

## Solid State General Communication Power Amplifier

**4018 - GCS4M4OUT**
**1600 - 1700MHz / 1000Watts**

### PRELIMINARY INFORMATION

The GCS4M4OUT (SKU # 4018) is suitable for L-Band high power linear applications. This amplifier utilizes high power Push-Pull devices that provide high gain, wide dynamic range, low distortions and good linearity. Exceptional performance, long term reliability and high efficiency are achieved by employing advanced broadband RF matching networks and combining techniques, built in high quality power supply, EMI/RFI filters, machined housings and all qualified components. The amplifier is constructed of three modular drawers all housed in a modern and rugged rack cabinet. Each LRU includes a universal voltage, single phase, power supply and a built in forced air-cooling system. Empower RF's ISO9001 Quality Assurance Program assures consistent performance and the highest reliability.

- Solid-state class AB linear design
- Instantaneous bandwidth
- Standard front panel manual gain adjust
- Optional Touchscreen LCD for local and remote interface
- Suitable for all modulations standards
- 50 Ohm Input/Output impedance
- High reliability and ruggedness



### ELECTRICAL SPECIFICATIONS @ 208VAC, 3 $\phi$ , 25°C, 50 $\Omega$ System

Characteristics	Rating	Min	Typ	Max	Units
Frequency Response	BW	1600		1700	MHz
Power Output CW	P <sub>SAT</sub>		1200		Watt
Power Output @ 1dB G.C.P	P <sub>1dB</sub>	1000			Watt
Power Gain @ P1dB G.C.P	G <sub>1dB</sub>	60			dB
Input Power for Rated Pout	P <sub>IN</sub>		0		dBm
Gain Flatness	$\Delta$ G			$\pm$ 1.0	dB
Gain Adjustment Range	FGA	25	30		dB
Input/Output Return Loss	S11/S22			-10	dB
Harmonics @ rated 1dB G.C.P	H		-40		dBc
Noise Figure	NF			10	dB
Third Order Intercept Point	IP3		+72		dBc
2-tone IMD @ 57dBm/Tone, $\Delta$ = 0.5MHz					
Spurious Signals	Spur		-70	-60	dBc
Supply Voltage - 3 $\phi$ , Delta Connection Line to Line	VAC	180	208	264	Volt
Power Consumption	P <sub>D</sub>			8500	Watt

### MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions W x H x D/ Weight with enclosure	<b>21.79"x33.53"x30.71" / 400lb.</b>		Typ
Dimensions W x H x D / Weight w/o enclosure	19"x26.25"x22" / 300lb.		Typ
RF Connectors FCN or RCN option	Input: Type-N female, Output: 7/16 female		
Cooling	Built in forced-air system		

### ENVIRONMENTAL CHARACTERISTICS (Design to Meet)

Parameter	Symbol	Min	Typ	Max	Unit
Operating Temperature	T <sub>c</sub>	-10		50	°C
Non-operating Temperature	T <sub>stg</sub>	-40		+85	°C
Relative Humidity w/o condensation	RH	95			%
Altitude	Alt	10,000			Feet
Shock and Vibration	SH / VI		Airborne		-

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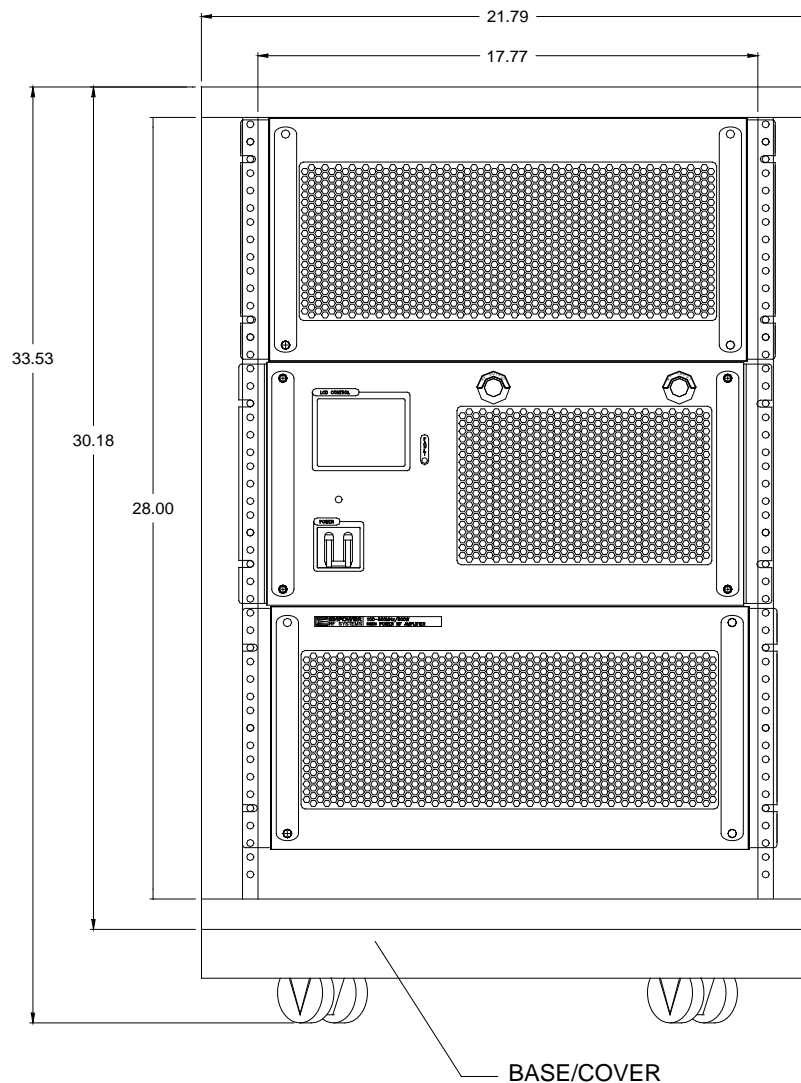
### PROTECTIONS

Input Overdrive	+10dBm	Max
Load VSWR @ rated P1dB G.C.P	5:1 @ any angle & magnitude	Nom
Thermal Overload	85°C Shutdown	Max

### AVAILABLE OPTIONS (Refer to [www.empowerrf.com](http://www.empowerrf.com) for detailed available options)

Option	Number	Description	Price
FGA	061	Front panel manual gain adjustment 10 turns	Standard
LCD	062	<b>Local:</b> Front panel touch screen LCD controller including Fwd/Rev Power indication (dB or Watt scale), Gain Adjustment, ALC Fast/Slow & On/Off, Standby mode, Fault indication. <b>Remote:</b> Rear panel HPIB IEEE-488.2 or full duplex RS232 serial interface. <b>Note: Output Power is lowered by 0.5 - 0.75dB with this option.</b>	Call
FCN	051	Front Panel Type-N, SC or 7/16	N/C
RCN	052	Rear Panel Type-N, SC or 7/16	N/C

### SYSTEM OUTLINE DRAWING - FRONT VIEW



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SYSTEM OUTLINE DRAWING - SIDE VIEW

