

**Broadband Standard Product**  
**PA001040-32 GaN High Efficiency Driver Amplifier**  
**Broadband Power 100MHz to 4GHz**

February 9, 2009

[www.aeroflex.com/bband](http://www.aeroflex.com/bband)



**DESCRIPTION**

The PA001040-32 is a broadband high efficiency driver amplifier in a compact package and is ideal for use as a stable gain block, IF Amplifier or Driver Power Amplifier for commercial, military or space applications.

Our team of engineers can custom design power amplifiers using the latest simulation software and proprietary technology to meet even the most demanding specifications.

**FEATURES**

- ❑ 0.1 to 4GHz Frequency Range
- ❑  $P_{SAT} > 32\text{dBm}$
- ❑ 10dB typical gain
- ❑ Operates from a Single +28V Supply
- ❑ Unconditionally Stable
- ❑ Compact Size
- ❑ Hermetic Package

**SPECIFICATIONS**

**ABSOLUTE MAXIMUM RATINGS<sup>1</sup>**

PARAMETER	SYMBOL	MIN	MAX	UNITS
Operating Temperature – Case	$T_{MO}$	-55	+95	°C
Storage Temperature – Case	$T_{MS}$	-65	+125	°C
Positive Supply Voltage	$V_{PS}$	-	+32	V

1. Stresses above those listed under "Absolute Maximums Rating" may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

**NOMINAL OPERATING CONDITIONS**

PARAMETER	CONDITIONS	MIN	MAX	UNITS
Temperature, $T_C$ – Case	Full Range	-55	+85	°C
Positive Supply Voltage, $V_{PS}$		+27.75	+28.5	V

*Aeroflex Plainview*

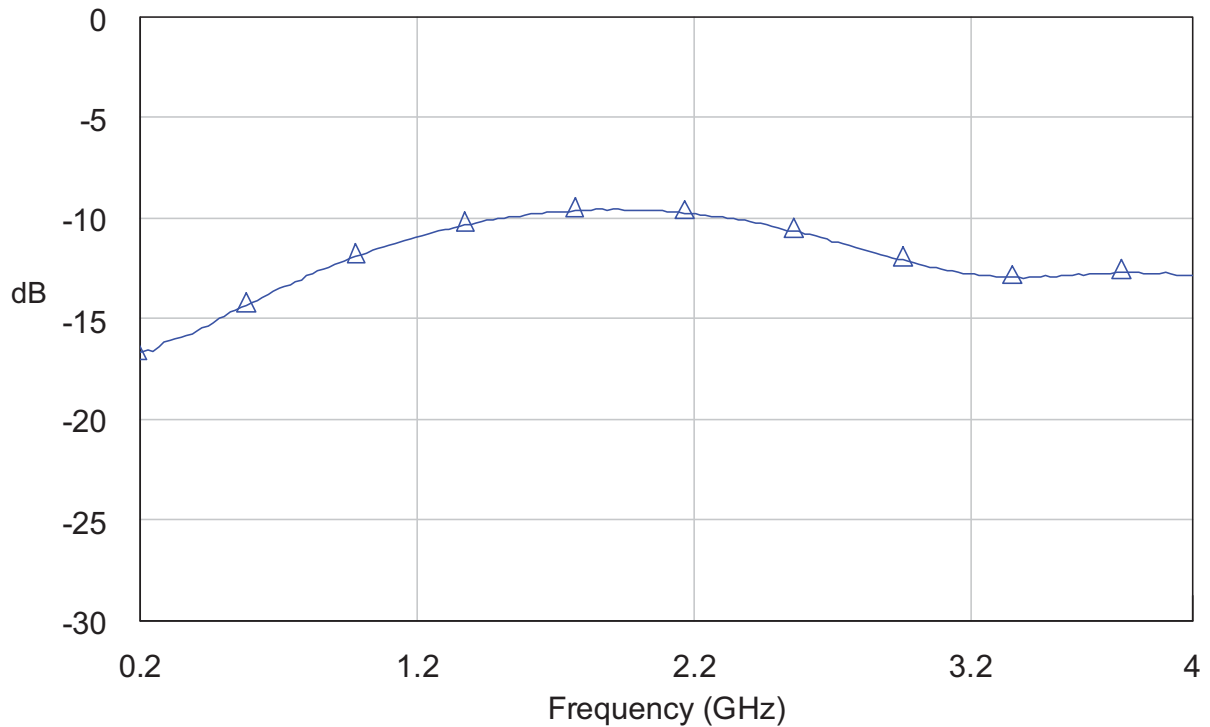
SCD10045 Rev A

## SPECIFICATIONS

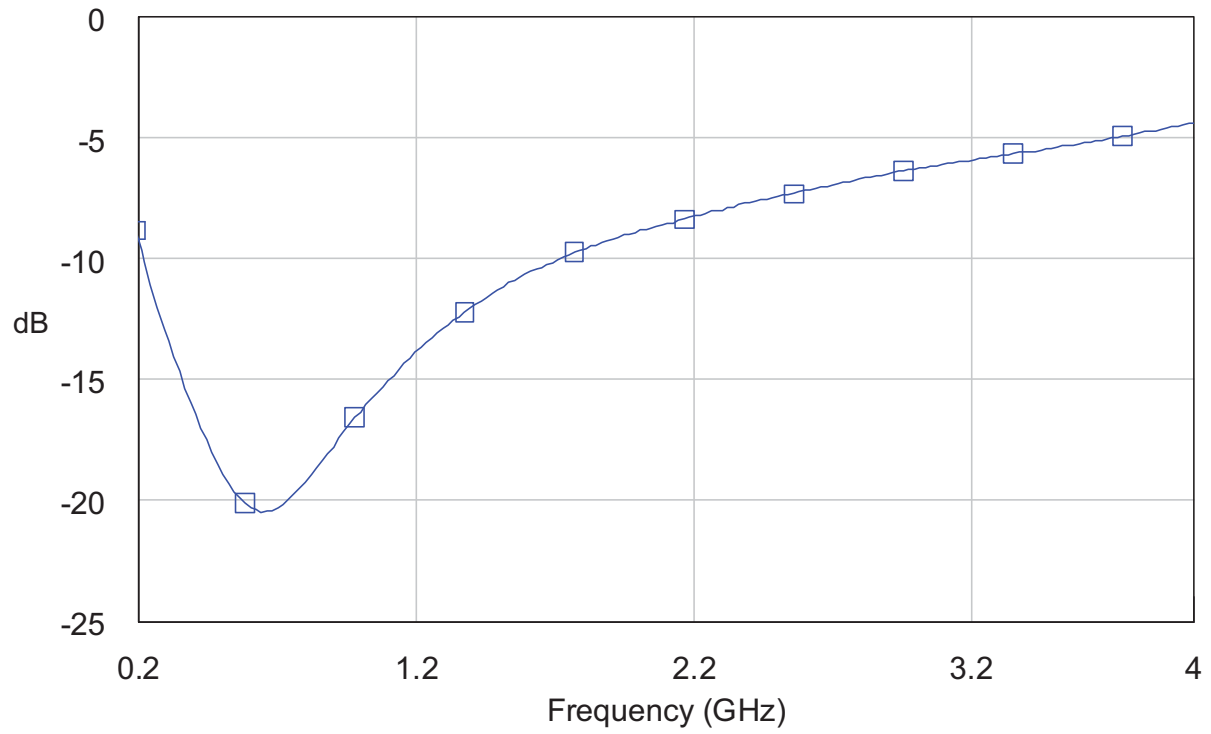
### ELECTRICAL CHARACTERISTICS @ +25°C

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
Frequency Range		0.1	-	4	GHz
Power Output	PSAT	-	+32	-	dBm
Power Output Variation	Over Frequency	-1	-	+1	dBm
Gain		-	10	-	dB
RF Input Impedance	Reference to 50 ohms	-	2.0:1	-	-
RF Output Impedance	Reference to 50 ohms	-	2.5:1	-	-
OIP3		-	40	-	dBm
Positive Supply Voltage		-	+28	-	V
Quiescent Positive Supply Current		-	115	-	mA
Efficiency		-	35	-	%

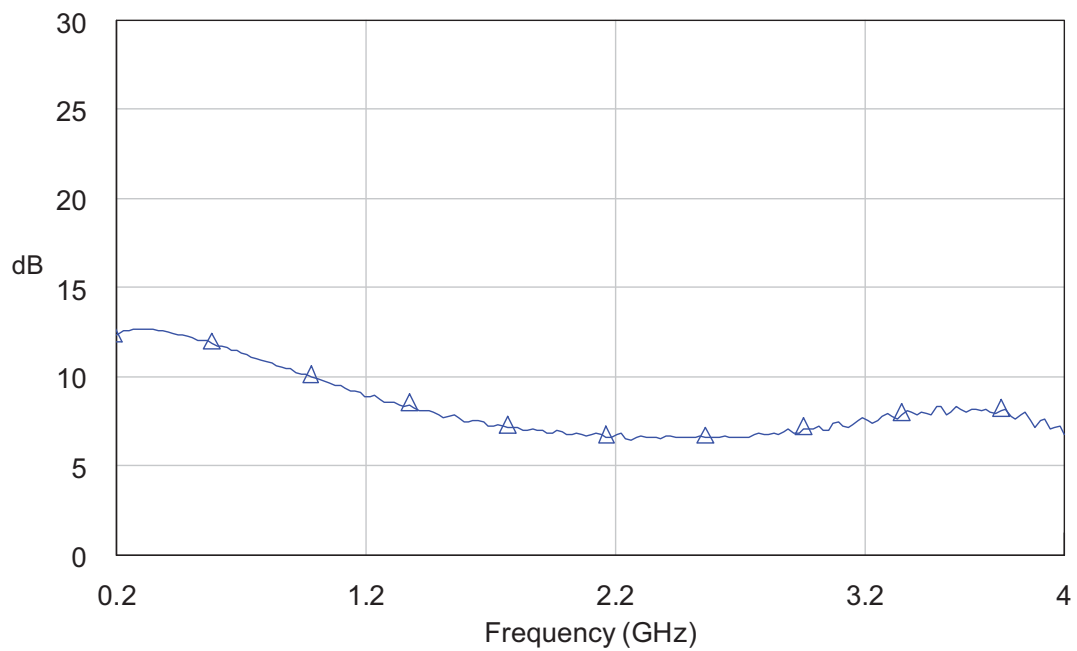
### TYPICAL INPUT RETURN LOSS



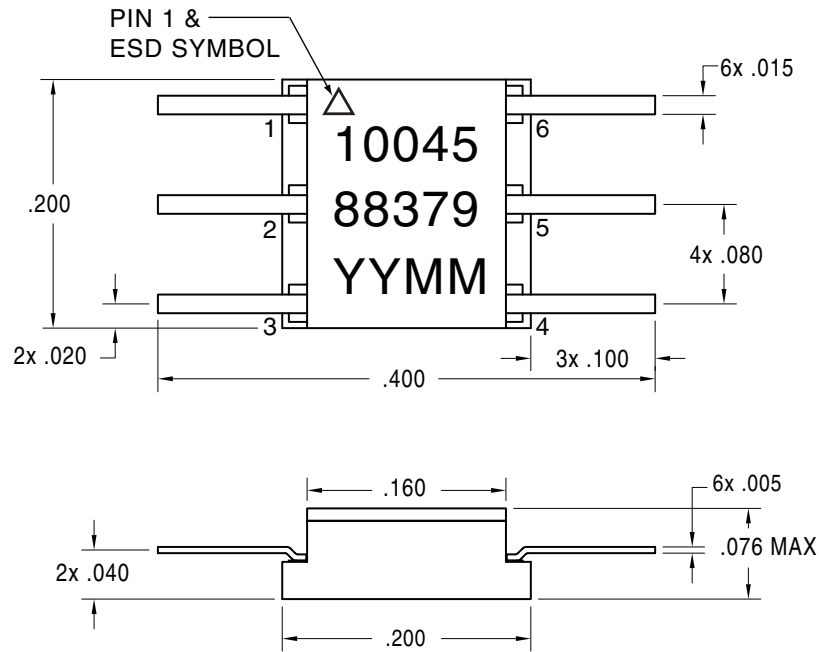
## TYPICAL OUTPUT RETURN LOSS



## TYPICAL GAIN



## OUTLINE DRAWING



PIN	FUNCTION	PIN	FUNCTION
1	RFIN	4	+28V
2	NC	5	NC
3	RFOUT	6	GND

## ORDERING INFORMATION

MODEL NUMBER	HERMETICITY	PACKAGE
PA001040-32	Non-Hermetic	0.200L x 0.200W x .076Ht
PA001040-32-H	Hermetic, Class H	

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