



DATASHEET
FEUILLE DE SPECIFICATIONS

P/N: MCS-AMP-20M-20G-27dB-33dBm-0-C
Designation: 2W, 27dB, 20MHz-20GHz Amplifier Module



20 MHz – 20 GHz 2W Power Amplifier Module

Ed.	Written by	Date	Observation	Approved by
-	R. Vergnault	05/07/2023	Creation – Preliminary (ET21008)	A. BILLY



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Electrical features <i>Caractéristiques électriques</i>		All parameters specified @ baseplate temperature of +25°C and Vsupply=+24Vdc, unless otherwise specified	
Electrical parameters <i>Paramètres électriques</i>	Measuring conditions <i>Conditions de mesure</i>	MCS specifications <i>Spécifications MCS</i>	Units <i>Unités</i>
Bandwidth <i>Bande de fréquence</i>		0.02 – 20	GHz
Output power <i>Puissance de sortie</i>	In CW Mode, @Psat (+5dBm input power typ) @T° case +25°C	32 min. 33 typ.	dBm
Input power <i>Puissance d'entrée</i>	For saturated power Absolute maximum level	+5 typ. +15 max.	dBm
Gain <i>Gain</i>	@ small signal 0.02 – 1.45 GHz 2.0 – 20 GHz	25 min. 27 typ. 30 typ. 27 typ.	dB
In band Gain ripple <i>Ondulation de gain</i>	@ small signal wide band 0.02 – 1.5 GHz 1.9 – 20 GHz	+/- 3 max. +/-1 max +/-1.5 max	dB
Impedance <i>Impedance</i>		50	Ohms
Input / Output VSWR <i>TOS d'entrée / sortie</i>	RF_IN RF_OUT	2:1 typ. 2:1 typ.	
Load mismatch <i>Résistance au TOS de charge</i>	Output load	4:1 max.	
Time for RF on/off (blinking) <i>Vitesse d'extinction RF</i>	10-90% RF power rise / fall time	1 typ. 2 max.	µs
Supply voltage <i>Tension d'alimentation</i>	"Vcc"	+18 min. +24 typ. +36 max.	Vdc
Current consumption <i>Consommation de courant</i>	Under +24Vdc: Blanking mode @Psat	0.1 typ. 0.6 max	A

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Temperature voltage monitoring <i>Tension de contrôle de température</i>	"Temperature" Analog signal: positive slope & value	10mV x T(°C) -300mV@ -30°C 0V @ 0°C +600mV@ +60°C	mV/°C

Control, Alarms and Monitoring <i>Contrôles, Alarmes et Informations</i>		
Parameters <i>Paramètres</i>	Description <i>Description</i>	Spécifications <i>Specifications</i>
Blanking/noise quieting control bit <i>Control extinction</i>	1 solder pin TTL* command "Blanking"	Low or Not connected = RF ON High = RF OFF (Shutdown)
Temperature analog signal <i>Lecture temperature</i>	1 solder Pin Signal "Temperature"	Analog output Refer to Electrical features

* : TTL command is compatible with 3V CMOS and 5V TTL

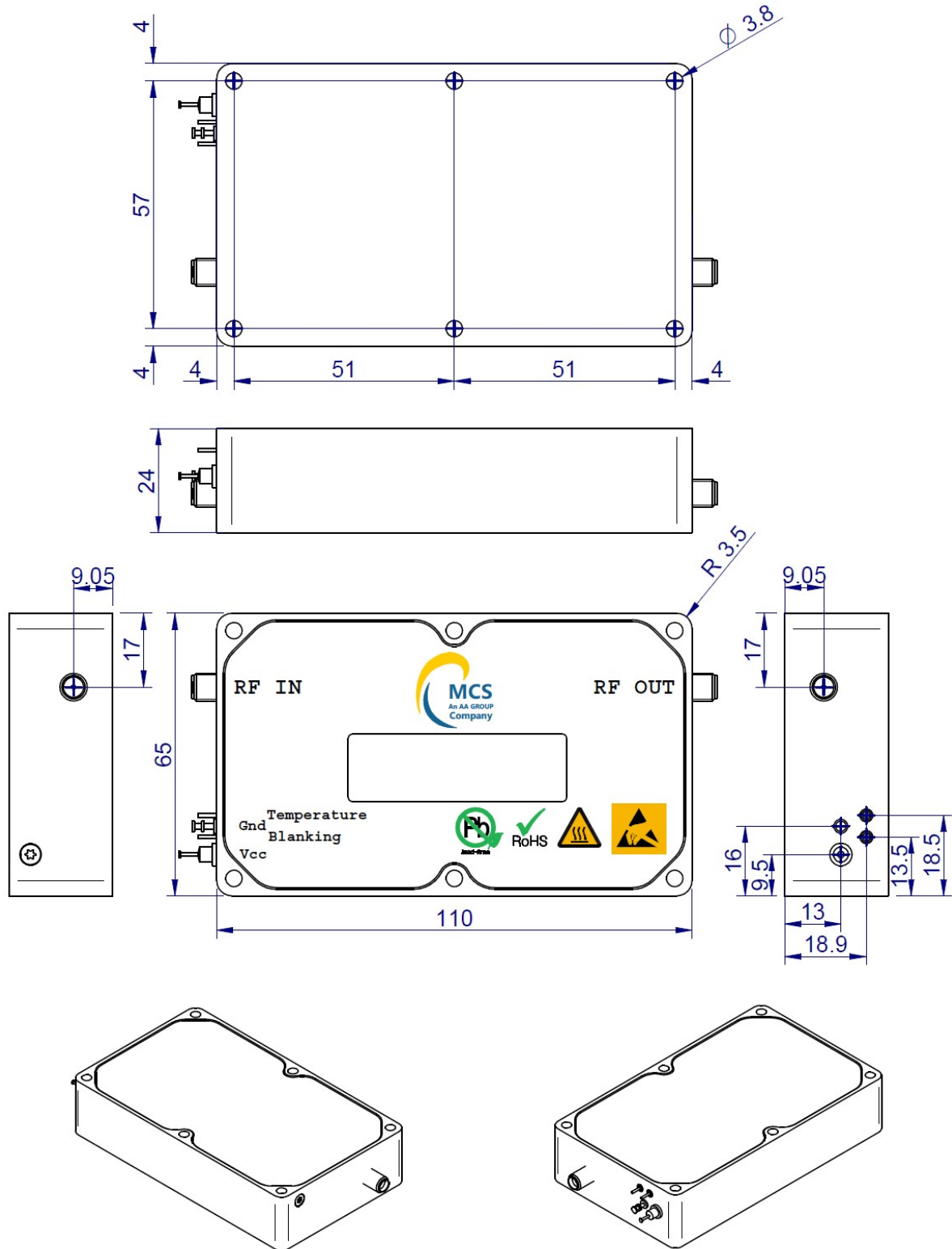
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Mechanical drawing:



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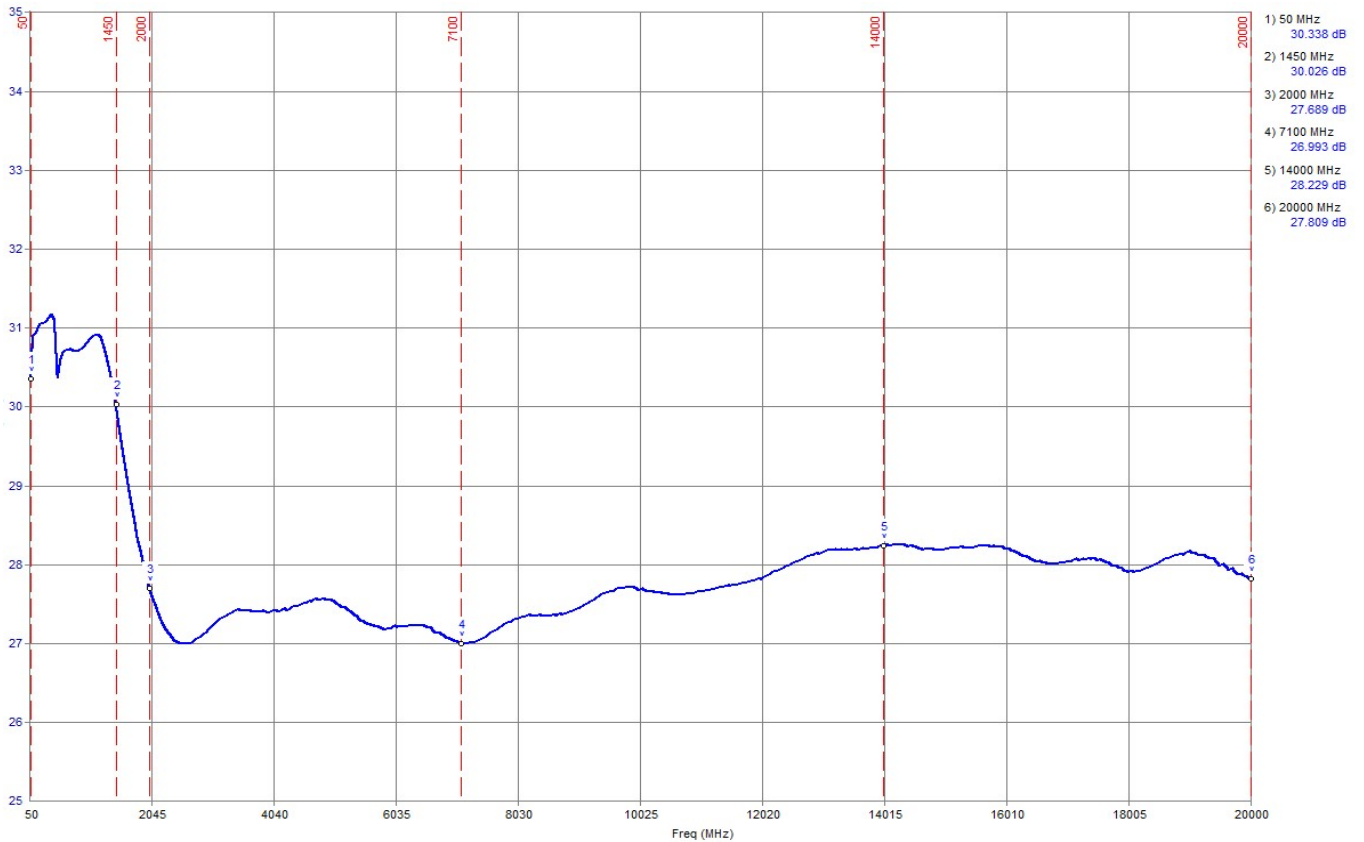
Environmental conditions <i>Conditions environnementales</i>			
Parameters <i>Paramètres</i>	Measuring conditions <i>Conditions de mesure</i>	AA-MCS specifications <i>Spécifications AA-MCS</i>	Units <i>Unités</i>
Cold temperature operation <i>Température de service à froid</i>	Case temperature	-40 min.	°C
Cold temperature storage <i>Température de stockage à froid</i>	Case temperature	-55 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	+90 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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Estimated Wide band small signal gain

PRELIMINARY

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