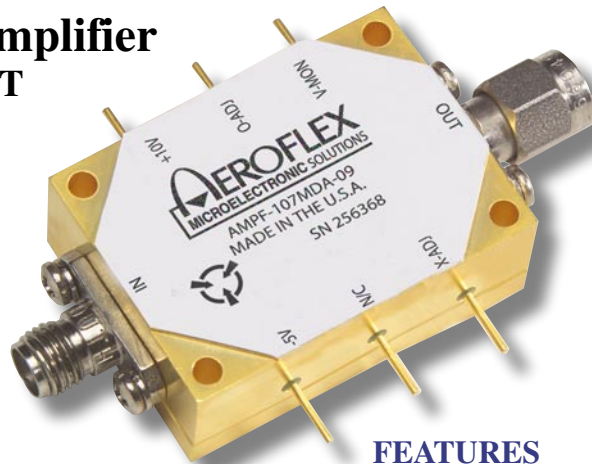


# Broadband Product Line

## AMPF-107MDA

### Modulator Driver Amplifier

#### ADVANCED DATA SHEET



#### DESCRIPTION

Aeroflex Microelectronic Solutions' driver amplifiers are designed for use in fiber optic, telecommunication and automated test equipment applications. These low power amplifiers are perfect for driving lithium niobate (LiNbO3) modulators at levels up to 7.5 Vpp and provide low jitter and minimized propagation delay, making them an excellent choice for OC-192/STM-64 (SONET) systems.

**Telcordia TR-NWT-930 Tested (Report available on request)**

#### FEATURES

- Less than 3 watt power consumption for 6.5 Vpp out
- 50 KHz to 13 GHz
- Low internal jitter and minimized propagation delay
- Output voltage adjustable from 4.0 to 7.5 Vpp
- 35 dB typical gain
- Limiting function to ensure high quality output signal, even with less than optimal input signal

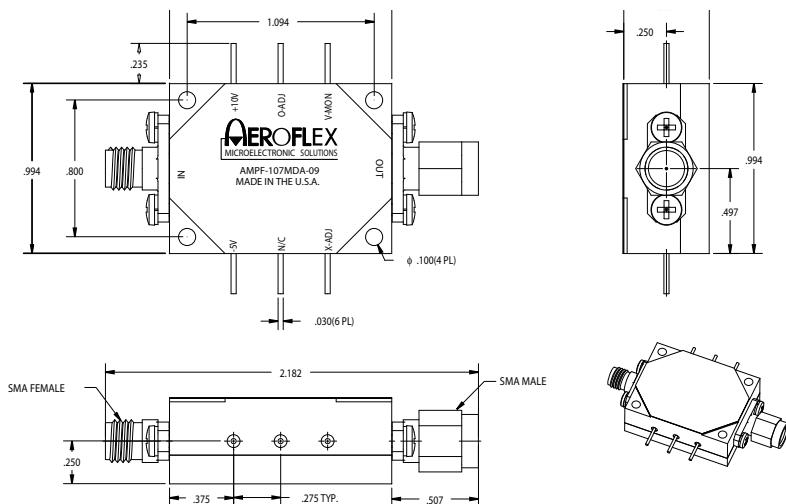
#### SPECIFICATIONS

Parameters	Min	Max	Units
Input Voltage		1.5	Vdc
Supply Voltage Positive	8	15	Vdc
Supply Voltage Negative	-4.5	6	Vdc
Operating Temperature	-10	+70	°C
Storage Temperature	-20	+85	°C

(V+ = +13.5 to +16.5V, V- = -4.75V to -5.75V, TA = -10°C to +70°C - Min/Max limits only), (V+ = +15V, V- = -5V, TA = +25°C - Typ), Zin/Zout = 50Ω)

Parameters	Conditions	Min	Typ	Max	Units
Bandwidth					
Low Frequency	3 dB point		30	50	kHz
High Frequency	3 dB point		13		GHz
Group Delay Flatness			±25		ps
Rise/Fall Time	10 - 90%		28	32	ps
Gain		28	35	40	dB
Output Voltage Swing	Input=0.7 Vpp NRZ	4	7	8	Vpp
Input Return Loss		10	12		dB
Output Overshoot			5	10	%
Output Eye Crossover		45	50	55	%
Symmetry					
Invert/Non-Invert			Invert		
Eye Crossing Adjust		-10		+10	%
Output Eye Opening	Vpp in eye center 10ps		85		%
Supply Current					
+10V			300	450	mA
-5V			20	40	mA
Output Modulator Bias (Optional)	Bias voltage Input	-9		+21	V

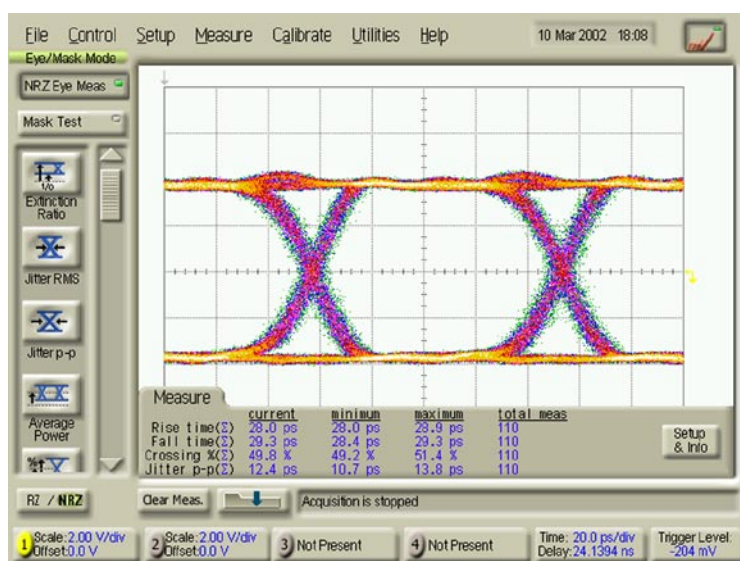
## OUTLINE DRAWING



## PIN FUNCTION

Pin #	Function
1	VOLTAGE MONITOR
2	OUTPUT ADJUST
3	+10 V
4	-5 V
5	NC
6	CROSSING ADJUST

## EYE PATTERN



## ORDERING INFORMATION

Model Number	Speed	Package
AMPF-107MDA	10.667 Gb/s	See Package Outline

### Plainview, New York

Toll Free: 800-THE-1553  
Fax: 516-694-6715

### SE and Mid-Atlantic

Tel: 321-951-4164  
Fax: 321-951-4254

### International

Tel: 805-778-9229  
Fax: 805-778-1980

### West Coast

Tel: 949-362-2260  
Fax: 949-362-2266

### Northeast

Tel: 603-888-3975  
Fax: 603-888-4585

### Central

Tel: 719-594-8017  
Fax: 719-594-8468

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Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused