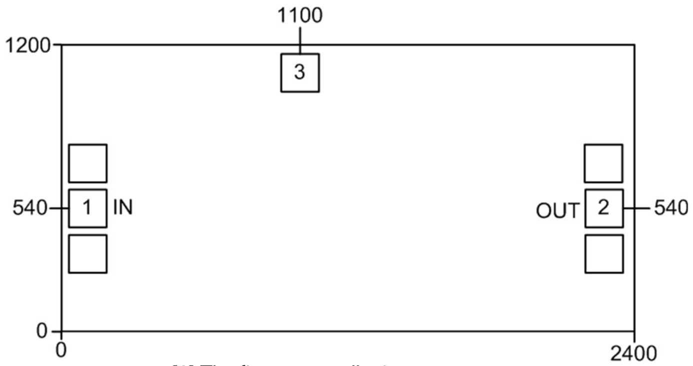
Reverse Isolation vs. Temperature P-1dB vs. Temperature





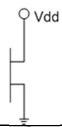
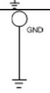
MYMMIC

Outline drawing



[2] The figures are all micrometers

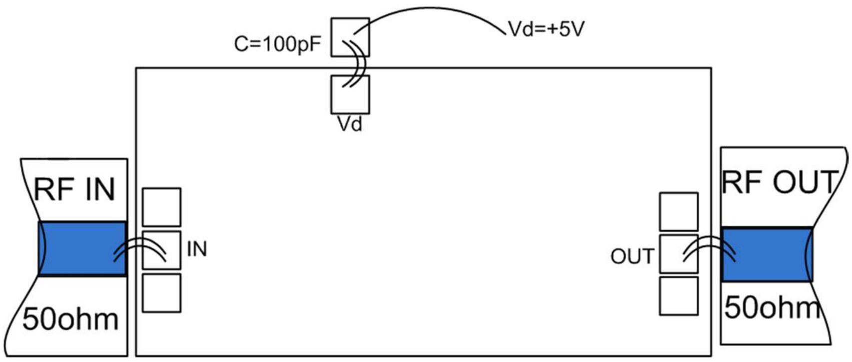
Pad Descriptions

Pad number	Function	Description	Interface schematic
1	RFIN	RF signal input, no need for DC blocking capacitors	
2	RFOUT	RF signal output without DC blocking capacitors	
3	VDD	Amplifier drain bias, external 100pF required Bypass capacitor	
Die bottom	GND	The bottom of the Die requires RF and DC grounding good	

MYMMIC

GaaS MMIC Low Noise Amplifier Die, 18-23GHz

Recommended assembly drawing



Notes

- The Die needs to be stored in a container with antistatic function and stored in a nitrogen atmosphere.
- It is prohibited to attempt to wet the surface of the bare Die by wet chemistry.
- Please strictly comply with ESD protection requirements to avoid electrostatic damage to the bare Die.
- Regular operation: Use a precision pointed tweezers to pick up the bare Die. Avoid tools or fingers touching the surface of the Die during operation.
- Rack Mounting Recommendations: Bare Die mounting can use AuSn solder eutectic sintering or conductive adhesive bonding processes. The mounting surface must be clean and flat.
- Sintering process: It is recommended to use an AuSn solder sheet with a gold/tin ratio of 80/20. The working surface temperature reached 255°C and the tool (vacuum chuck) temperature reached 265°C. When the high-temperature gas mixture (nitrogen-hydrogen gas ratio is 90/10) is blown into the Die, the temperature at the top of the tool is increased to 290°C. Do not leave the Die at temperatures above 320°C for more than 20 seconds. Do not rub for more than 3 seconds.
- Adhesion process: The amount of conductive glue to be dispensed should be as small as possible. After the Die is placed in the installation position, the conductive adhesive can be seen around it. For the curing conditions, please follow the information provided by the manufacturer of the conductive adhesive.
- Bonding recommendations: Φ0.025mm (1mil) gold wire is used for both spherical and wedge bonding. Thermosonic bonding temperature 150°C. Ball bond guillotine pressure 40~50gf, wedge bond guillotine pressure 18~22gf. Use as little ultrasonic energy as possible. Bonding starts at the Die The pad on the end of the package (or substrate).

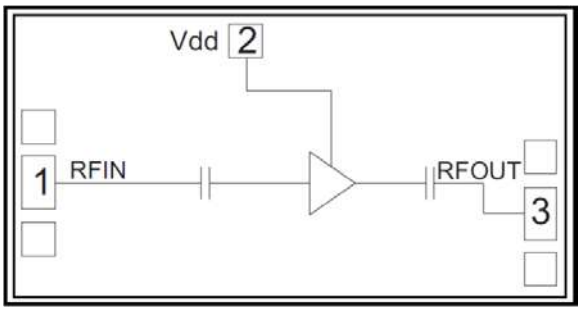
MYMMIC

GaAs MMIC Low Noise Amplifier Die, 18-32GHz

Feature:

- Frequency range: 18-32GHz
- Small signal gain: 14dB
- Noise figure: 2.0dB typ.
- Noise figure: 2.4dB max.
- P-1dB: 6dBm
- Power supply: +3.3V/30mA
- 50Ohm input/output
- 100% on-Die test
- Die size: 1.28 x 0.75 x 0.1 mm

Functional Diagram:



General Description:

MYM3218-2.0 is a wideband low noise amplifier Die with a frequency range of 18GHz~32GHz, small signal gain of 14dB, and in-band noise figure. 2.0dB. MYM3218-2.0 operates from a single +3.3V supply.

Absolute Max. Ratings

Max drain voltage	+6V
Max input power	+10dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

[1] Exceeding any of the above Max limits may cause permanent damage.

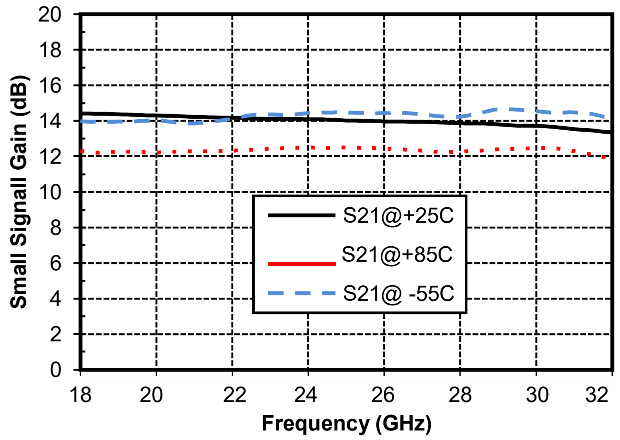
MYMMIC

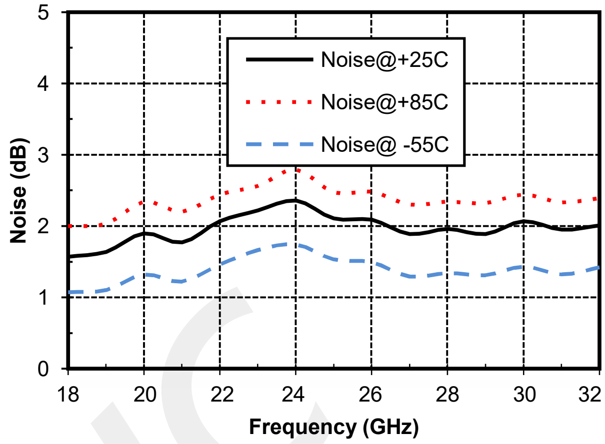
Electrical Specifications (TA= +25°C, Vd=+3.3V)

Parameter	Min	Typ	Max	Unit
Frequency Range		18-32		GHz
Small signal gain	13.5	14	14.5	dB
Gain flatness		±0.5		dB
Noise Figure	-	2.0	2.4	dB
P-1dB	5.5	6	8.5	dBm
Input return loss	7	10	-	dB
Output return loss	14	20	-	dB
Quiescent Current		30		mA

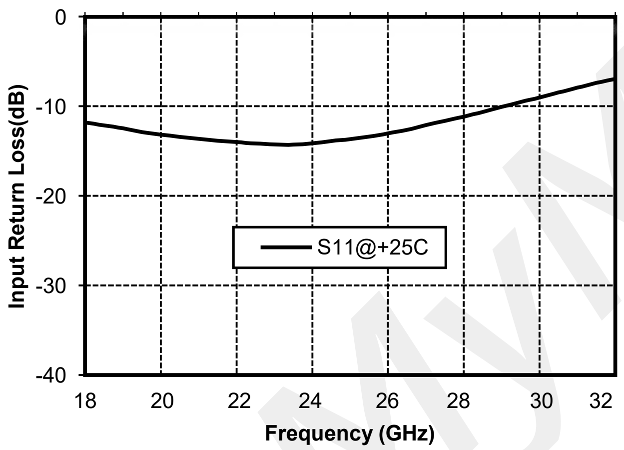
GaAs MMIC Low Noise Amplifier Die, 18-32GHz

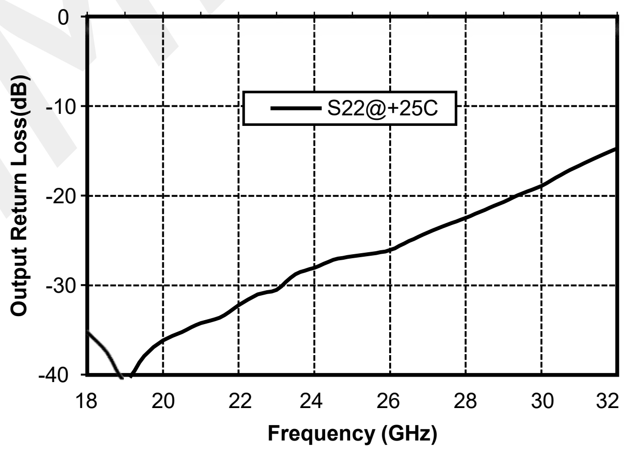
Gain vs. Temperature Noise Figure vs. Temperature



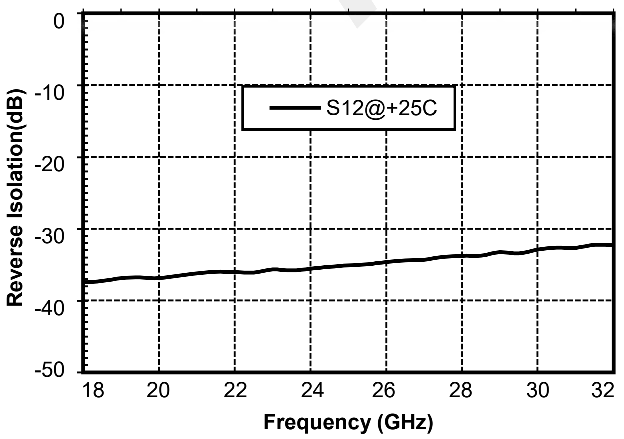


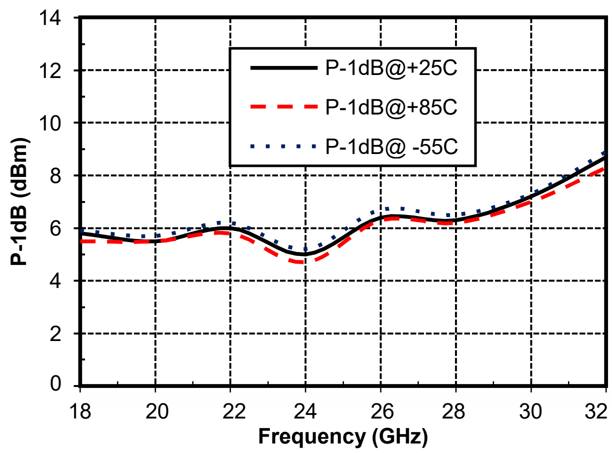
Input Return Loss vs. Temperature Output Return Loss vs. Temperature





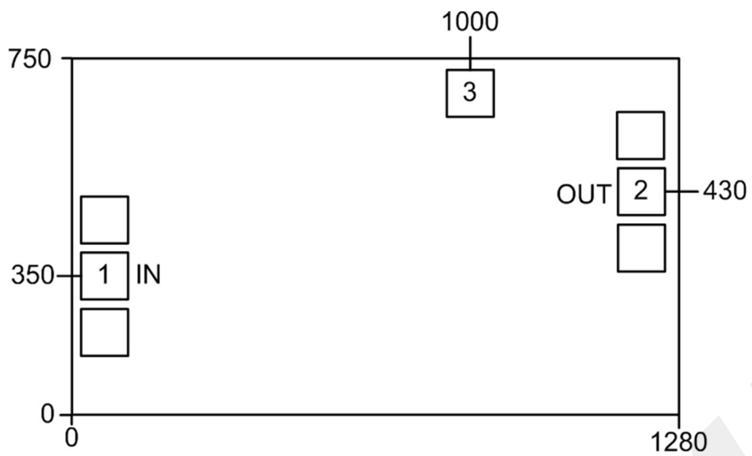
Reverse Isolation vs. Temperature P-1dB vs. Temperature





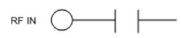
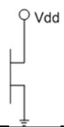
GaAs MMIC Low Noise Amplifier Die, 18-32GHz

Outline drawing



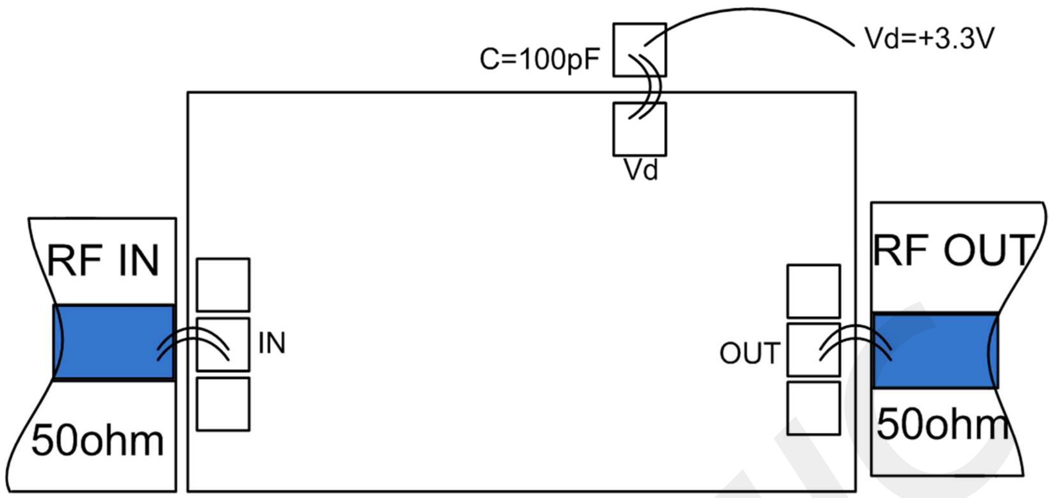
[2] The figures are all micrometers

Pad Descriptions

Pad number	Function	Description	Interface schematic
1	RFIN	RF signal input, no need for DC blocking capacitors	
2	RFOUT	RF signal output without DC blocking capacitors	
3	VDD	Amplifier drain bias, external 100pF required Bypass capacitor	
Die bottom	GND	The bottom of the Die requires RF and DC grounding good	

MYMMIC

Recommended assembly drawing



Notes

- The Die needs to be stored in a container with antistatic function and stored in a nitrogen atmosphere.
- It is prohibited to attempt to wet the surface of the bare Die by wet chemistry.
- Please strictly comply with ESD protection requirements to avoid electrostatic damage to the bare Die.
- Regular operation: Use a precision pointed tweezers to pick up the bare Die. Avoid tools or fingers touching the surface of the Die during operation.
- Rack Mounting Recommendations: Bare Die mounting can use AuSn solder eutectic sintering or conductive adhesive bonding processes. The mounting surface must be clean and flat.
- Sintering process: It is recommended to use an AuSn solder sheet with a gold/tin ratio of 80/20. The working surface temperature reached 255°C and the tool (vacuum chuck) temperature reached 265°C. When the high-temperature gas mixture (nitrogen-hydrogen gas ratio is 90/10) is blown into the Die, the temperature at the top of the tool is increased to 290°C. Do not leave the Die at temperatures above 320°C for more than 20 seconds. Do not rub for more than 3 seconds.
- Adhesion process: The amount of conductive glue to be dispensed should be as small as possible. After the Die is placed in the installation position, the conductive adhesive can be seen around it. For the curing conditions, please follow the information provided by the manufacturer of the conductive adhesive.
- Bonding recommendations: Φ0.025mm (1mil) gold wire is used for both spherical and wedge bonding. Thermosonic bonding temperature 150°C. Ball bond guillotine pressure 40~50gf, wedge bond guillotine pressure 18~22gf. Use as little ultrasonic energy as possible. Bonding starts at the Die
The pad on the end of the package (or substrate).

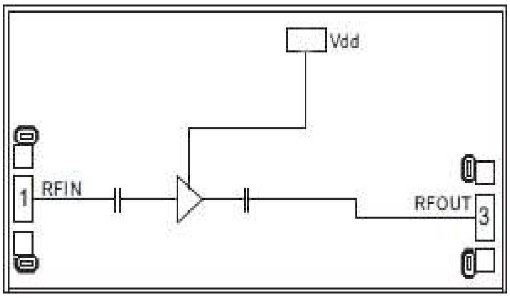
MYMMIC

GaAs MMIC Low Noise Amplifier Die, 18-40GHz

Feature:

- Frequency range: 18-40GHz
- Small signal gain: 8dB (positive slope)
- Noise figure: 3.0dB typ. /3.5dB max
- P-1dB: 5dBm
- Power supply: +5V/25mA
- 50Ohm input/output
- 100% on-Die test
- Die size: 1.6 x 1.6 x 0.09 mm

Functional Diagram:



General Description:

MYM4018C is a broadband low noise amplifier Die with a frequency range of 18 GHz to 40 GHz, small signal gain of 8 dB, and in-band typical noise figure. 3.0dB, Max noise figure 3.5dB. The MYM4018C operates from a single +5V supply.

Absolute Max. Ratings

Max drain voltage	+7V
Max input power	+10dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

[1] Exceeding any of the above Max limits may cause permanent damage.

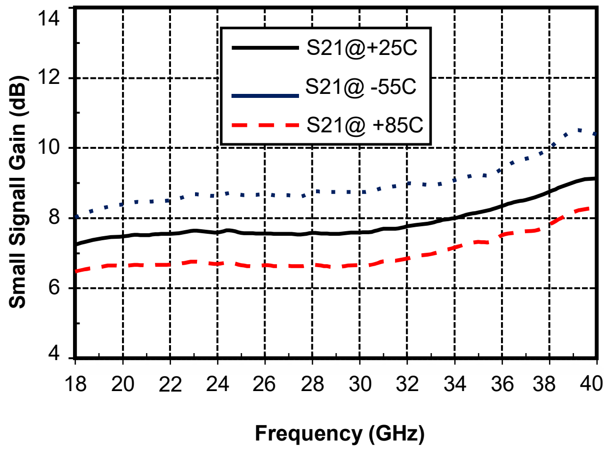
Electrical Specifications (TA= +25°C, Vd=+5V)

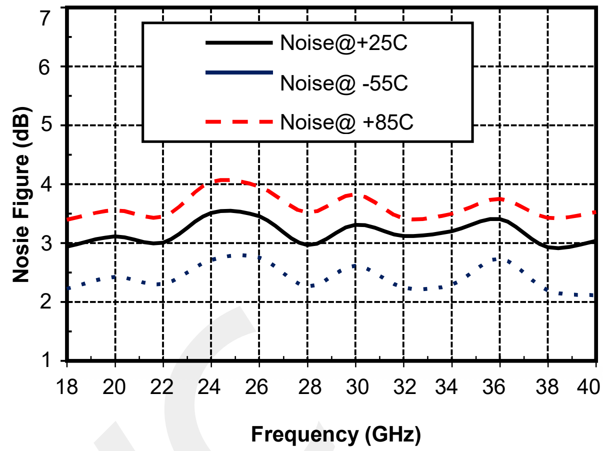
Parameter	Min	Typ	Max	Unit
Frequency Range		18-40		GHz
Small signal gain	7.5	8	9	dB
Gain flatness		±0.75		dB
Noise Figure	-	3.0	3.5	dB
P-1dB	-	5	-	dBm
Input return loss	15	18	-	dB
Output return loss	20	30	-	dB
Quiescent Current		25		mA

MYMMIC

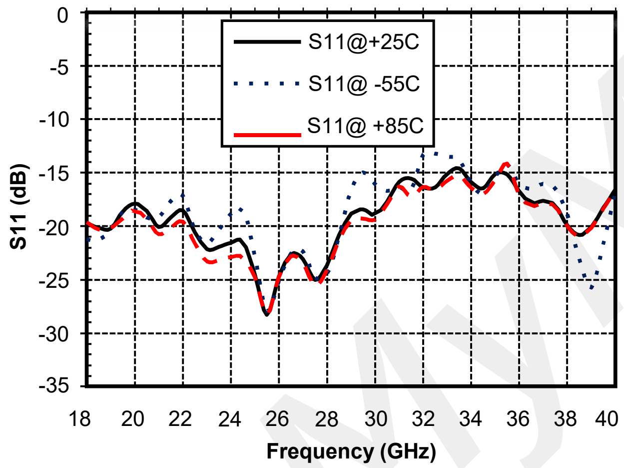
GaAs MMIC Low Noise Amplifier Die, 18-40GHz

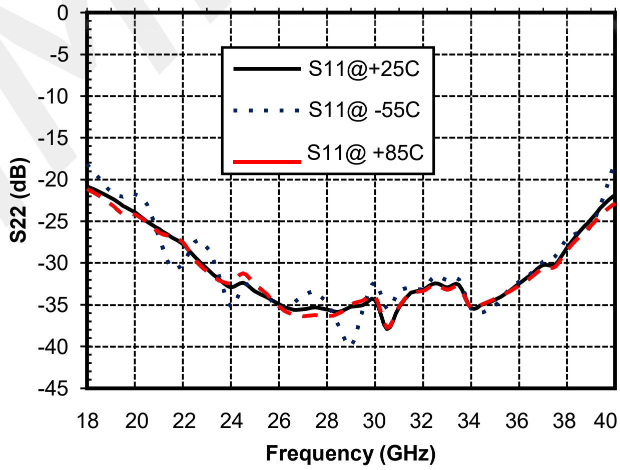
Gain vs. Frequency Noise Figure vs. Frequency



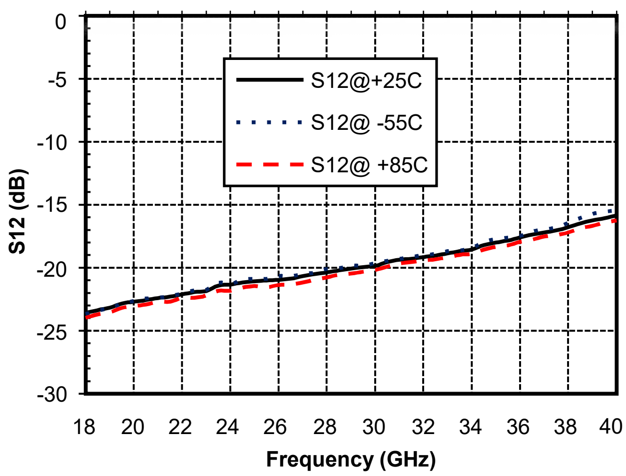


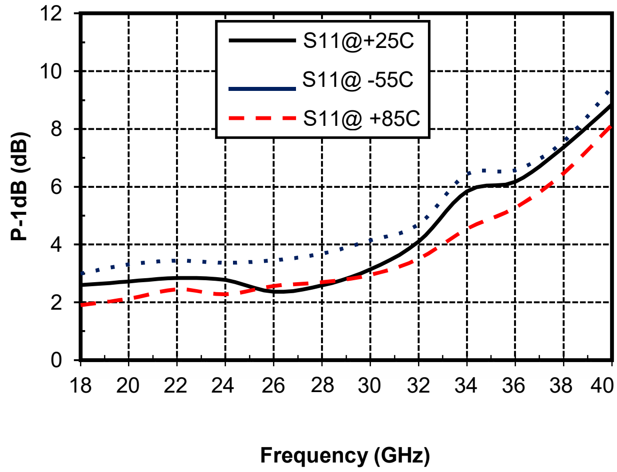
Input Return Loss vs. Frequency Output Return Loss vs. Frequency





Reverse Isolation vs. Frequency P-1dB vs. Frequency

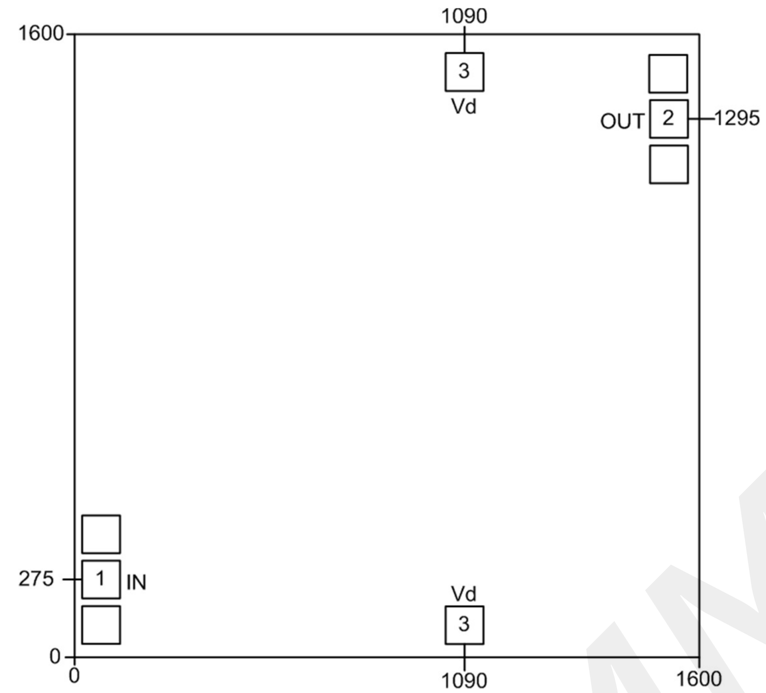




MYMMIC

GaAs MMIC Low Noise Amplifier Die, 18-40GHz

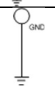
Outline drawing



2] The figures are all micrometers

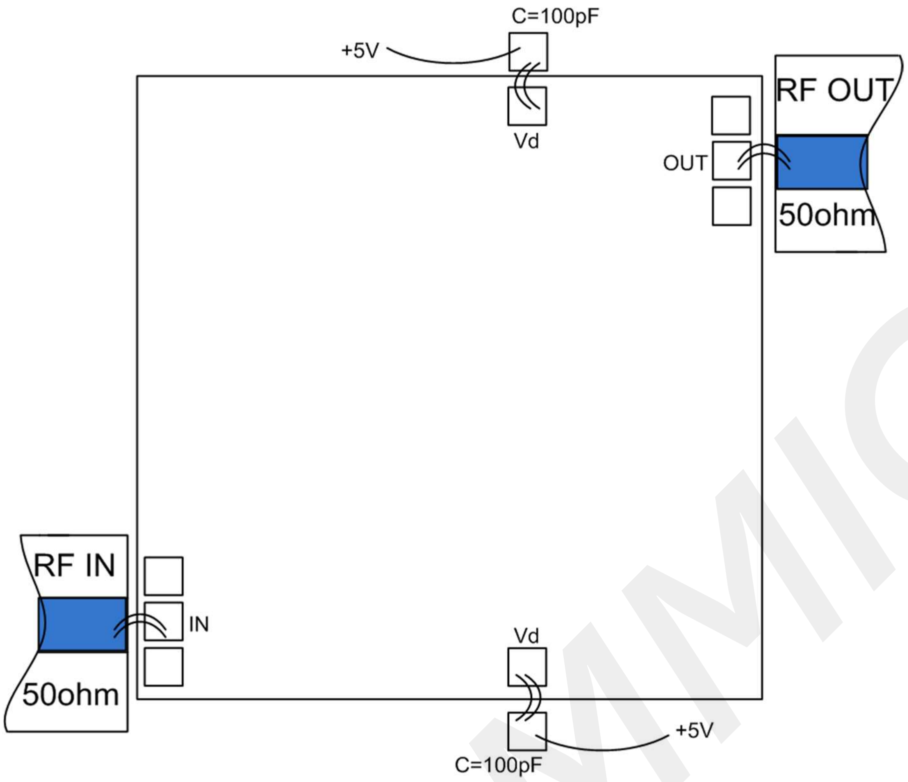
MyMMIC

Pad Descriptions

Pad number	Function	Description	Interface schematic
1	RFIN	RF signal input, no need for DC blocking capacitors	
2	RFOUT	RF signal output without DC blocking capacitors	
3	VD	The amplifier drain bias requires an external 100pF bypass capacitor, single-sided power supply, only one side of the bond Vd.	
Die bottom	GND	The bottom of the Die needs good grounding with RF and DC	

GaAs MMIC Low Noise Amplifier Die, 18-40GHz

Recommended assembly drawing



[3] Single-side power supply requires only one side of the bonding Vd.

Notes

- The Die needs to be stored in a container with antistatic function and stored in a nitrogen atmosphere.
- It is prohibited to attempt to wet the surface of the bare Die by wet chemistry.
- Please strictly comply with ESD protection requirements to avoid electrostatic damage to the bare Die.
- Regular operation: Use a precision pointed tweezers to pick up the bare Die. Avoid tools or fingers touching the surface of the Die during operation.
- Rack Mounting Recommendations: Bare Die mounting can use AuSn solder eutectic sintering or conductive adhesive bonding processes. The mounting surface must be clean and flat.
- Sintering process: It is recommended to use an AuSn solder sheet with a gold/tin ratio of 80/20. The working surface temperature reached 255°C and the tool (vacuum chuck) temperature reached 265°C. When the high-temperature gas mixture (nitrogen-hydrogen gas ratio is 90/10) is blown into the Die, the temperature at the top of the tool is increased to 290°C. Do not leave the Die at temperatures above 320°C for more than 20 seconds. Do not rub for more than 3 seconds.
- Adhesion process: The amount of conductive glue to be dispensed should be as small as possible. After the Die is placed in the installation position, the conductive adhesive can be seen around it. For the curing conditions, please follow the information provided by the manufacturer of the conductive adhesive.
- Bonding recommendations: Φ0.025mm (1mil) gold wire is used for both spherical and wedge bonding. Thermosonic bonding temperature 150°C. Ball bond guillotine pressure 40~50gf, wedge bond guillotine pressure 18~22gf. Use as little ultrasonic energy as possible. Bonding starts at the Die
The pad on the end of the package (or substrate).

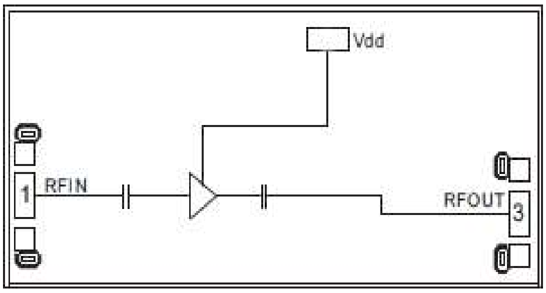
MYMMIC

GaAs MMIC Low Noise Amplifier Die, 18-40GHz

Feature:

- Frequency range: 18-40GHz
- Small Signal Gain: 9.5dB (Positive Slop
- Noise figure: 3.0dB typ. /3.2dB max
- P-1dB: 12dBm
- Power supply: +5V/40mA
- 50Ohm input/output
- 100% on-Die test
- Die size: 1.85 x 1.6 x 0.09 mm

Functional Diagram:



General Description:

MYM4018D is a broadband low noise amplifier Die with a frequency range of 18 GHz to 40 GHz, a small signal gain of 9.5 dB, and an in-band typical noise figure. 3.0dB, Max noise figure 3.2dB. The MYM4018D operates from a single +5V supply.

Absolute Max. Ratings

Max drain voltage	+7V
Max input power	+10dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

[1] Exceeding any of the above Max limits may cause permanent damage.

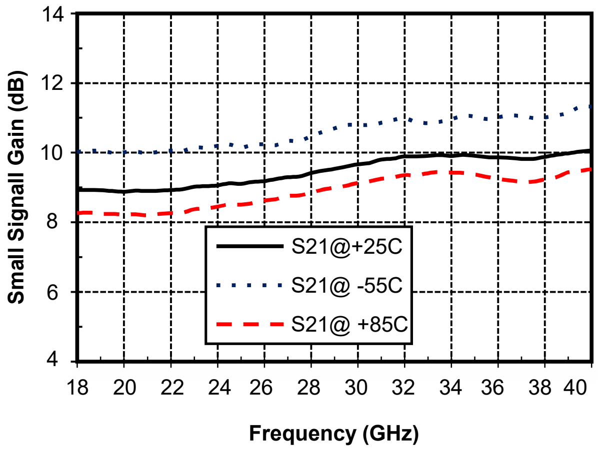
Electrical Specifications (TA= +25°C, Vd=+5V)

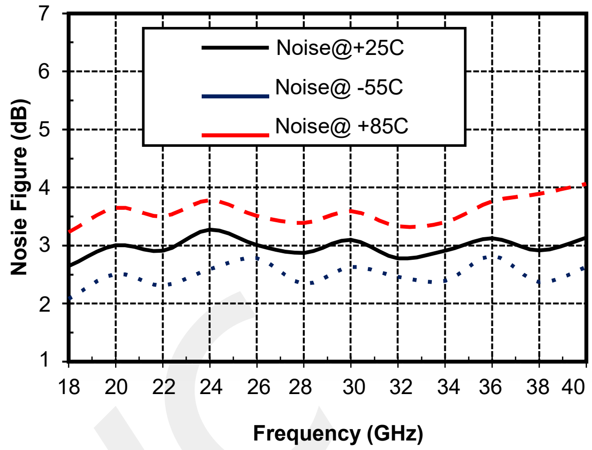
Parameter	Min	Typ	Max	Unit
Frequency Range		18-40		GHz
Small signal gain	9	9.5	10	dB
Gain flatness		±0.5		dB
Noise Figure	-	3.0	3.2	dB
P-1dB	-	12	-	dBm
Input return loss	17	20	-	dB
Output return loss	20	25	-	dB
Quiescent Current		40		mA

MYMMIC

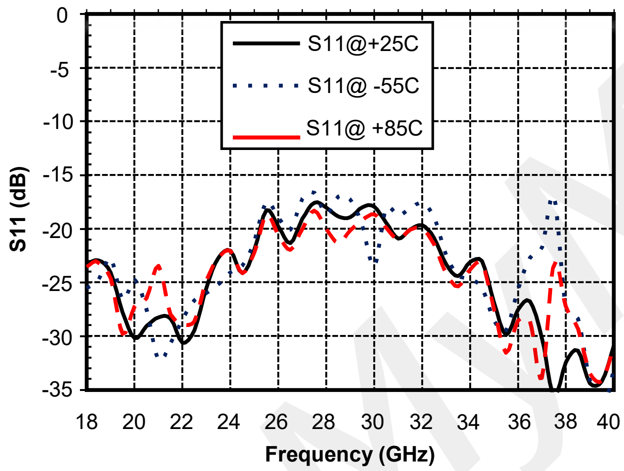
GaAs MMIC Low Noise Amplifier Die, 18-40GHz

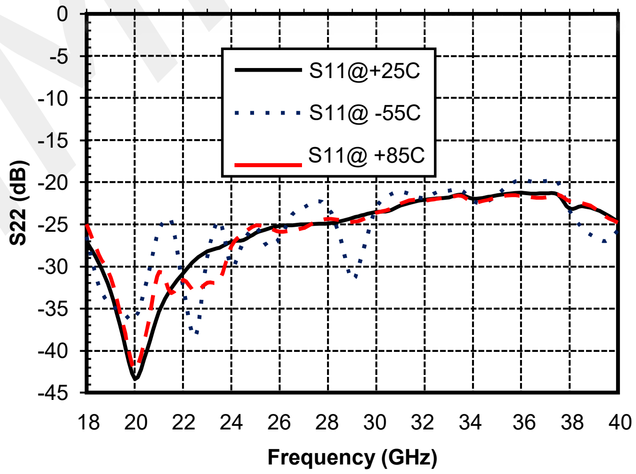
Gain vs. Frequency Noise Figure vs. Frequency



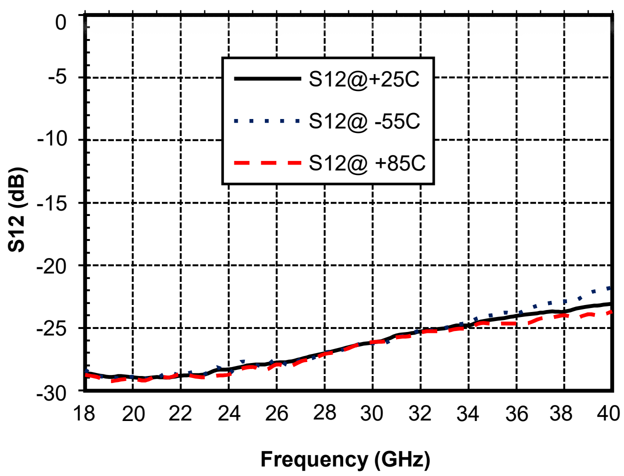


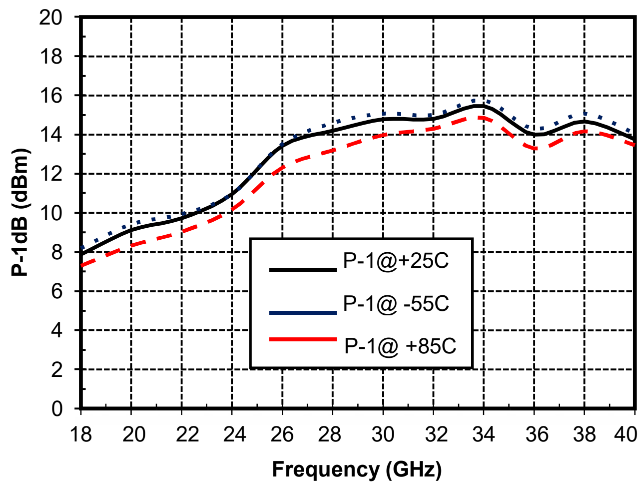
Input Return Loss vs. Frequency Output Return Loss vs. Frequency





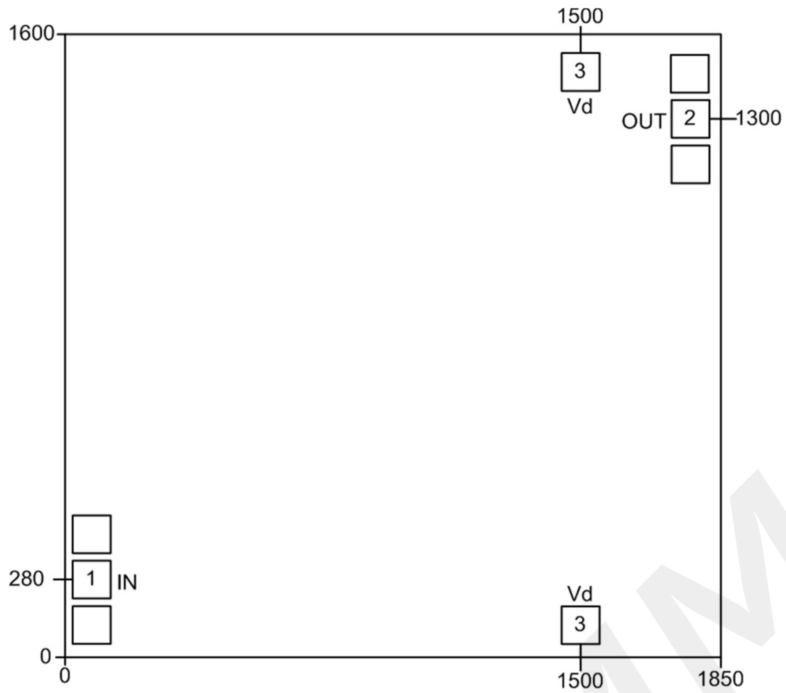
Reverse Isolation vs. Frequency P-1dB vs. Frequency





GaAs MMIC Low Noise Amplifier Die, 18-40GHz

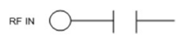
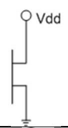
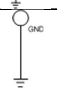
Outline drawing



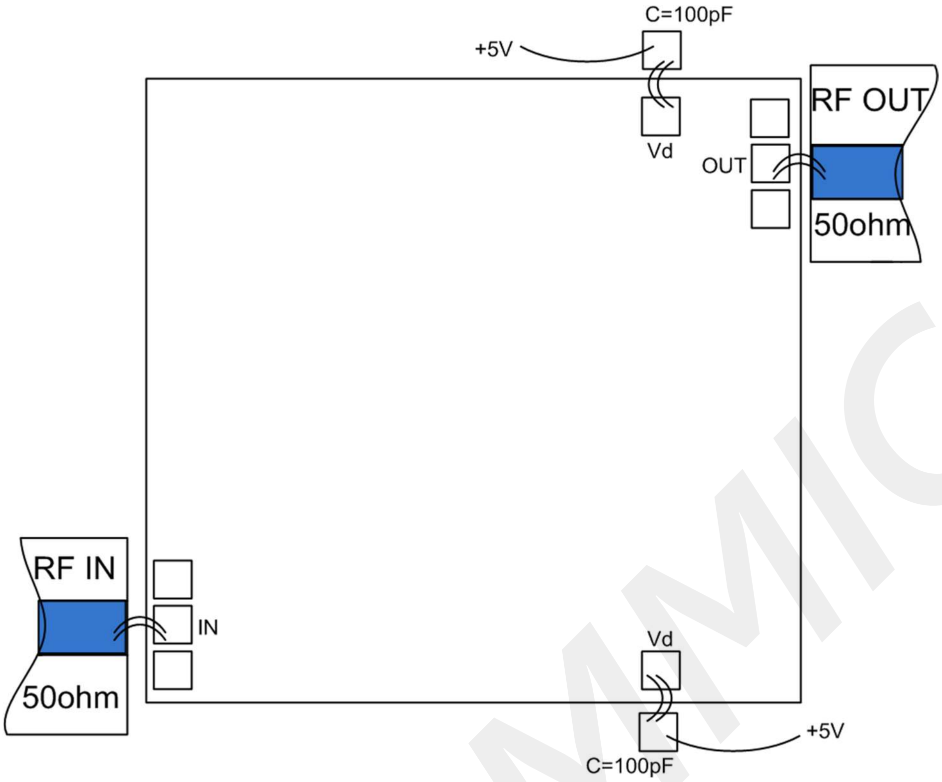
2] The figures are all micrometers

MyMMIC

Pad Descriptions

Pad number	Function	Description	Interface schematic
1	RFIN	RF signal input, no need for DC blocking capacitors	
2	RFOUT	RF signal output without DC blocking capacitors	
3	VD	The amplifier drain bias requires an external 100pF bypass capacitor, single-sided power supply, only one side of the bond Vd.	
Die bottom	GND	The bottom of the Die needs good grounding with RF and DC	

Recommended assembly drawing



[3] Single-side power supply requires only one side of the bonding Vd.

Notes

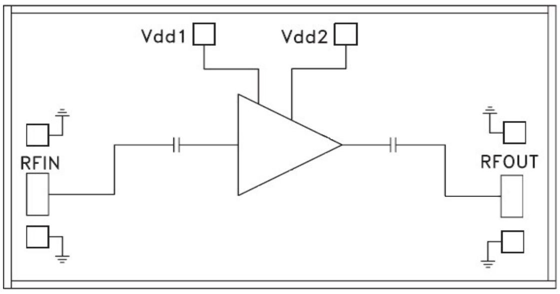
- The Die needs to be stored in a container with antistatic function and stored in a nitrogen atmosphere.
- It is prohibited to attempt to wet the surface of the bare Die by wet chemistry.
- Please strictly comply with ESD protection requirements to avoid electrostatic damage to the bare Die.
- Regular operation: Use a precision pointed tweezers to pick up the bare Die. Avoid tools or fingers touching the surface of the Die during operation.
- Rack Mounting Recommendations: Bare Die mounting can use AuSn solder eutectic sintering or conductive adhesive bonding processes. The mounting surface must be clean and flat.
- Sintering process: It is recommended to use an AuSn solder sheet with a gold/tin ratio of 80/20. The working surface temperature reached 255°C and the tool (vacuum chuck) temperature reached 265°C. When the high-temperature gas mixture (nitrogen-hydrogen gas ratio is 90/10) is blown into the Die, the temperature at the top of the tool is increased to 290°C. Do not leave the Die at temperatures above 320°C for more than 20 seconds. Do not rub for more than 3 seconds.
- Adhesion process: The amount of conductive glue to be dispensed should be as small as possible. After the Die is placed in the installation position, the conductive adhesive can be seen around it. For the curing conditions, please follow the information provided by the manufacturer of the conductive adhesive.
- Bonding recommendations: Φ0.025mm (1mil) gold wire is used for both spherical and wedge bonding. Thermosonic bonding temperature 150°C. Ball bond guillotine pressure 40~50gf, wedge bond guillotine pressure 18~22gf. Use as little ultrasonic energy as possible. Bonding starts at the Die
  The pad on the end of the package (or substrate).

GaAs MMIC Low Noise Amplifier Die, 18-40GHz

Feature:

- Frequency range: 18-40GHz
- Small signal gain: 15dB (positive slope)
- Noise figure: 3.0dB max.
- P-1dB: 5dBm
- Power supply: +5V/45mA
- 50Ohm input/output
- 100% on-Die test
- Die size: 2.25 x 1.6 x 0.09 mm

Functional Diagram:



General Description:

MYM4018E is a wideband low noise amplifier Die with a frequency range covering 18GHz to 40GHz, a small signal gain of 15dB, and an in-band Max noise figure. 3.0dB. The MYM4018E operates from a single +5V supply.

Absolute Max. Ratings

Max drain voltage	+7V
Max input power	+10dBm
Operating temperature	-55 ~ +85°C
storage temperature	-65 ~ +150°C

[1] Exceeding any of the above Max limits may cause permanent damage.

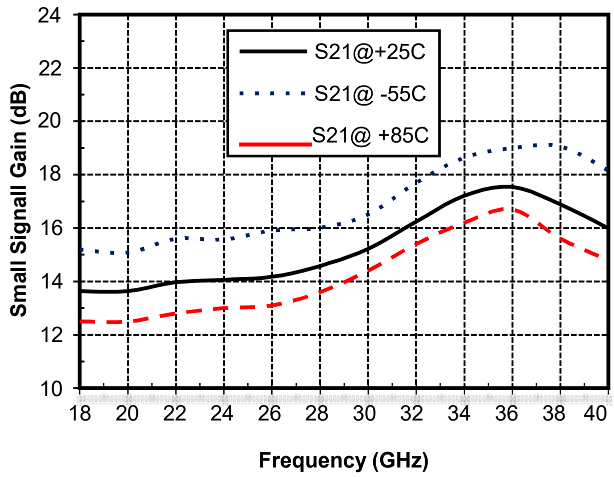
Electrical Specifications (TA = +25°C, Vd = +5V)

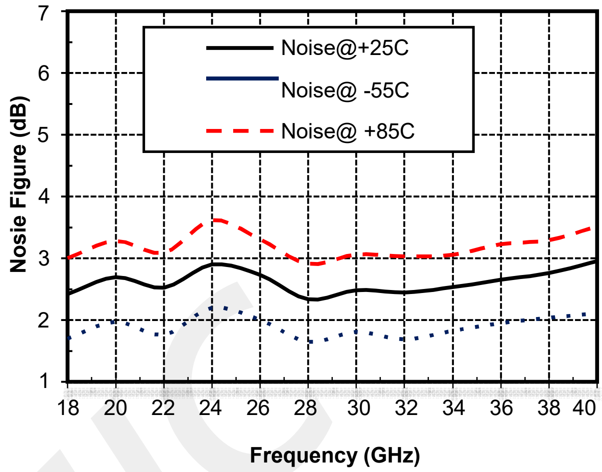
Parameter	Min	Typ	Max	Unit
Frequency Range		18-40		GHz
Small signal gain	13.5	15	17.5	dB
Gain flatness		±2.0		dB
Noise Figure	-	-	3.0	dB
P-1dB	-	5	-	dBm
Input return loss	15	18	-	dB
Output return loss	20	25	-	dB
Quiescent Current		45		mA

MYMMIC

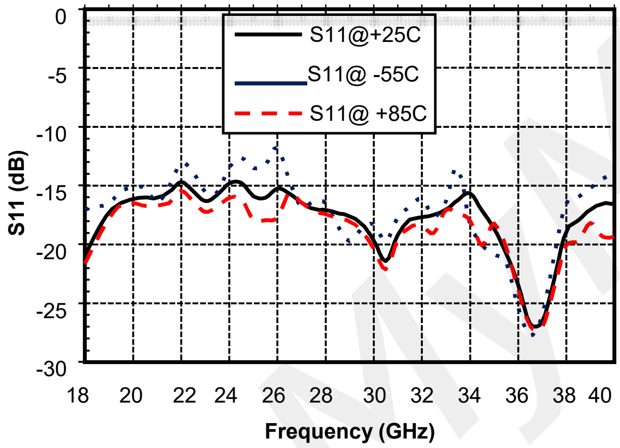
GaAs MMIC Low Noise Amplifier Die, 18-40GHz

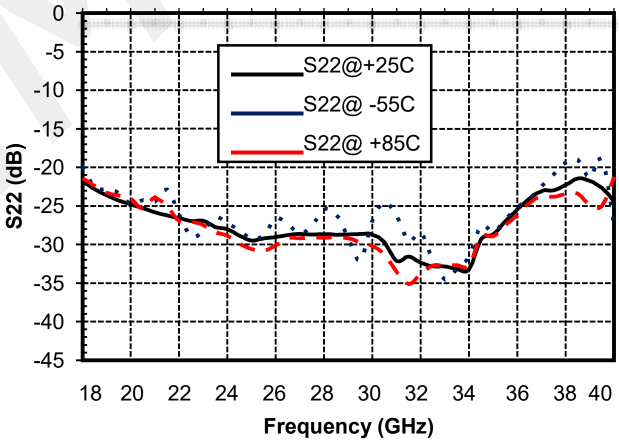
Gain vs. Frequency Noise Figure vs. Frequency



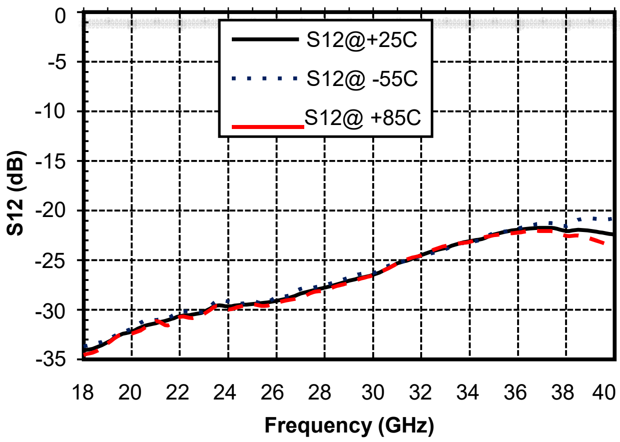


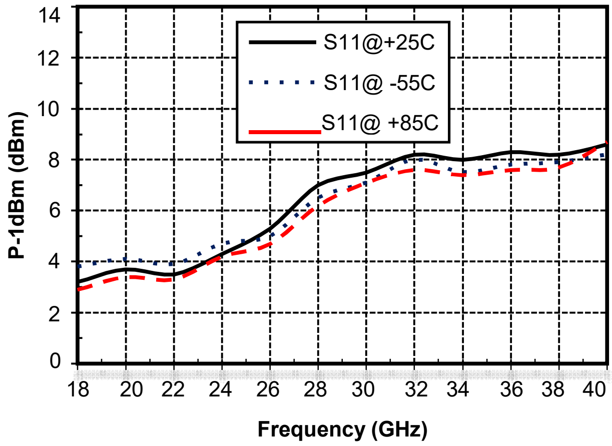
Input Return Loss vs. Frequency Output Return Loss vs. Frequency





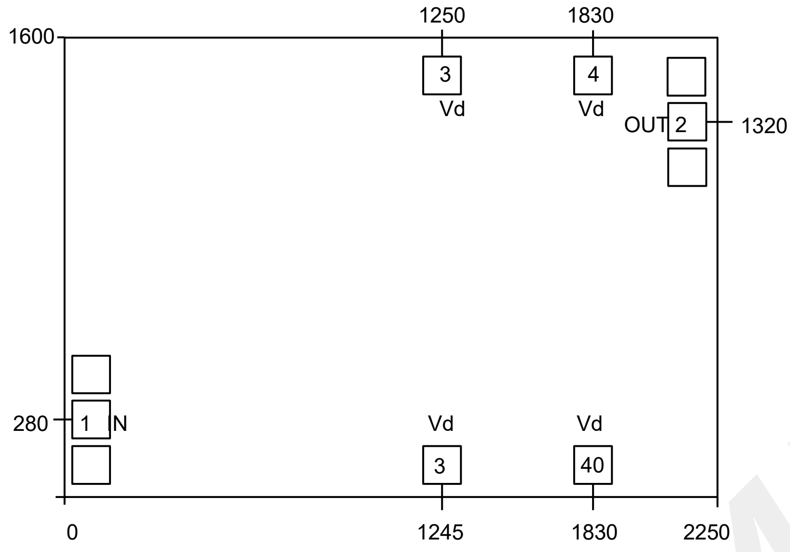
Reverse Isolation vs. Frequency P-1dB vs. Frequency





GaAs MMIC Low Noise Amplifier Die, 18-40GHz

Outline drawing



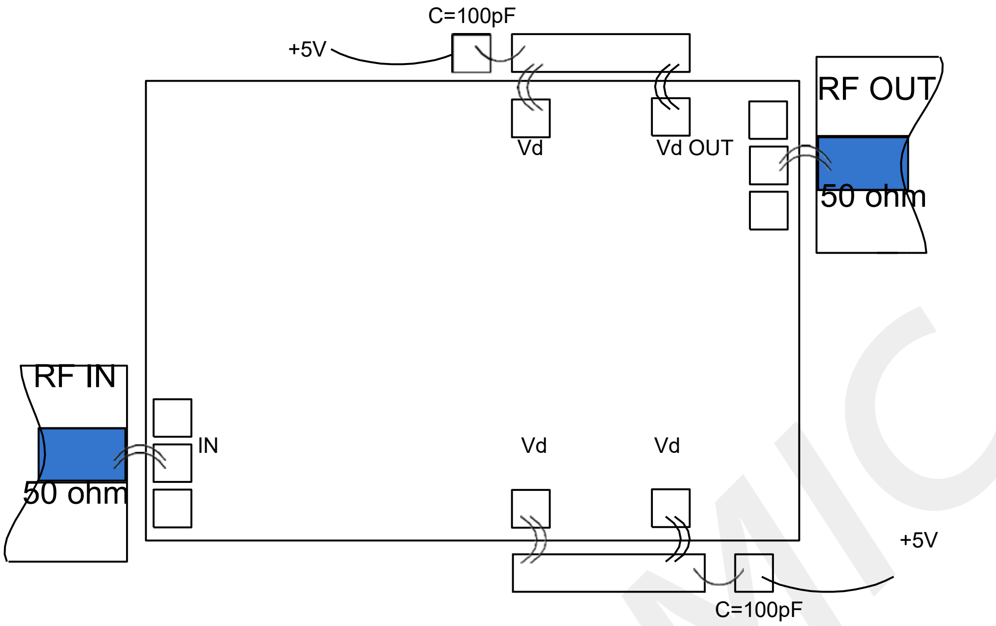
2] The figures are all micrometers

Pad Descriptions

Pad number	Function	Description	Interface schematic
1	RFIN	RF signal input, no need for DC blocking capacitors	RF IN
2	RFOUT	RF signal output without DC blocking capacitors	RF OUT
3	VD	The amplifier drain bias requires an external 100pF bypass capacitor, single-sided power supply, only one side of the bond Vd.	Vdd
Die bottom	GND	The bottom of the Die needs good grounding with RF and DC	GND

MYMMIC

Recommended assembly drawing



[3] Single-side power supply requires only one side of the bonding Vd.

Notes

- The Die needs to be stored in a container with antistatic function and stored in a nitrogen atmosphere.
- It is prohibited to attempt to wet the surface of the bare Die by wet chemistry.
- Please strictly comply with ESD protection requirements to avoid electrostatic damage to the bare Die.
- Regular operation: Use a precision pointed tweezers to pick up the bare Die. Avoid tools or fingers touching the surface of the Die during operation.
- Rack Mounting Recommendations: Bare Die mounting can use AuSn solder eutectic sintering or conductive adhesive bonding processes. The mounting surface must be clean and flat.
- Sintering process: It is recommended to use an AuSn solder sheet with a gold/tin ratio of 80/20. The working surface temperature reached 255°C and the tool (vacuum chuck) temperature reached 265°C. When the high-temperature gas mixture (nitrogen-hydrogen gas ratio is 90/10) is blown into the Die, the temperature at the top of the tool is increased to 290°C. Do not leave the Die at temperatures above 320°C for more than 20 seconds. Rubbing time should not exceed 3 seconds.
- Adhesion process: The amount of conductive glue to be dispensed should be as small as possible. After the Die is placed in the installation position, the conductive adhesive can be seen around it. For the curing conditions, please follow the information provided by the manufacturer of the conductive adhesive.
- Bonding recommendations: Use Φ0.025mm (1mil) gold wire for either spherical or wedge-type bonding. Thermosonic bonding temperature 150°C. Spherical bonding file pressure 40~50gf, wedge bond file pressure 18~22gf. Use as little ultrasonic energy as possible. Bonding starts at the pad on the Die and ends at the package (or substrate).

MYMMIC