

Solid State General Communication Power Amplifier

3051 - GCM3Q4ANQ
800 - 1000MHz / 200Watts

PRELIMINARY DATA

The GCM3Q4ANQ (SKU # 3051) is suitable for CW and pulse applications across the whole Cellular frequency range. This amplifier utilizes high efficiency LDMOS 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 and combining techniques, EMI/RFI filters, machined housings, and qualified components. Empower RF's ISO9001 Quality Assurance Program assures consistent performance and the highest reliability.



- Solid-state linear design
- Small and lightweight
- Suitable for all modulation types
- 50 Ohm Input/Output impedance
- High reliability and ruggedness
- Built in Control & Monitoring Circuits

ELECTRICAL SPECIFICATIONS @ VDD=+28VDC, T=25°C, 50Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	800	-	970	MHz
Power Output CW	P _{SAT}	200	-		Watt
Power Output @ 1dB G.C.P	P _{1dB}	150			Watt
Power Gain	G _p	53	54		dB
Input Power for Rated Output	P _{IN}		0		dBm
Gain Flatness	ΔG			±1.0	dB
Input/Output VSWR	S11/S22			2:1	-
Harmonics @ 1dB G.C.P	H			-30	dBc
Spurious Signals	Spur		-70	-60	Volt
Turn On Time	T _{ON}			2	Sec
Operating Voltage	VDD	27.5	28	28.5	VDC
Supply Current @ Pout=200W	IDD			19.3	Amp

MECHANICAL SPECIFICATIONS

Dimensions (w/o connectors)	15.85" x 8.11" x 1.45"	Max
Weight	10lb.	Max
RF Connectors Input / Output	SMA female / Type-N female	
DC / Interface (See Table)	COMBO D-Sub, P/N CBM13W6F2000	
Cooling	External heatsink / Air-flow	

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	T _c	-30		+55	°C
Storage Temperature	T _{stg}	-40		+60	°C
Relative humidity w/o condensation	RH	100			%
Altitude	ALT	15,000	40,000		Feet
Shock / Vibration	SH / VI		Airborne		

PROTECTIONS

Input Overdrive	+20dBm no damage	Max
Load VSWR @ P1dB (Output Isolator)	Infinite @ all load phase & amplitude	Nom
Thermal Overload	85°C shutdown	Max

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CONNECTOR Hybrid D-Sub

Pin #	Description	Notes
A1, A2, A3	+28VDC (Input)	Range: ± 0.5 VDC
A4, A5, A6	GND (Input)	Housing Ground
1	+VDC Sense Line (Output)	Connected to A1, A2, A3
2	<u>TX-Enable</u> (Input)	OPEN = Disable CLOSE = Enable
3	FWD PWR DET (Output)	4V @ 200W
4	REV PWR DET (Output)	4V @ 200W
5	-VDC Sense & GND (Output)	Connected to A4, A5, A6
6	Signal GND (Output)	Ground
7	<u>HIGH-TEMP</u> (Output) - Open Collector	T _b > 75°C = OPEN T _b < 75°C = CLOSE

 Connectors are from www.connectpositronic.com
OUTLINE DRAWING
