



DATASHEET **FEUILLE DE SPECIFICATIONS**

P/N: AAMCS-AMP-9G-11G-40dB-42dBm-0-C
Designation: 15W, 40dB, 9-11GHz Amplifier Module

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9 – 11 GHz 15W Power Amplifier Module

Ed.	Written by	Date	Observation	Approved by
0	Belluot	18/11/2016	Creation (ET16074)	
1	A. Billy	20/03/2017	Adjustment after prototype	



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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>
Bandwidth <i>Bande de fréquence</i>		8.8 – 10.8 Usable from 8.5 to 11GHz with derating on side band	GHz
Output power <i>Puissance de sortie</i>	@ Psat (0dBm input typ.)	41 min. 42 typ.	dBm
Input power <i>Puissance d'entrée</i>	For rated power Maximum level	0 typ. +5 max.	dBm
Gain <i>Gain</i>	Small signal (-40dBm) @ 0dBm input power	45 min. 50 typ. 41 min. 42 typ.	dB
In band Gain ripple <i>Ondulation de gain</i>	Small signal @ Psat	+/- 2 max. +/- 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 typ.	
Load mismatch <i>Résistance au TOS de charge</i>		6:1 max.	
Time for RF on/off (blanking) <i>Vitesse d'extinction RF</i>	10-90% RF rise / fall time	2 typ. 5 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
Spurious <i>Parasites</i>	@ Psat	-60 max.	dBc
OIP3 <i>OIP3</i>	@ 1W / carrier Spacing = 1MHz	45 min. 47 typ.	dBm
Harmonics <i>Harmoniques</i>	H2 H3	-40 typ. -35 max. -45 typ. -40 max.	dBc

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Noise figure <i>Facteur de bruit</i>		5 typ. 7 max.	dB
Operating class <i>Classe de fonctionnement</i>		AB on GaN devices	
Supply voltage <i>Tension d'alimentation</i>	"Vcc" (includes DC/DC converter)	+18 min. +28 typ. +36 max.	Vdc
Current consumption <i>Courant consommé</i>	Blanking ON Small signal, CW @Psat – 0dBm input power	0.2 max. 0.5 typ. 1.6 typ. 2 max.	A
Temperature voltage monitoring <i>Tension de contrôle de température</i>	Positive slope	10 -300mV @ -30°C 0V @ 0°C +600mV @ +60°C	mV/°C

Control and Monitoring <i>Contrôle et Information</i>		
Parameters <i>Paramètres</i>	Description <i>Description</i>	Specifications <i>Spécifications</i>
Noise quieting / RF blanking control <i>Commande d'extinction RF</i>	TTL command "Blanking" solder pin	Low or Not Connected = RF Output ON High (+5V) = RF Output OFF (Muted)
Temperature analog signal <i>Lecture temperature</i>	Analog output "Temperature" solder pin	Range: -5Vdc to +5Vdc See electrical features

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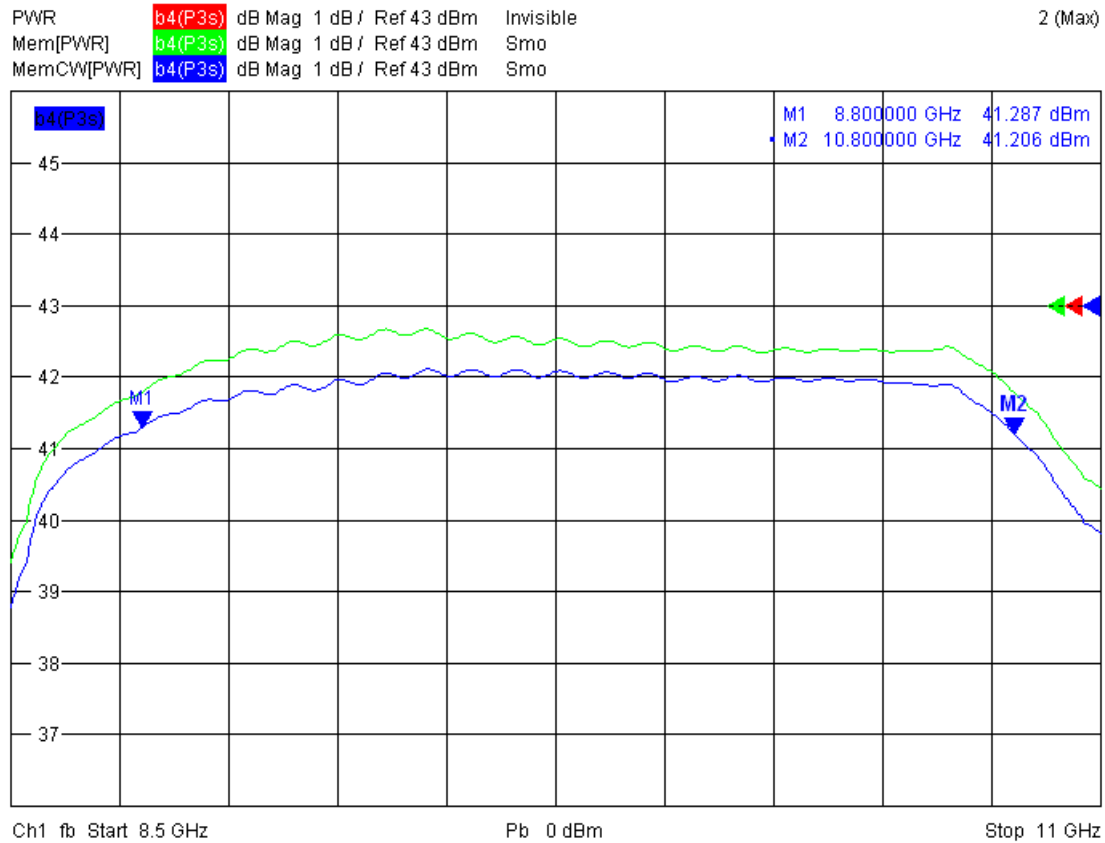


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Green : Psat (dBm) in pulsed mode @ 0dBm input power
 Blue : Psat (dBm) in CW mode @ 0dBm input power

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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	110 x 65 x 24 max. (without connectors) (see drawings below)	mm
RF Connectors <i>Connectique RF</i>	Input / Output	SMA female	-
Supply & Control connectors <i>Connecteurs de contrôle et alimentation</i>	Supply + GND "Blanking" & "Temperature"	Solderable feedthru and pins	
Weight <i>Masse</i>		320 typ. 350 max.	g
Housing <i>Châssis</i>		Aluminium coated with Nickel	
Sealing <i>Etanchéité</i>		Hermetically sealed	

Mechanical interfaces:



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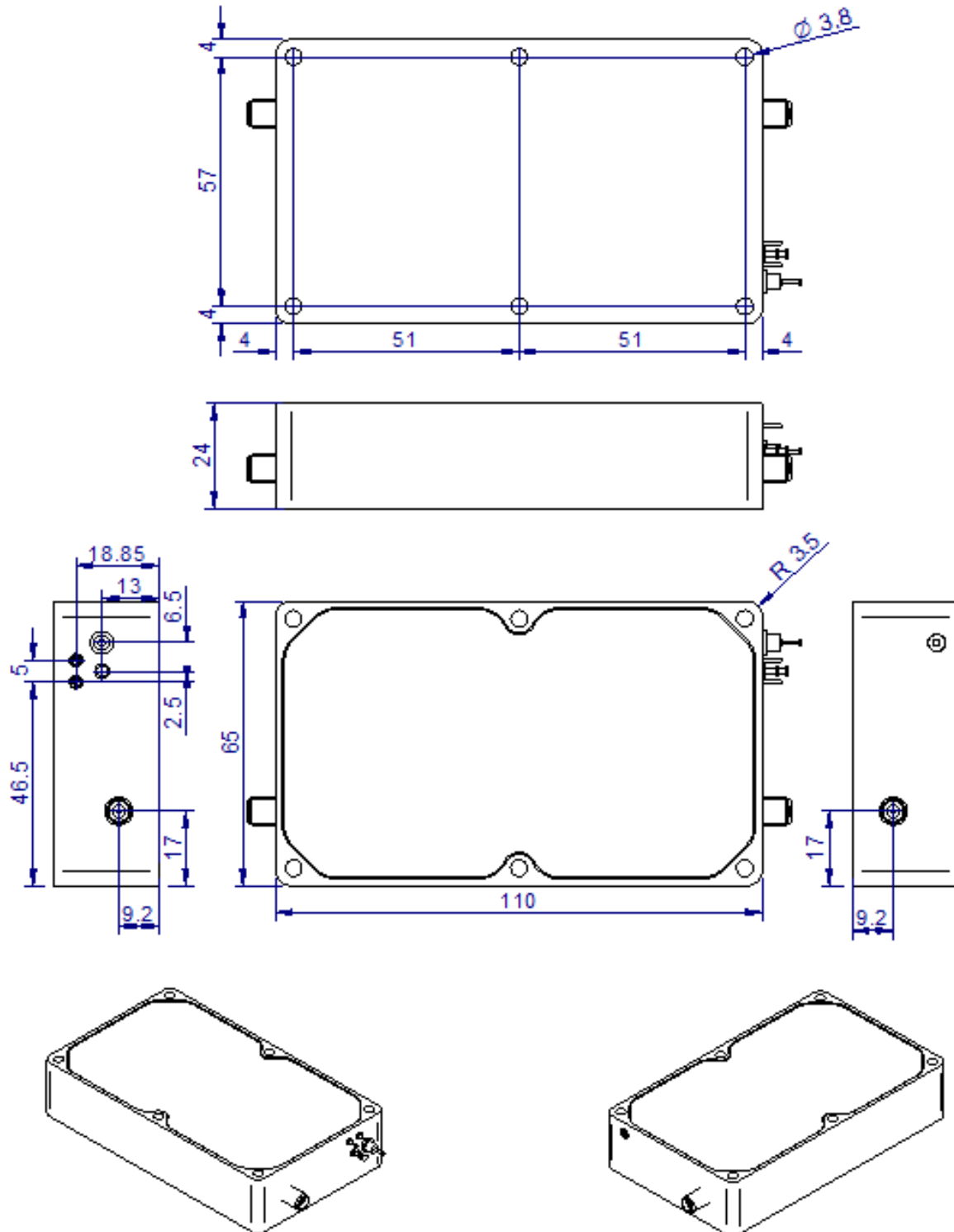


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Mechanical drawing:



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

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