

# Module GaAs FET Amplifiers

## 2.0 - 18.0 GHz

### MLA 2900-000 Series

V4.00

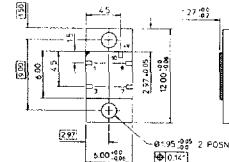
#### Features

- MiCM 20 Compatible
- Def Stan & CECC Specifications
- Direct 50ohm Microstrip Interfaces
- Broad Frequency Ranges
- Wide Dynamic Ranges

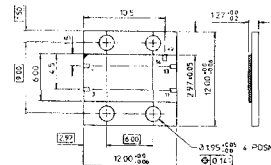
#### Description

The modular amplifiers in this series are miniature carrier mounted balanced designs providing a range of gain levels and output powers over the 2 to 18 GHz frequency range. Devices provide for direct integration with other MiCM components as well as existing microstrip circuitry. The package styles are compatible with the MiCM 20 standard, DEF STAN 59-90 (Part 1) Microwave Common Modules, Part 1: Interfaces and fixings for use up to 20GHz and Draft Basic Specification CECC 00 017 Microwave Common Modules, General Requirements and Interfaces and fixings for use up to 20GHz.

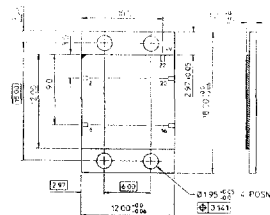
#### Package Style 1



#### Package Style 2



#### Package Style 3



#### Specifications @ +25° C

Frequency Range (GHz)	Output Power at 1dB Gain Compression (dBm) Min.	Gain (dB) Min.	Gain Flatness (dB) Max.	Gain Variation (dB/°C)	Noise Figure (dB) Max.	Input and Output VSWR Max.	DC Current at +8V (mA)	Package Style	Part Number
2.0 - 8.0	+5	18	±1.50	0.024	4.5	1.8	80	3	MLA2940-101
		20	±1.50	0.024	6.0	1.8	100	3	MLA2940-102
	+12	17	±1.50	0.024	7.0	1.8	150	3	MLA2940-201
		16	±2.00	0.024	8.0	1.8	200	3	MLA2940-301
6.0 - 12.0	+5	6	±0.50	0.012	4.0	2.0	45	1	MLA2950-101
		7	±0.50	0.012	5.0	2.0	50	1	MLA2950-102
		12	±1.00	0.024	5.0	2.0	80	2	MLA2950-103
		13	±1.00	0.024	6.0	2.0	100	2	MLA2950-104
	+12	5	±1.00	0.012	6.0	2.0	70	1	MLA2950-201
		10	±1.50	0.024	7.0	2.0	130	2	MLA2950-202
	+18	4	±1.50	0.012	8.0	2.0	100	1	MLA2950-301
		9	±2.00	0.024	9.0	2.0	180	2	MLA2950-302

Specifications Subject to Change Without Notice.

M/A-COM, Inc.

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North America:

Tel. (800) 366-2266

■ Asia/Pacific: Tel. +81 (03) 3226-1671

■ Europe: Tel. +44 (1344) 869 595

Fax (800) 618-8883

Fax +81 (03) 3226-1451

Fax +44 (1344) 300 020

## Specifications @ +25° C

Frequency Range (GHz)	Output Power at 1dB Gain Compression (dBm) Min.	Gain (dB) Min.	Gain Flatness (dB) Max.	Gain Variation (dB/°C)	Noise Figure (dB) Max.	Input and Output VSWR Max.	DC Current at +8V (mA)	Package Style	Part Number
12.0 - 18.0	+5	5	±0.50	0.012	5.0	2.0	45	1	MLA2960-101
		6	±0.50	0.012	6.0	2.0	50	1	MLA2960-102
		10	±1.00	0.024	5.5	2.0	80	2	MLA2960-103
		12	±1.00	0.024	6.5	2.0	100	2	MLA2960-104
	+12	5	±1.00	0.012	7.0	2.0	70	1	MLA2960-201
		10	±1.50	0.024	8.0	2.0	130	2	MLA2960-202
	+18	3.5	±1.00	0.012	9.0	2.0	100	1	MLA2960-301
		8	±1.50	0.024	10.0	2.0	180	2	MLA2960-302
6.0 - 18.0	+5	5	±0.50	0.012	5.0	2.0	45	1	MLA2970-101
		6	±0.50	0.012	6.0	2.0	50	1	MLA2970-102
		10	±1.00	0.024	5.5	2.0	80	2	MLA2970-103
		12	±1.00	0.024	6.5	2.0	100	2	MLA2970-104
	+12	5	±1.00	0.012	7.0	2.0	70	1	MLA2970-201
		10	±1.50	0.024	8.0	2.0	130	2	MLA2970-202
	+18	3.5	±1.50	0.012	9.0	2.0	100	1	MLA2970-301
		8	±2.00	0.024	10.0	2.0	180	2	MLA2970-302

## Notes

1. Maximum input power without damage +20dBm (CW).
2. Third order intercept point is typically 10dB above P1dB.
3. All amplifiers are unconditionally stable for any input or output VSWR, any phase.
4. Alternative +5V power supply available on selected amplifiers, please consult the factory.
5. Case operating temperature -55°C to +95°C. Storage temperature -55°C to +125°C. Maximum solder/epoxy attachment temperature +150°C.
6. Flanges have clearance holes for M1.6 screws (maximum head diameter 2.7mm).
7. Bonding pads are typically 0.5mm x 0.5mm.
8. Modules are available with left handed or right handed inputs and outputs as below:

Package Style	Left Handed		Right Handed	
	Input Port	Output Port	Input Port	Output Port
1	1	7	3	9
2	1	13	3	11
3	2	20	6	16

To specify left handed modules add L as a suffix to the part number and for right handed modules add R when ordering.

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