

HA5003

General Description

The HA5003 is a C-band driver amplifier at 5.35 GHz with a gain of 24 dB and an output power of +23 dBm.

The amplifier is hermetically sealed.

Electrical Performance

Data @ 20°C and at 1 dB Compression

Parameter	Min	Typ	Max	Units
Frequency Range	5.2		5.5	GHz
Output Power	23			dBm
Norm. Input Power	-30	0	6	dBm
Small Signal Gain		24		dB
Gain Flatness over 150 MHz			0.1	dB
Power Stab. (24hrs) (2)			0.1	dB
Power Stab. (temp.)			0.3	dB
Droop over 30 μ s pulse (duty = 3%) (1)			0.01	dB
Ripple over 150 MHz (1)			0.01	dB
2 nd Harmonic Level			-30	dBc
3 rd Harmonic Level			-34	dBc
Spurious			-60	dBc
AM Sideband (1)			-60	dBc
PM Sideband (1)			-60	dBc
3 rd order IMP (1)			-15	dBc
Pulse Rise Time			50	ns
Pulse Fall Time			50	ns
Phase Response			3° Quadratic 0.3° Ripple	
Impedance		50		Ohm
Input VSWR			1.2 : 1	
Output VSWR			1.2 : 1	

Data @ 20°C and at 1 dB Compression (continued)

Parameter	Min	Typ	Max	Units
Temperature Range Option I	-15		+55	°C
Temperature Range Option II	-40		+71	°C
Temp. Storage	-40		+85	°C
DC Voltage		tbd		V
DC Current		tbd		A
RF Connectors	SMA female (input and output)			
DC Connector	tbd (shielded)			
Cooling	Device to be mounted on cold plate			
Size		tbd		mm
Weight		tbd		g

(1) Measurement method to be specified

(2) tbd seconds after power on.

Operating parameters are tested at -15°C, +20°C and +55°C for 4 hours at each temperature.

Continuous operation is guaranteed for Option II with reduced performance.

Temperature storage test is performed at -40°C and +85°C for 6 hours at each temperature.

Active vibration test (pulse operation at 1 dB compression) according to Exhibit-III is performed.

Humidity test (+40°C, 95% RH), higher altitude test (200 torr) and EMI/EMC test (MIL-STD-461D/E) are not performed, but device is designed to meet specifications within amplifier unit.

Rev. 1.0