

The MICA300CM Proof Mass (PM) is an inertial force actuator aiming to generate or damp vibrations. This active proof-mass configuration is based on a MICA300CM (see characteristics next page) with flexure bearing and a counter-mass, tuned according to the user operating bandwidth. (see table 1.a below)

For instance inertial force higher than 250 N can be generated above 40 Hz, and more than 100 N from 20 Hz to almost 200 Hz, in a configuration where the moving mass is 1 Kg (see Fig. 3) and where the MICA300CM-PM is driven by the CSA96 amplifier.



Fig. 1: View of the MICA300CM-PM 1 Kg

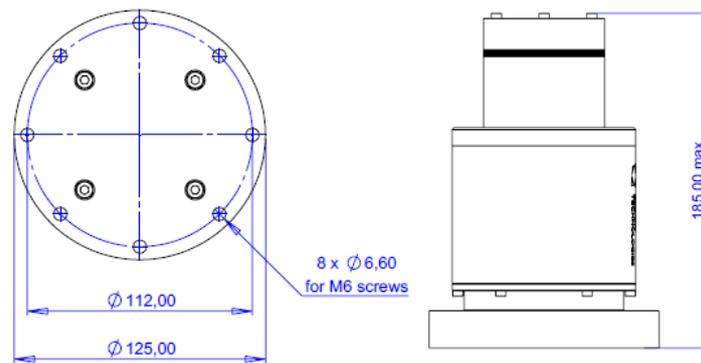


Fig. 2: View of the mechanical interfaces of the MICA300CM proof-mass (MICA300CM actuator + counter-mass)

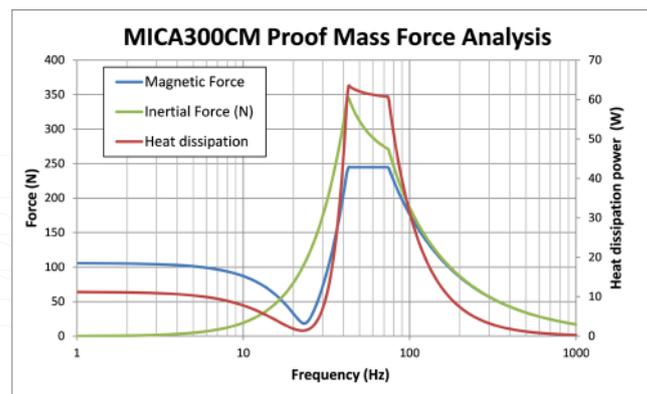


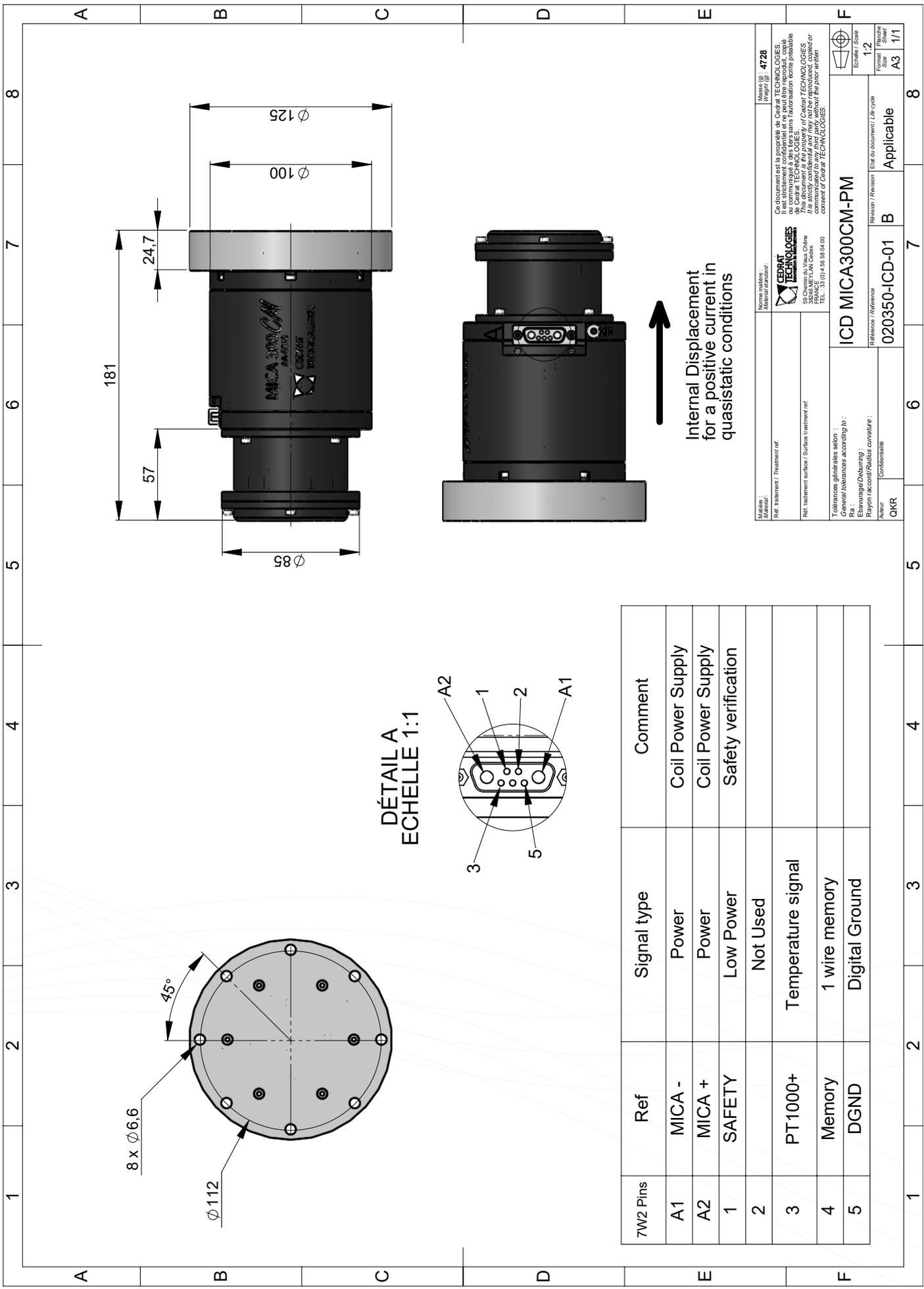
Fig. 3: Force and heat dissipation vs frequency

PARAMETER	UNIT	MICA300CM PROOF MASS
Tunable moving mass	kg	0.60 - 1.50
Tunable resonance frequency ^(a.1)	Hz	18 - 30
Maximum inertial force range ^(a.2)	N	250 - 350

Table 1.a Characteristics of MICA™ Proof Mass

a.1 Achieved by tuning only the moving mass. Other resonance frequencies can be achieved with custom flexure bearing configurations.

a.2 In the vicinity of resonance frequency and above



Internal Displacement
for a positive current in
quasistatic conditions

7W2 Pins	Ref	Signal type	Comment
A1	MICA -	Power	Coil Power Supply
A2	MICA +	Power	Coil Power Supply
1	SAFETY	Low Power	Safety verification
2		Not Used	
3	PT1000+	Temperature signal	
4	Memory	1 wire memory	
5	DGND	Digital Ground	

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Référence / Treatment ref.: Ref. traitement surface / Surface treatment ref.:	Référence / Référence: ICD MICA300CM-PM Référence / Revision: 020350-ICD-01 B Révision / Life cycle: Applicable
Tolérances générales selon : General tolerances according to : Eqs. / Large/Debouring : Rayon raccord / Radius curvature :	Echelle / Scale: 1:2 Format / Sheet Size: A3 1/1
Auteur / Conceptionnaire:	Form: A3 / 1/1