



**DATASHEET**  
**FEUILLE DE SPECIFICATIONS**

**P/N:** AAMCS-AMP-8G-11G-50dB-50dBm-0-C  
**Designation:** 100W, 50dB, 8-11GHz Amplifier Module



**8 – 11 GHz 100W Power Amplifier Module**

Ed.	Written by	Date	Observation	Approved by
0	A. Billy	09/11/2016	Création (ET16015)	



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Electrical features <i>Caractéristiques électriques</i>		All parameters specified @ baseplate temperature of +25°C and supply of 28Vdc, 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>
<b>Bandwidth</b> <i>Bande de fréquence</i>		8 – 11	GHz
<b>Output power – PW mode</b> <i>Puissance de sortie – Mode pulsé</i>	@ Psat – pulsed (PW) Pulse duration: <b>100µs max.</b> Duty cycle (DC): <b>10% max.</b>	49 min. 50 typ.	dBm
<b>Input power – PW mode</b> <i>Puissance d'entrée – Mode pulsé</i>	For rated power <b>Maximum level</b>	0 typ. <b>+5 max.</b>	dBm
<b>Output power – CW mode</b> <i>Puissance de sortie – Mode CW</i>	CW	47 max. (user must take care not to exceed 47dBm CW)	dBm
<b>Input power – CW mode</b> <i>Puissance d'entrée – Mode CW</i>	For 50W output power <b>Maximum level</b>	-12 typ. <b>-10 max.</b>	dBm
<b>Gain</b> <i>Gain</i>	Small signal CW @ Psat – PW	55 typ. 49 min. 52 typ.	dB
<b>In band Gain ripple</b> <i>Ondulation de gain</i>	@ Psat – PW	+/- 1 max.	dB
<b>Impedance</b> <i>Impedance</i>		50	Ohms
<b>Input / Output VSWR</b> <i>TOS d'entrée / sortie</i>	Input Output	1.5:1 typ. 2:1 max. 1.5:1 typ. 2:1 max.	
<b>Load mismatch</b> <i>Résistance au TOS de charge</i>		3:1 max.	
<b>Time for RF on/off (blinking)</b> <i>Vitesse d'extinction RF</i>	10-90% RF rise / fall time	0.2 typ. 1 max.	µs
<b>Power density in blanking mode</b> <i>Densité spectrale de puissance</i>	In 2 MHz BW	-120 max. RF switch in TX path and gate bias cut-off	dBm

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<b>Spurious</b> <i>Parasites</i>	@ Psat	-65 max.	dBc
<b>Operating class</b> <i>Classe de fonctionnement</i>		AB on GaN devices	
<b>Supply voltage</b> <i>Tension d'alimentation</i>	"Vcc" (With output power derating if Vcc < typical value)	+25 min. +28 typ. +32 max.	Vdc
<b>Current consumption</b> <i>Courant consommé</i>	Blanking ON Small signal, CW @Psat, PW: 100µs, 10%	0.2 typ. 2.2 typ. 12 typ. 15 max.	A (instantaneous)
<b>Tension de control température</b> <i>Temperature voltage monitoring</i>	Positive slope	10 -300mV @ -30°C 0V @ 0°C +600mV @ +60°C	mV/°C

<b>Control, Alarms and Monitoring</b> <i>Contrôles, Alarmes et Informations</i>		
<b>Parameters</b> <i>Paramètres</i>	<b>Description</b> <i>Description</i>	<b>Spécifications</b> <i>Specifications</i>
<b>Noise quieting / RF blanking control</b> <i>Commande d'extinction RF</i>	1 solder pin TTL command "Blanking"	Low or Not Connected = RF Output ON High = RF Output OFF (Muted)
<b>Temperature analog signal</b> <i>Lecture temperature</i>	1 solder Pin Signal "Temperature"	Analog Refer to Electrical features

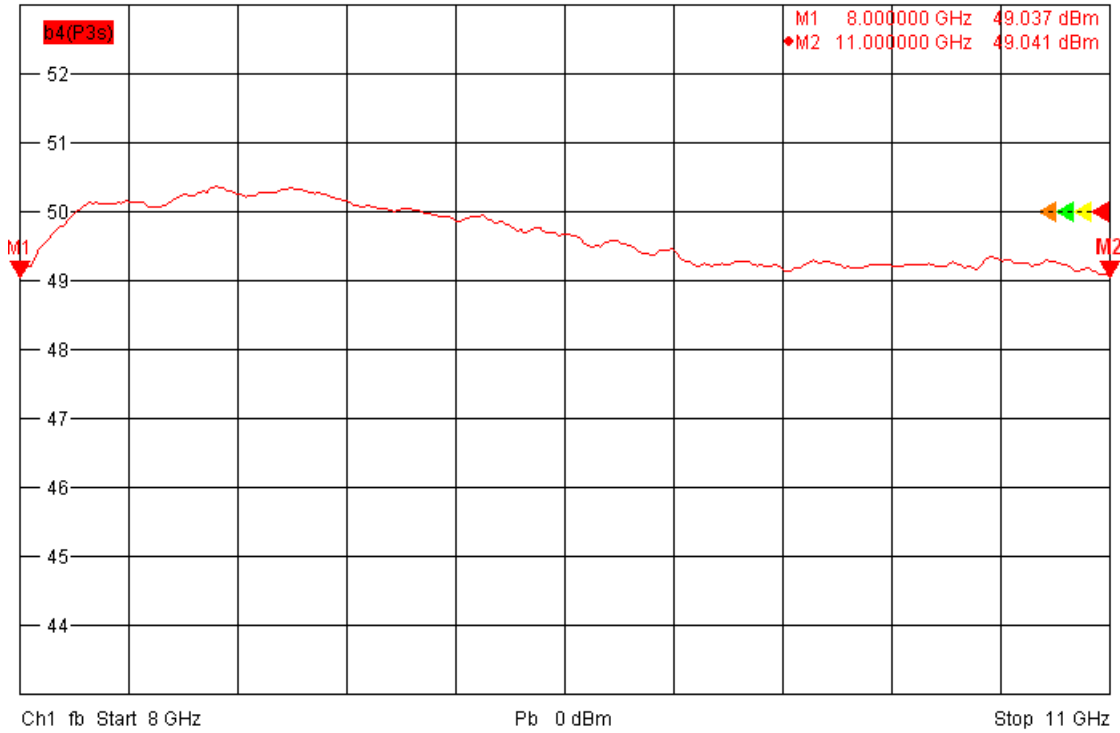
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PWR **b4(P3s)** dB Mag 1 dB / Ref 50 dBm PCai Smo 2 (Max)  
 Mem1[PWR] **b4(P3s)** dB Mag 1 dB / Ref 50 dBm Invisible  
 Mem2[PWR] **b4(P3s)** dB Mag 1 dB / Ref 50 dBm Smo  
 Mem3[PWR] **b4(P3s)** dB Mag 1 dB / Ref 50 dBm Smo



Saturated Output power in pulsed mode @ +25°C (0dBm input power)

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<b>Mechanical features</b> <i>Caractéristiques mécaniques</i>			
Parameters <i>Paramètres</i>	Measuring conditions <i>Conditions de mesure</i>	AA-MCS specifications <i>Spécifications AA-MCS</i>	Units <i>Unités</i>
<b>Length x width x height</b> <i>Longueur x largeur x Hauteur</i>	L x W x H ISO 2768-mH	110 x 65 x 24 max. (without connectors) (see drawings below)	mm
<b>RF Connectors</b> <i>Connectique RF</i>	Input / Output	SMA female	-
<b>Supply &amp; Control connectors</b> <i>Connecteurs de contrôle et alim.</i>	Supply + GND "Blanking" & "Temperature"	Solderable feedthru and pins	
<b>Weight</b> <i>Masse</i>		450 max.	g
<b>Housing</b> <i>Châssis</i>		Aluminium coated with Nickel	
<b>Sealing</b> <i>Etanchéité</i>		Hermetically sealed	

Mechanical interfaces:



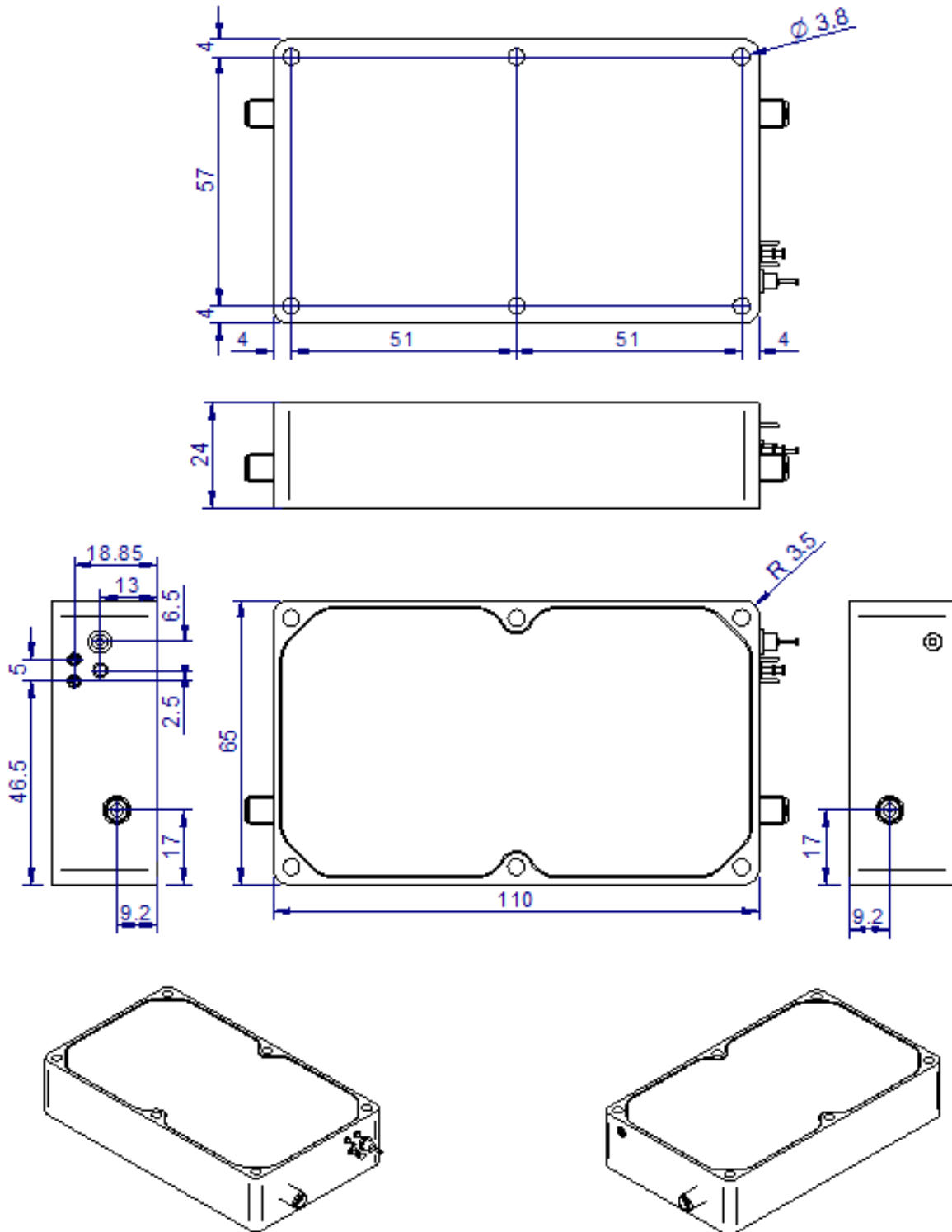
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Mechanical drawing:



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**Environmental conditions**  
*Conditions environnementales*

<b>Parameters</b> <i>Paramètres</i>	<b>Measuring conditions</b> <i>Conditions de mesure</i>	<b>AA-MCS specifications</b> <i>Spécifications AA-MCS</i>	<b>Units</b> <i>Unités</i>
<b>Cold temperature operation</b> <i>Température de service à froid</i>	Case temperature	-32 min.	°C
<b>Cold temperature storage</b> <i>Température de stockage à froid</i>	Case temperature	-46 min.	°C
<b>Dry heat temperature operation</b> <i>Température de service à chaud</i>	Case temperature	+85 max. <i>(includes automatic shutdown with recovery when baseplate temperature exceeds +90°C)</i>	°C
<b>Dry heat temperature storage</b> <i>Température de stockage à chaud</i>	Case temperature	+85 max.	°C
<b>Altitude</b> <i>Altitude</i>		30 000 max.	ft
<b>Sand and dust</b> <i>Sable et poussières</i>		As per MIL-STD-810G method 510.5 procedure I & II	
<b>Humidity</b> <i>Humidité</i>	97% @ +26°C	As per MIL-STD-810G method 507.5 procedure II	%
<b>Functional random vibrations</b> <i>Vibrations aléatoires opération</i>		MIL-STD-810G method 514.5 procedure I Airborne	
<b>Functional shocks</b> <i>Chocs fonctionnels</i>		As per MIL-STD-810G method 516.6 procedure I 20g	
<b>Functional acceleration</b> <i>Accélération fonctionnelle</i>		Forward 12g Back 4g Up 4g Down 2g Lateral 3g	

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