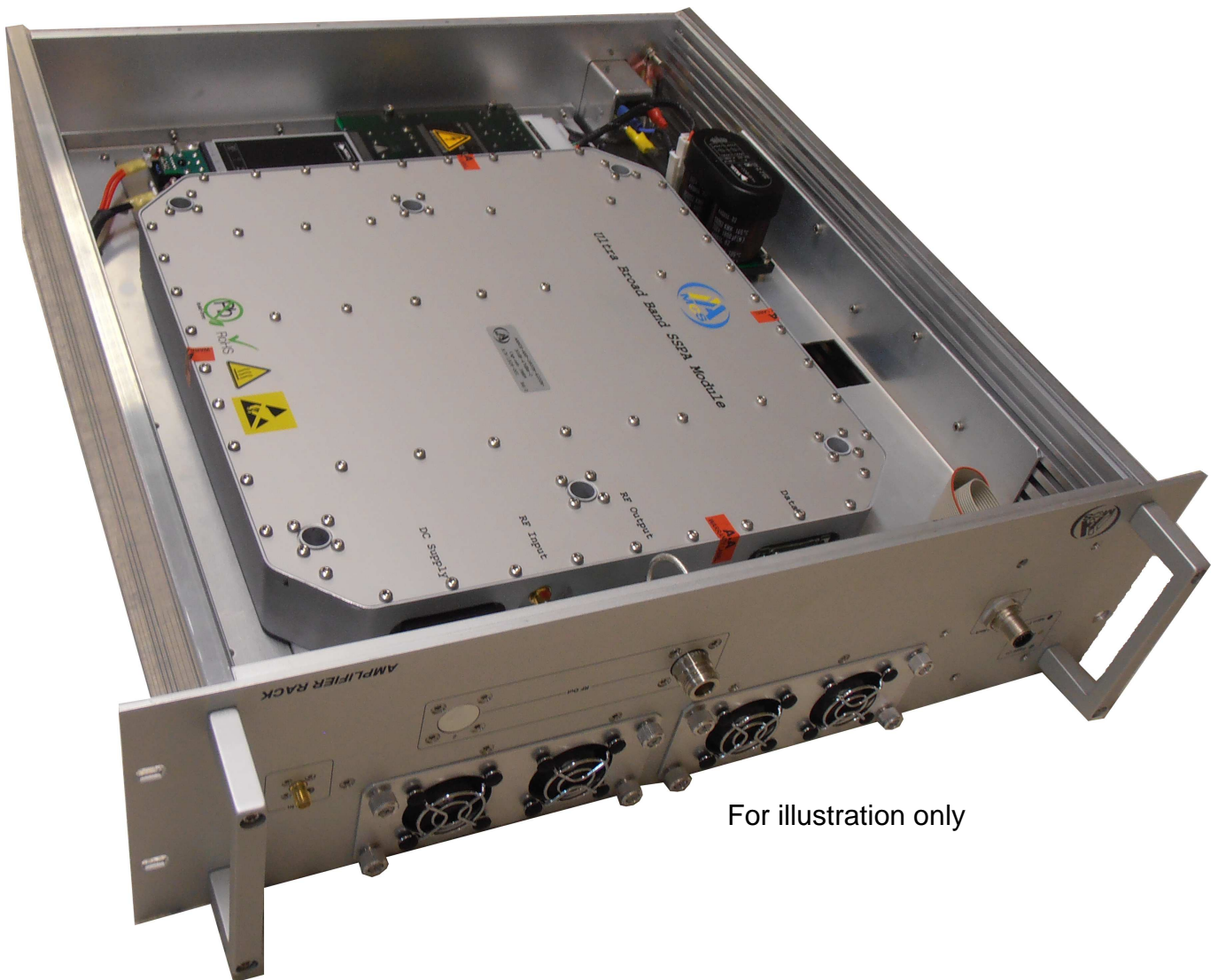




DATASHEET
FEUILLE DE SPECIFICATIONS

P/N: AAMCS-AMP-6G-12G-45dB-47dBm-R
Designation : 50W, 45dB, 6-12GHz Amplifier Rack



For illustration only

6 – 12 GHz 50W Power Amplifier Rack

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Electrical features <i>Caractéristiques électriques</i>		All parameters specified @ room temperature = +25°C, unless otherwise specified	
Electrical parameters <i>Paramètres électriques</i>	Measuring conditions <i>Conditions de mesure</i>	AA-MCS specifications <i>Spécifications AA-MCS</i>	Units <i>Unités</i>
Bandwidth <i>Bande de fréquence</i>		6 – 12	GHz
Output power <i>Puissance de sortie</i>	CW @ Psat	46 min. 48 typ.	dBm
Input power <i>Puissance d'entrée</i>	CW @ Psat Maximum level	0 typ. +10 max.	dBm
Gain <i>Gain</i>	@ 0dBm input power	46 min. 48 typ. <i>(includes gain compensation versus temperature)</i>	dB
In band Gain ripple <i>Ondulation de gain</i>	@ 0dBm input power	+/- 1 max.	dB
Impedance <i>Impedance</i>		50	ohms
Input / Output VSWR <i>TOS d'entrée / sortie</i>	Input Output	2:1 max. 2:1 max.	-
Load mismatch <i>Résistance au TOS de charge</i>		2:1 max.	
Time for RF on/off (blinking) <i>Vitesse d'extinction RF</i>	10-90% RF rise / fall time	0.5 typ. 1 max.	µs
Power density in blanking mode <i>Densité spectrale de puissance</i>	In 2 MHz BW	-120 max. RF switch in TX path and gate bias cut-off	dBm
Harmonics <i>Distortion harmonique</i>	Fondamental in 6-8GHz Fondamental in 8-12GHz	-10 max. -30 max.	dBc
Spurious <i>Parasites</i>	@ Psat	-60 max.	dBc

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Electrical parameters <i>Paramètres électriques</i>	Measuring conditions <i>Conditions de mesure</i>	AA-MCS specifications <i>Spécifications AA-MCS</i>	Units <i>Unités</i>
Operating class <i>Classe de fonctionnement</i>		AB on GaN devices	
Supply voltage <i>Tension d'alimentation</i>		230 +/-10% 50 +/-10%	Vac Hz
Power consumption <i>Puissance consommée</i>	Blanking ON Small signal @Psat	100 typ. 300 typ. 600 typ. 800 max.	Wrms
Temperature voltage monitoring <i>Tension de contrôle température</i>	Positive slope	10 -300mV @ -30°C 0V @ 0°C +600mV @ +60°C	mV/°C

<u>Internal protection & options</u>		
Type	Included or optional items	Description
Temperature protection	Included in standard configuration	Autoshutdown of the bias if temperature of the internal module baseplate exceeds +85°C – auto recovery when temperature decreases below 80°C)
Coupler	Option 1 (not included in standard conf.)	Directional coupler for monitoring of the forward output power
Remote control	Option 2 (not included in standard conf.)	Remote control with Man Machine Interface and microcontroller board
Gate protection	Option 3 (not included in standard conf.)	Gate current self protection
Reverse PWR protection	Option 4 (not included in standard conf.)	Reverse power ALC (automatic level control)

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Control, Alarms and Monitoring

Contrôles, Alarmes et Informations

Parameters <i>Paramètres</i>	Measuring conditions <i>Conditions de mesures</i>	Specifications <i>Spécifications</i>
Noise quieting / RF blanking control <i>Commande d'extinction RF</i>	TTL command "Blanking"	Low or Not Connected = RF Output ON High = RF Output OFF (Muted)
Temperature indicator <i>Info température</i>	Analog output "Temperature"	Range : -5Vdc to +5Vdc See electrical features
ON/OFF supply control <i>Commande ON/OFF alimentation</i>	TTL command "Shutdown"	low or not connected = supply ON high = supply OFF
Temperature protection <i>Etat de l'alarme temperature</i>	TTL info	Low = OK High = alarm (autosutdown of the biasing if temperature of the baseplate exceeds +65°C – auto recovery when temperature decrease below 60°C)

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Mechanical features

Caractéristiques mécaniques

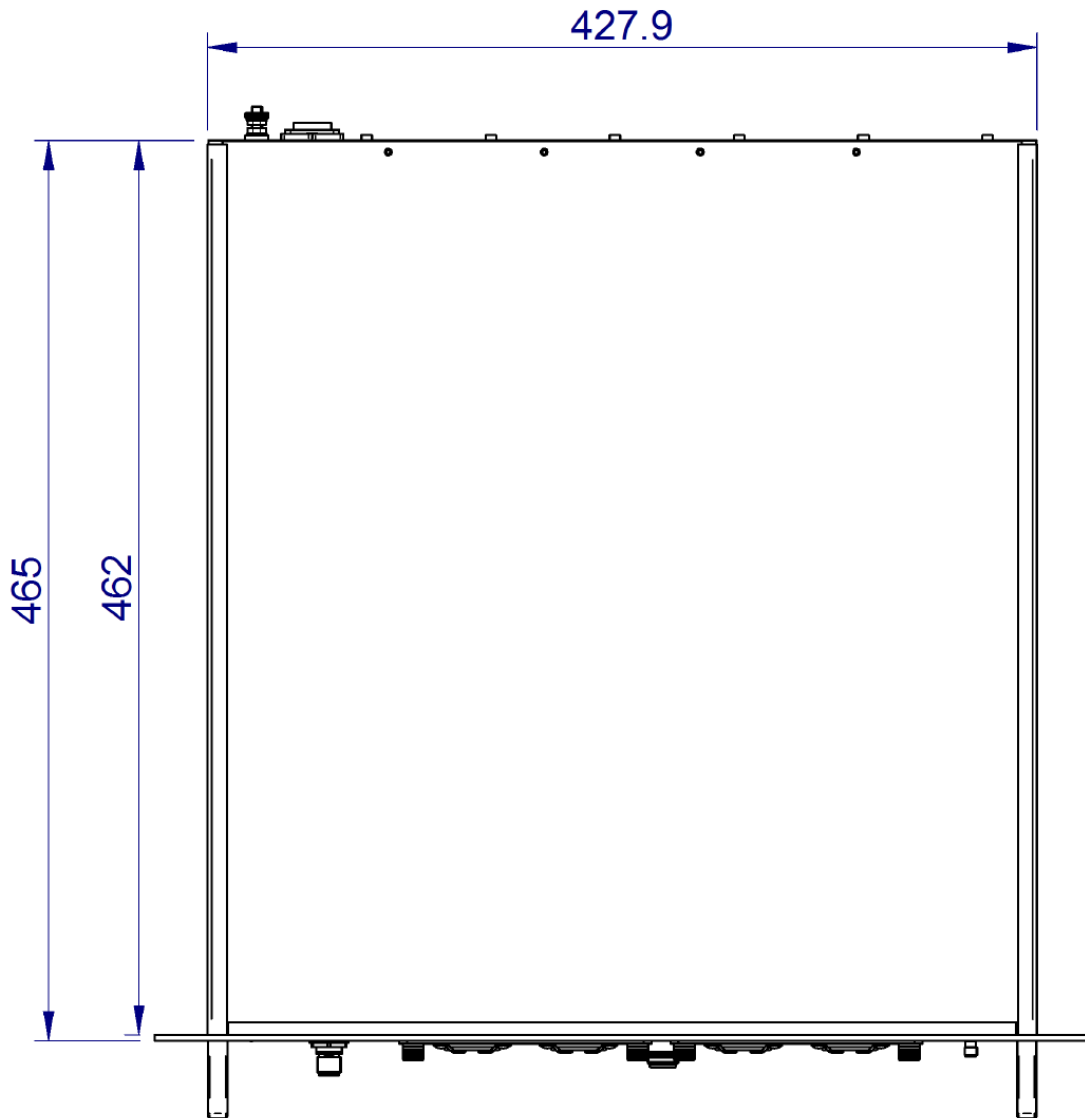
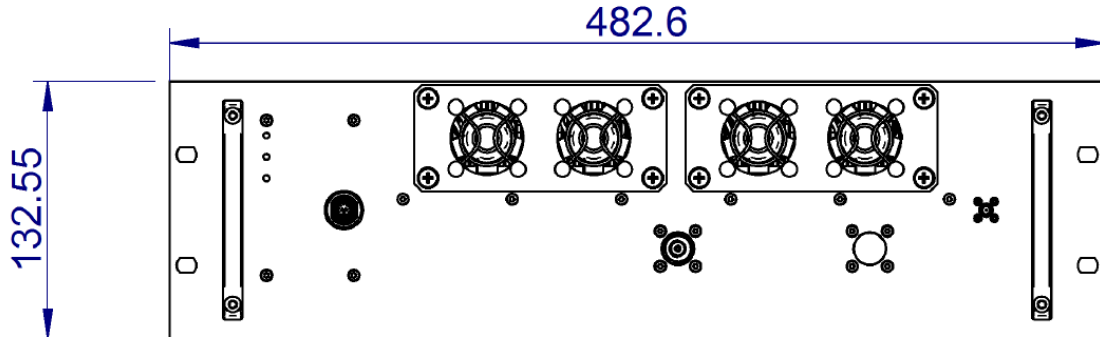
Parameters <i>Paramètres</i>	Measuring conditions <i>Conditions de mesure</i>	AA-MCS specifications <i>Spécifications AA-MCS</i>	Units <i>Unités</i>
Length x width x height <i>Longueur x largeur x Hauteur</i>	L x W x H ISO 2768-mH	465 x 19" x 3U (without connectors)	mm
Dissipation <i>Cooling</i>		Air cooled (integrated fans)	-
Temperature opérationnelle <i>Operating temperature range</i>	Room temperature	-10 min. +45 max.	°C
RF Connectors <i>Connectique RF</i>	Input Output	SMA female N female	-
Monitoring & Control and Supply connectors <i>Connecteurs de commande et d'alimentation</i>	J1 (Control) J2 (Supply)	Connector M12x1 12pts male Ref.: Binder 09-3491-500-12 (amplifier provided with 2m control cable) EIC plug	
Weight <i>Masse</i>		17 typ.	kg

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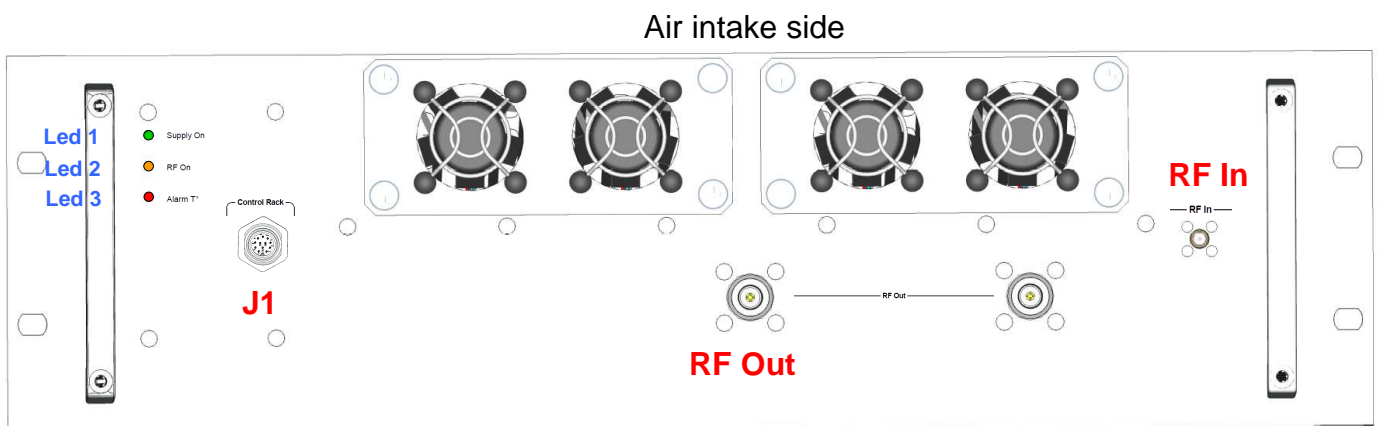
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Front Panel Displays

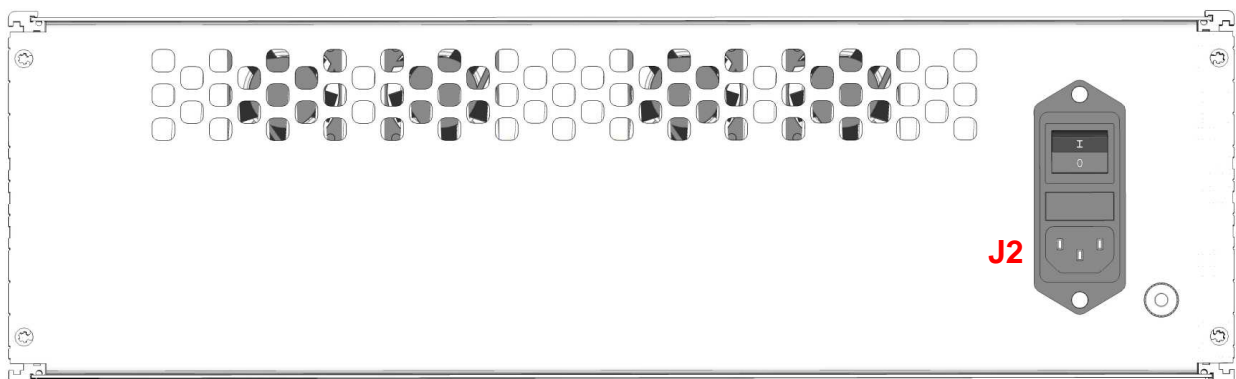
Led N°	Name	Type	Description
1	Supply On	Green Led	highlighted = supply On off = Supply Off
2	RF On	Yellow Led	highlighted = RF On (RF enabled) off = RF Off
3	Alarm T°	Red Led	highlighted = alarm temperature off = Temperature OK

Front panel :



Rear Panel :

Air exhaust side



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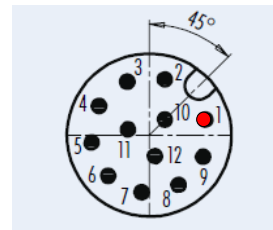
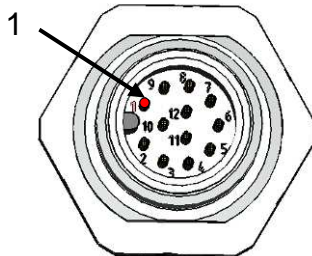
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Monitoring & Control interface : J1 connector

Pin N°	Name	Wire colour	Type	Description
1	Shutdown	Brown	Ctrl ; TTL	Low = Amplifier enabled (Bias ON) High = Amplifier disabled (Bias OFF)
2	Blanking	Blue	Ctrl ; TTL	Low = RF ON High = RF OFF
3	Alarm temperature	White	Info ; TTL	High = Temperature alarm => Amplifier disabled
6	Temperature monitor	Yellow	Info ; analog	Range : -5Vdc to +5Vdc See electrical features
4,5,7,8,9, 10,11	Reserved			Internally connected, leave open
12	GND	Red / blue	GND	Grounded to chassis (for TTL)

J1 pinning :



Amplifier provided with 2m control cord (customer doesn't have to order the plug if not required).
The amplifier is operational without plugging the control cable (if monitoring & control is not necessary).

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