

PA1020 20 – 530 MHz / 100 Watts

ELECTRICAL SPECIFICATIONS @ +28 V_{DC}, 25 °C, 50 Ω System

Parameter	Condition	Symbol	Min	Typ	Max	Unit
Operating Frequency		F _{BW}	20		530	MHz
Output Power	CW	P _{SAT}	100	120		Watt
Output Power	P _{1dB}	P _{1dB}		60		Watt
Power Gain	P _{1dB}	G _P	50			dB
Small Signal Gain Flatness		ΔG _{SS}		±1.0	±1.5	dB
Input Power	P _{OUT}	P _{IN}		0		dBm
Gain Adjustment Range	0 – 5 V _{DC}	VVA	25	30		dB
Input Return Loss		S ₁₁			-10	dB
Noise Figure	Min Attenuation	NF		7	10	dB
Third Order Intercept Point	2 – Tone @ 37 dBm / Tone Δ = 100 kHz	IP3		+56		dBm
Harmonics	2 ND @ P _{SAT} = 100 Watts	H		-40		dBc
	3 RD @ P _{SAT} = 100 Watts			-15		
Spurious Signals		S _{PUR}		-70	-60	dBc
Operating Voltage		V _{DC}	26	28	30	Volt
Current Consumption	P _{SAT} = 100 Watts	I _{DD}			8.5	Amp
Turn On / Off	10 kHz TTL, 50% Duty Cycle	T _{ON} / T _{OFF}		1.0		μsec

ENVIRONMENTAL CHARACTERISTICS

Parameter	Condition	Symbol	Min	Typ	Max	Unit
Operating Case Temperature		T _C	-40		+85	°C
Storage Temperature		T _{STG}	-40		+85	°C
Relative Humidity	Non-condensing	RH			95	%

LIMITS

Parameter	Condition	Specifications	Unit
Input RF Drive Level	No Damage	Max +10	dBm
Load VSWR	All Load Phase & Amplitude for duration of 1 minute	3 : 1	
Thermal Overload		-	°C

MECHANICAL SPECIFICATIONS

Parameter	Condition	Specifications	Unit
Dimension	W x D x H	205 x 90 x 28	mm
Weight		TBD	Kg
RF Connector Input		SMA (Female)	
RF Connector Output		SMA (Female)	
DC Connector		D-Sub, 9 Pin (Male)	
Cooling	Not Supplied	External Heatsink	

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INTERFACE CONNECTOR – D-Sub, 9 Pin, Male

Pin #	Description	Specifications
1	Forward Power Monitor	@ 50 dBm / 4 V, Slope = 100 mV / dB, Dynamic Range > 35 dB ($\Delta V < \pm 0.5$ V with Operating Frequency)
2	Reverse Power Monitor	@ 50 dBm / 4 V, Slope = 100 mV / dB, Dynamic Range > 35 dB ($\Delta V < \pm 0.5$ V with Operating Frequency)
3	Temperature Monitor	Analog Voltage relative to Unit's Temperature @ 10 mV / °C
4	VVA	Controlled via Analog 0 – 5 V
5	Shutdown	Amplifier Enable : TTL "Low" (Logic 0) or Open Amplifier Disable : TTL "High" (Logic 1)
6,7	VDD	+28 V _{DC} ± 2 V _{DC}
8,9	GND	Ground

OUTLINE DRAWINGS

