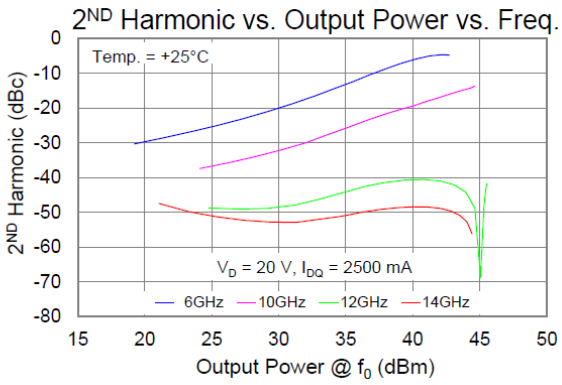
6 – 18 GHz 20W Power Amplifier Module

Ed.	*Written by*	*Date*	*Observation*	*Approved by*
0	**A. Billy**	**17/03/2017**	**Création**	**J.Belluot**

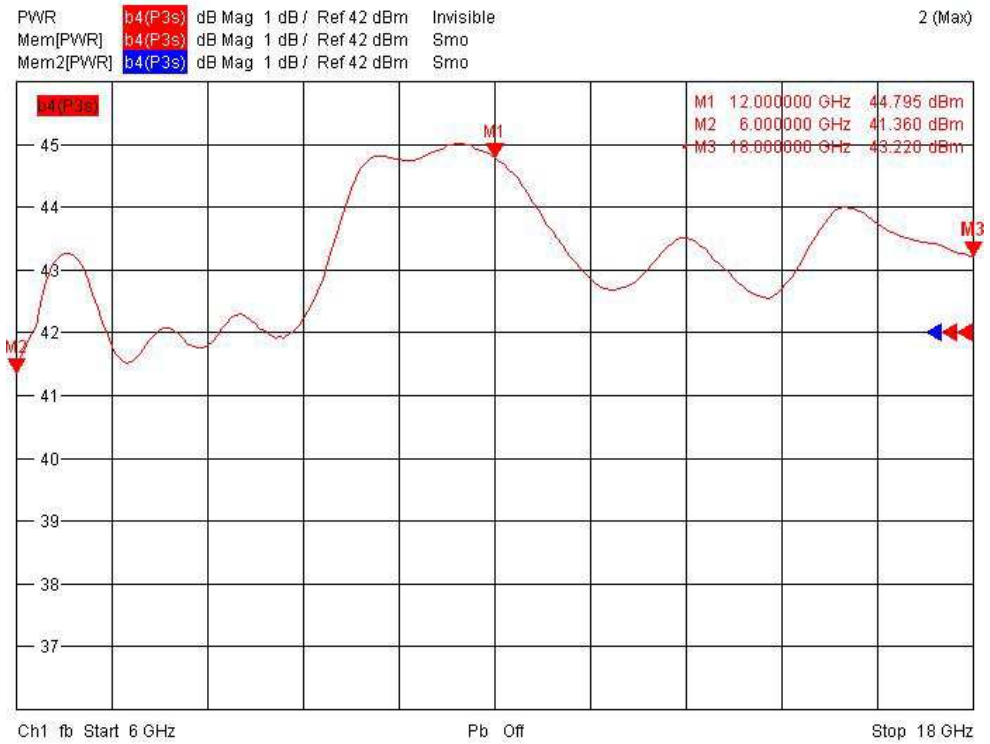
Electrical features *Caractéristiques électriques*		All parameters specified @ baseplate temperature of +25°C and supply of 21Vdc, unless otherwise specified	
Electrical parameters *Paramètres électriques*	**Measuring conditions** *Conditions de mesure*	**AA-MCS specifications** *Spécifications AA-MCS*	**Units** *Unités*
Bandwidth *Bande de fréquence*		6 – 18	GHz
Output power *Puissance de sortie*	@ Psat (0dBm input)	41 min. 43 typ.	dBm
Input power *Puissance d'entrée*	For rated power Maximum level	0 typ. **+5 max.**	dBm
Gain *Gain*	Small signal (-40dBm)	54 min. 60 typ.	dB
In band Gain ripple *Ondulation de gain*	@ SSG @ Psat	+/- 6 max. +/- 2 max.	dB
Impedance *Impedance*		50	Ohms
Input / Output VSWR *TOS d'entrée / sortie*	Input Output	2:1 max. 2:1 typ.	
Load mismatch *Résistance au TOS de charge*		3:1 max.	
Time for RF on/off (blanking) *Vitesse d'exctinction RF*	10-90% RF rise / fall time	0.2 typ. 1 max.	µs
Power density in blanking mode *Densité spectrale de puissance*	In 2 MHz BW	-120 max. RF switch in TX path and gate bias cut-off	dBm
Spurious *Parasites*	@ Psat	-60 max.	dBc
Harmonics *Harmoniques*	H2 H3	-5 max. -15 max.	dBc
Operating class *Classe de fonctionnement*		AB on GaN devices	

Electrical features *Caractéristiques électriques*		All parameters specified @ baseplate temperature of +25°C and supply of 21Vdc, unless otherwise specified	
Electrical parameters *Paramètres électriques*	**Measuring conditions** *Conditions de mesure*	**AA-MCS specifications** *Spécifications AA-MCS*	**Units** *Unités*
Supply voltage *Tension d'alimentation*	"Vcc" (With output power derating if Vcc < typical value)	+18 min. +21 typ. +24 max. (12-36Vdc input range on demand – contact factory)	Vdc
Current consumption *Courant consommé*	Blanking ON Small signal, CW @Psat – 0dBm input power	0.2 typ. 0.3 max. 3 max. 6 typ. 8 max.	A (instantaneous)
Tension de control température *Temperature voltage monitoring*	Positive slope	10 -300mV @ -30°C 0V @ 0°C +600mV @ +60°C	mV/°C

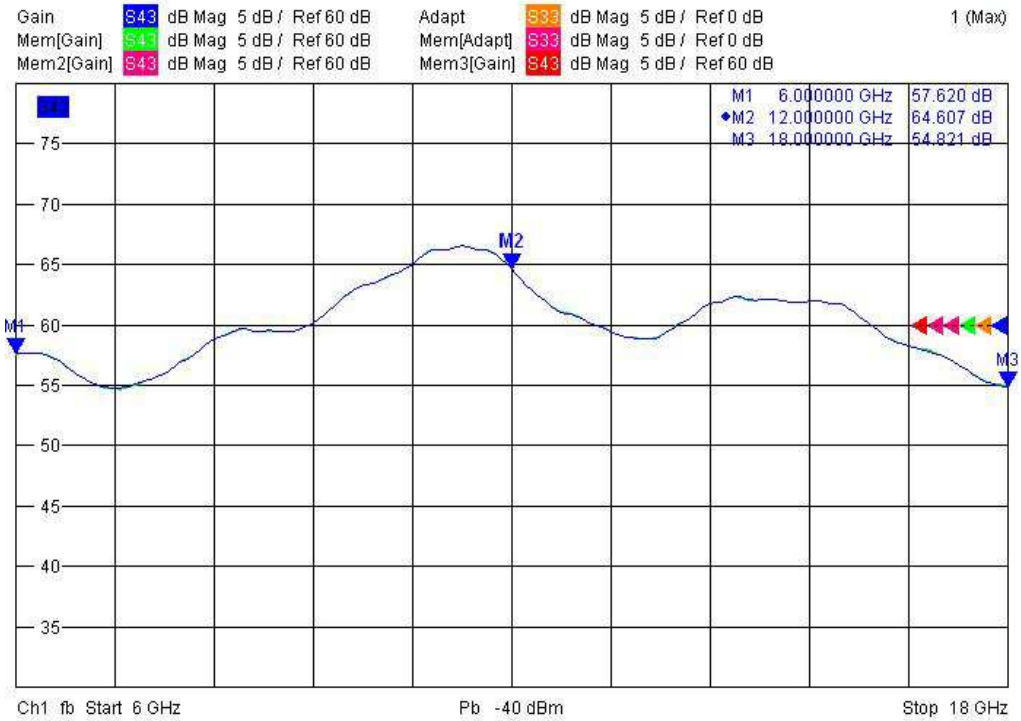
Control, Alarms and Monitoring *Contrôles, Alarmes et Informations*		
Parameters *Paramètres*	**Description** *Description*	**Spécifications** *Specifications*
Noise quieting / RF blanking control *Commande d'extinction RF*	1 solder pin TTL command "Blanking"	Low or Not Connected = RF Output ON High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



Ed.	*Written by*	*Date*	*Observation*	*Approved by*
0	**A. Billy**	**17/03/2017**	**Création**	**J.Belluot**



Output power in dBm for 0dBm input power @ +25°C & Vdc = 21Vdc



Small signal gain @ +25°C & Vdc = 21Vdc

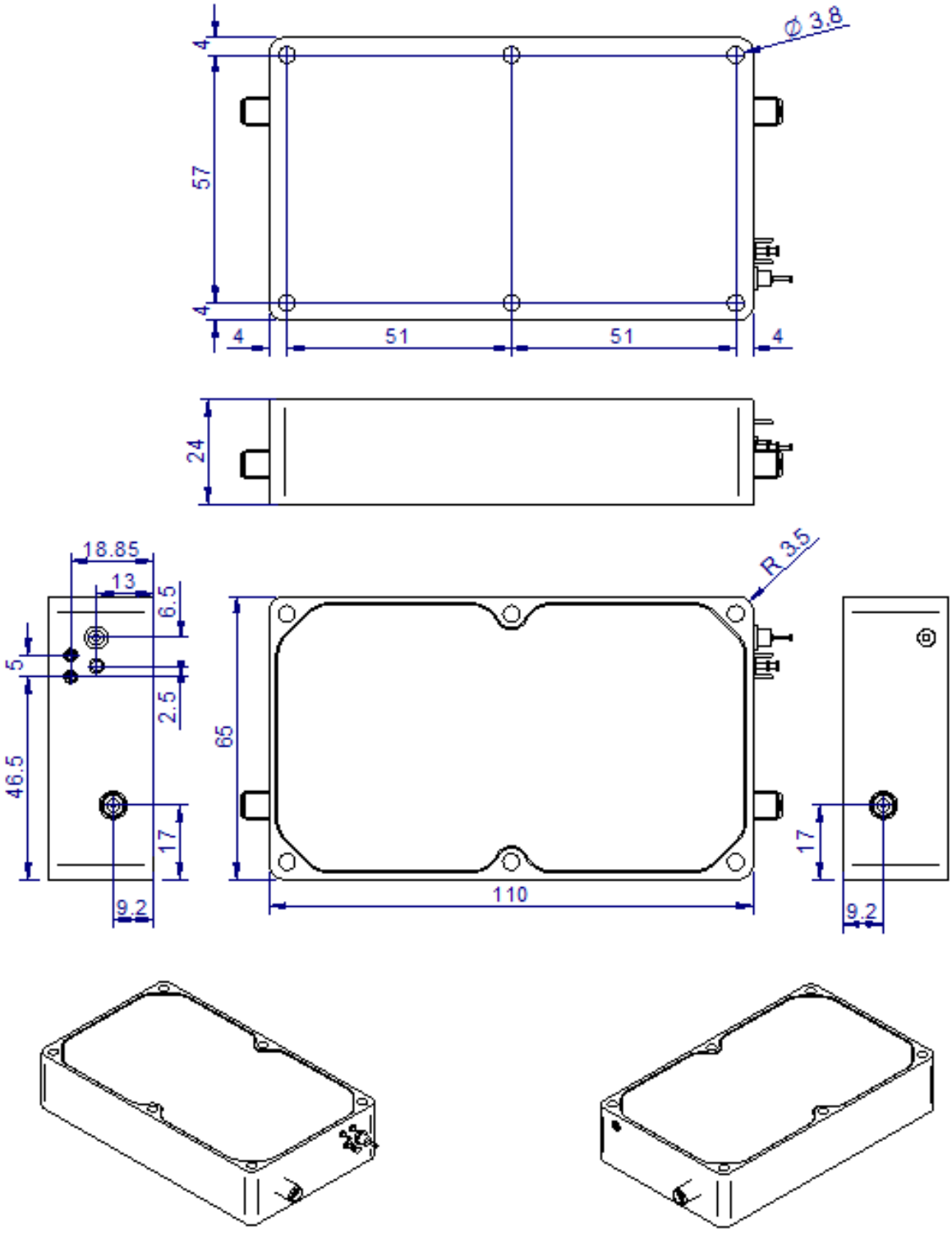
Ed.	*Written by*	*Date*	*Observation*	*Approved by*
0	**A. Billy**	**17/03/2017**	**Création**	**J.Belluot**

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

Mechanical interfaces:

Ed.	*Written by*	*Date*	*Observation*	*Approved by*
0	**A. Billy**	**17/03/2017**	**Création**	**J.Belluot**

Mechanical drawing:



Ed.	*Written by*	*Date*	*Observation*	*Approved by*
0	**A. Billy**	**17/03/2017**	**Création**	**J.Belluot**

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