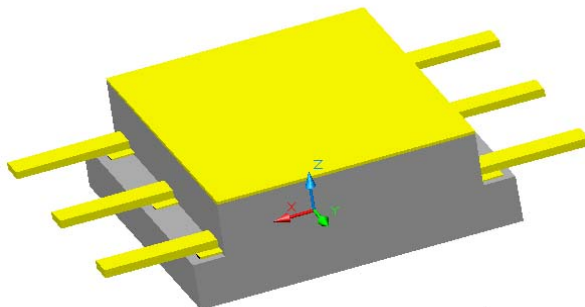


Broadband Standard Product PA020090-17 Medium Power Amplifier Module Broadband Power 2GHz to 9GHz

January 25, 2008

www.aeroflex.com/bband

PRELIMINARY



DESCRIPTION

The PA020090-17 is a broadband high reliability amplifier in a compact package and is ideal for use as a stable gain block, IF Amplifier or medium 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

- 2 to 9GHz Frequency Range
- $P_{1dB} > 17\text{dBm}$
- 17dB typical gain
- 6dB typical noise figure
- Operates from a Single +5V Supply
- Unconditionally Stable
- Compact Size
- Hermetic Package

SPECIFICATIONS

ABSOLUTE MAXIMUM RATINGS¹

PARAMETER	SYMBOL	MIN	MAX	UNITS
Operating Temperature – Case	T_{MO}	-55	+125	°C
Storage Temperature – Case	T_{MS}	-65	+125	°C
Positive Supply Voltage	V_{PS}	-	+8.5	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}		+4.75	+5.5	V

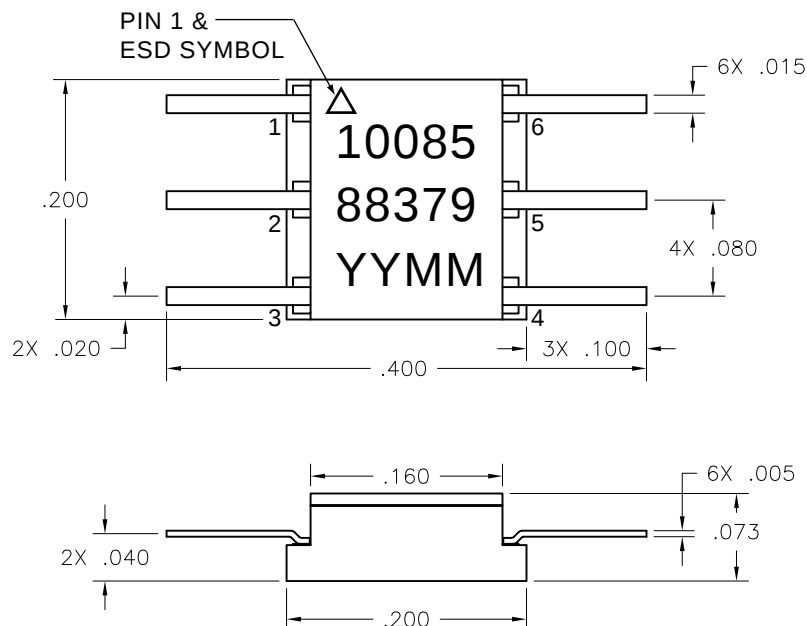
Aeroflex Plainview

SPECIFICATIONS

ELECTRICAL CHARACTERISTICS @ +25°C

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
Frequency Range		2.0	-	9	GHz
Power Output	1dB Compression Point	+14	+17	-	dBm
Power Output Variation	Over Frequency, Temperature	-1	-	+1	dBm
Gain		15	17	-	dB
Gain Flatness		-1	-	+1	dB
Noise Figure		-	6.0	-	dB
RF Input Impedance	Reference to 50 ohms	-	1.9:1	-	-
RF Output Impedance	Reference to 50 ohms	-	1.3:1	-	-
OIP3		-	26	-	dBm
Positive Supply Voltage		-	5	-	V
Positive Supply Current		-	120	-	mA

OUTLINE DRAWING



PIN	FUNCTION	PIN	FUNCTION
1	GND	4	+5V
2	RFin	5	RFOUT
3	GND	6	+5V

ORDERING INFORMATION

MODEL NUMBER	HERMETICITY	PACKAGE
PA020090-17	Hermetic	0.200L x 0.200W x .75Ht
PA020090-17-H	Hermetic, Class H	
PA020090-17-K	Hermetic, Class K	

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