

Solid State Personal Communication Power Amplifier

7007 - PCM3Q4AAM - AGC
800 – 1000 MHz / 10 Watts

The PCM3Q4AAM (SKU # 7007) is suitable for Ultra linear GSM repeater applications in the Cellular frequency range. Also suitable for CDMA and TDMA applications, this amplifier utilizes linear GaAsFET power devices that provide high gain, wide dynamic range, and excellent group delay and phase linearity. Exceptional performance, long term reliability, and high efficiency are achieved by employing advanced broadband RF matching networks, built in sequence regulator, EMI/RFI filters, machined housings, and qualified components. Empower RF's ISO9001 Quality Assurance Program assures consistent performance and the highest reliability.



- Solid-state Class A linear design
- Built in AGC function
- Small and lightweight
- Suitable for GSM, TDMA and Multi-Carrier CDMA Application
- 50 Ohm Input/Output impedance
- High reliability and ruggedness

ELECTRICAL SPECIFICATIONS @ T=25°C, VDD=+13VDC; 50Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	800		1000	MHz
Power Output CW	P _{Sat}	10	12		Watt
Power Output @ 1dB G.C.P	P _{1dB}	8	10		Watt
Gain @ P1dB G.C.P, minimum attenuation	G _{1dB}	44	45		dB
Gain Adjustment Range via internal Pot.	GA	20	25		dB
Small Signal Gain Flatness	ΔG		±0.5	±0.75	dB
Input/Output VSWR	S11/S22		1.2:1	1.5:1	-
Noise Figure @ minimum attenuation	NF		7	10	dB
Third Order Intercept Point 2 – Tones, Pout=1W Avg., 100KHz spacing	IP3	+50	+52		dBm
Harmonics @ 1dB G.C.P	H			-30	dBc
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	VDD	12	13	15	Volt
Supply Current	IDD		2.5	3.0	Amp

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions (L x W x D)	5.67 x 2.42 x 0.87	Inch	Max
Weight	1.0	lb.	Max
RF Connectors In/Out	SMA female		
DC Connectors	Feed Thru		
Cooling	External Heatsink		

ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	T _c	0		+50	°C
Storage Temperature	T _{stg}	-40		+85	°C
Relative humidity w/o condensation	RH	95			%
Altitude	ALT	10,000	30,000		Feet
Shock & Vibration	SH / VI		Airborne		

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PROTECTIONS

Input Overdrive	0dBm	Max
Load VSWR	∞ @ all load phase and amplitude for duration of 1 minute 3:1 @ all load phase & amplitude continuous	Nom
Thermal Overload	85°C shutdown	Max

ADEQUATE HEATSINK COOLING REQUIRED

