

Filters

Markets



Cob-fcav-001

Cavity Filters

FEATURES

- Center Frequency : 382 MHz
- Bandwidth : 379.5 MHz to 384.5 MHz
- Input Power (max) : 32 W
- Insertion losses @ fo : < 3 dB
- Operating temperature : -20°C to +50°C

DESCRIPTION

The cob-fcav-001 is a cavity filter ideal for tetra applications. Low in bandwidth insertion losses (< 3 dB) and excellent attenuation out of bandwidth (30dB at 387MHz and 25dB at 376MHz) is achieved using state of the art design, assembly and tuning process. This product is designed for 32 W input power.

APPLICATIONS

- Tetra

ELECTRICAL SPECIFICATIONS

	Value
Centre frequency	382.5 MHz
Bandwidth at 1dB	5 MHz
Insertion loss at 382.5 MHz	< 3dB
VSWR	< 1.2:1
Rejection at 387.5MHz	> 30dB
Rejection at 376MHz	> 20dB
Power	32W

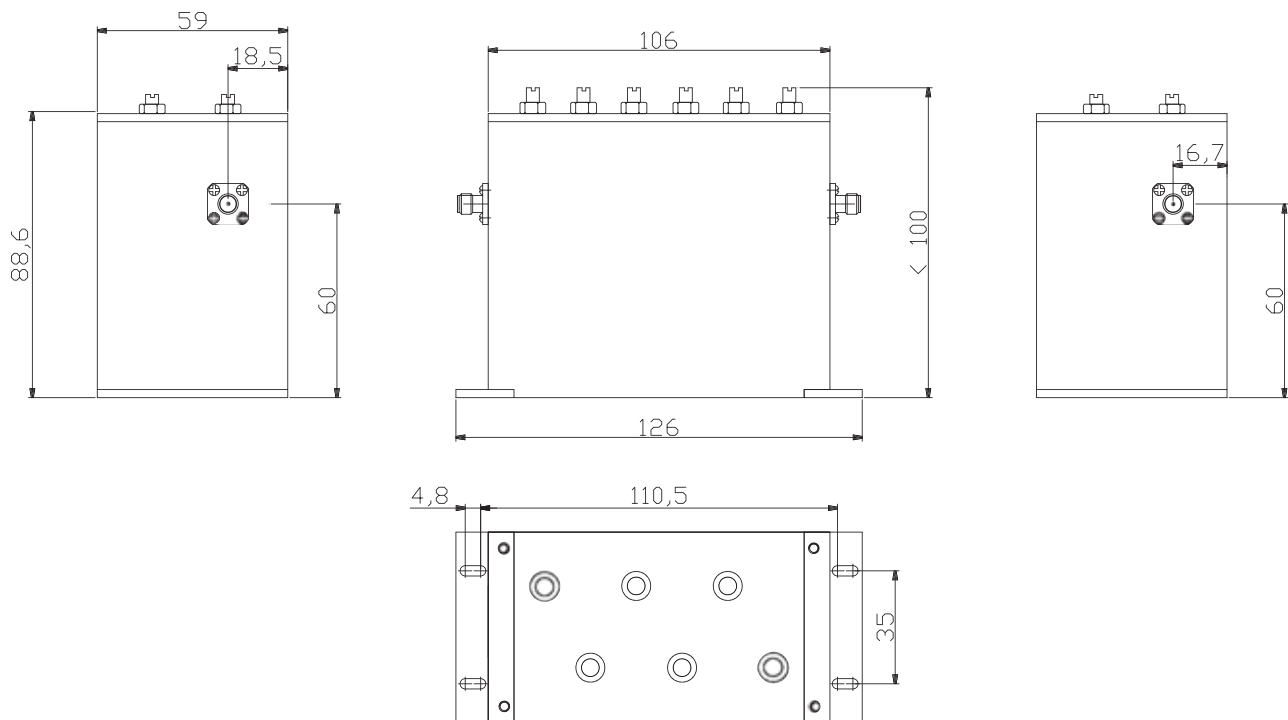
ENVIRONMENTAL SPECIFICATIONS

	Symbol	Unit	Value
Operating Temperature range	t	°C	-20 → +50
Storage Temperature range	t	°C	-30 → +60

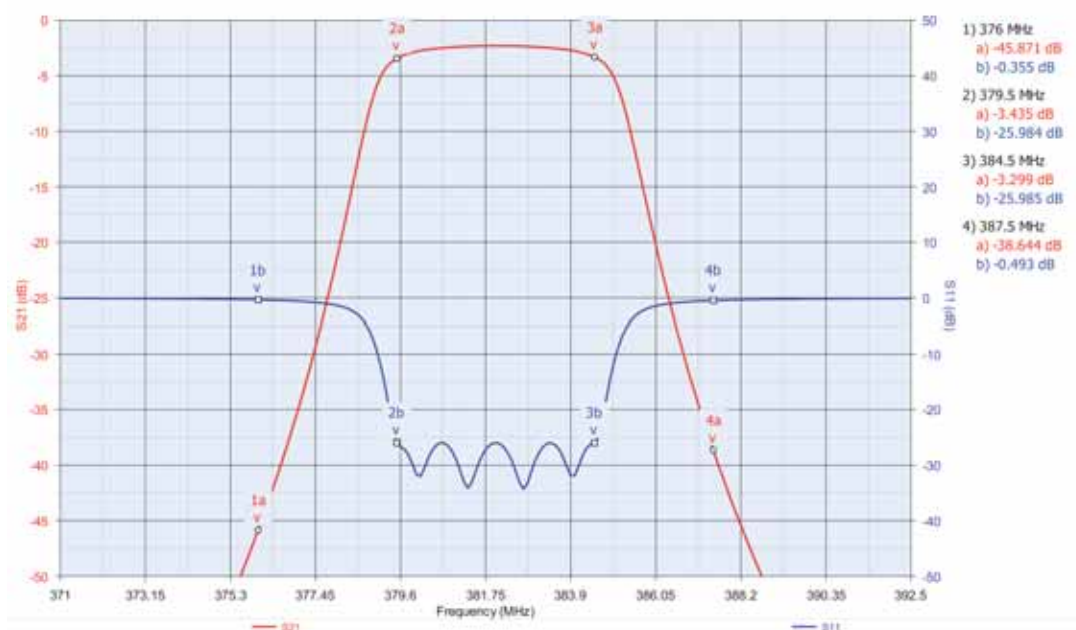
OTHER SPECIFICATIONS

	Symbol	Unit	Value
Dimensions	L x l x h	mm	130 x 65 x 100
Connectors			SMA

OUTLINE DRAWING



TYPICAL PERFORMANCES



Cob-fcav-003

Cavity Filters

FEATURES

- Center Frequency : 401 MHz
- Bandwidth : 400 MHz to 402 MHz
- Input Power (max) : 0 dBm
- Insertion losses @ fo : < 1 dB
- Operating temperature : -40°C to +85°C

DESCRIPTION

The cob-fcav-003 is a cavity filter ideal for space applications. Low in bandwidth insertion losses (< 1 dB) and excellent attenuation out of bandwidth (45dB at 300MHz and 65dB at 462MHz) is achieved using state of the art design, assembly and tuning process. This product is designed for 1 mW input power.

APPLICATIONS

- Space
- Avionics

ELECTRICAL SPECIFICATIONS

	Value
Centre frequency	401.635 MHz
bandwidth	> 2 MHz
Insertion loss in Bandwidth	< 1 dB
Rejection 10MHz-300MHz	> 45 dB
Rejection at 354.2 MHz ± 30 kHz	> 25dB
Rejection at 462.5 MHz ± 0.6 MHz	> 65dB
Rejection at 480 MHz	> 50dB
Rejection at 500MHz up to >3rd harmonic	> 45dB
Input / Output return loss	> 18 dB
Pressure	1.33 x 10 ⁻³ TORR

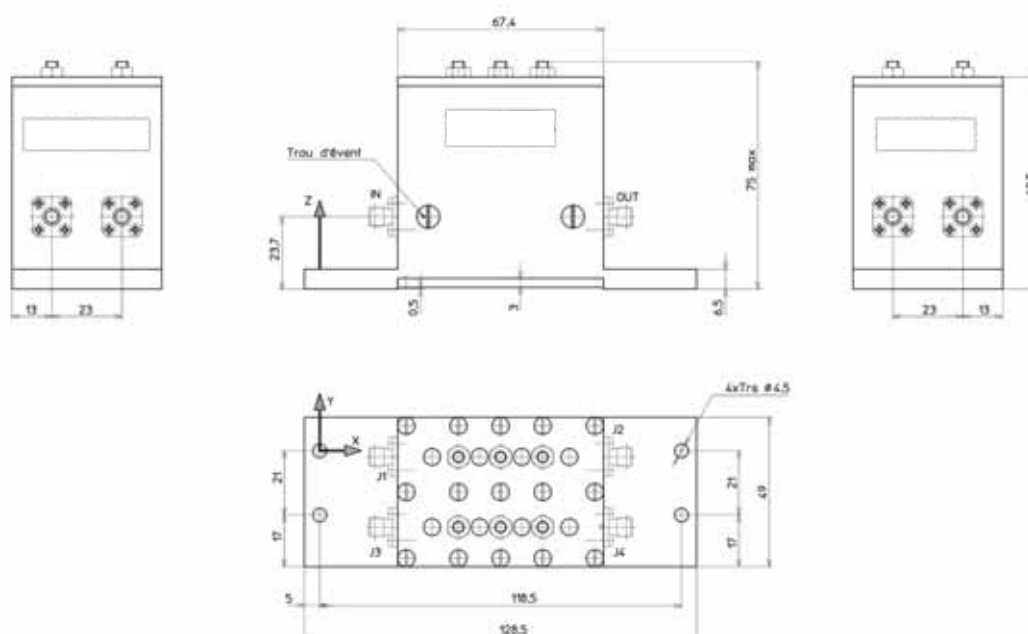
ENVIRONMENTAL SPECIFICATIONS

	Symbol	Unit	Value
Operating Temperature range	t	°C	-40 → +85
Storage Temperature range	t	°C	-45 → +90

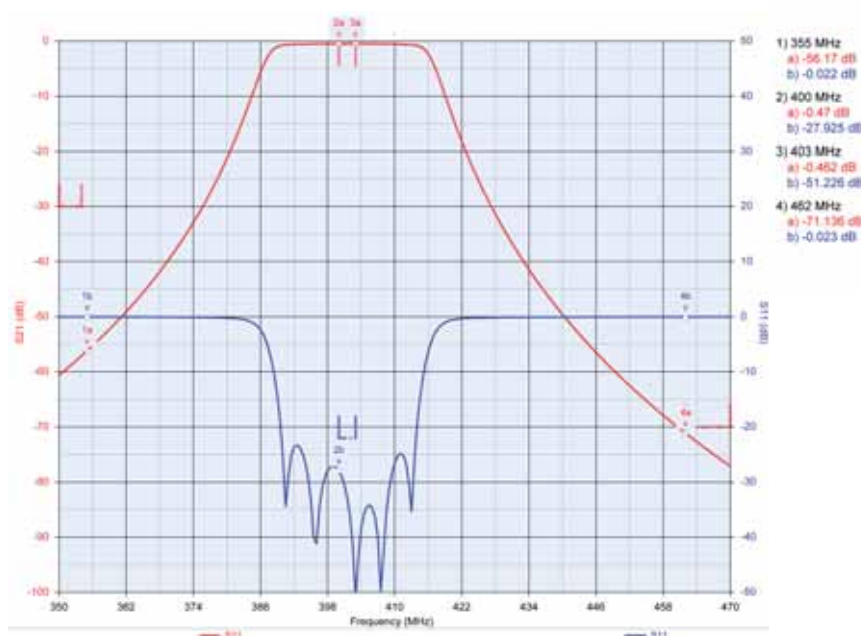
OTHER SPECIFICATIONS

	Symbol	Unit	Value
Dimensions	L x l x h	mm	128 x 43 x 71
Connectors			SMA Female

OUTLINE DRAWING



TYPICAL PERFORMANCES



Cob-fcav-005

Cavity Filters

FEATURES

- Center Frequency : 435 MHz
- Bandwidth : 420 MHz to 450 MHz
- Input Power (max) : 5 W
- Insertion losses @ fo : < 0.5 dB
- Operating temperature : -20°C to +50°C

DESCRIPTION

The cob-fcav-005 is a cavity filter ideal for pmr applications. Low in bandwidth insertion losses (< 0.5 dB) and excellent attenuation out of bandwidth (40dB at 380MHz and 40dB at 490MHz) is achieved using state of the art design, assembly and tuning process. This product is designed for 5 W input power.

APPLICATIONS

- Pmr

ELECTRICAL SPECIFICATIONS

	Symbol	Unit	Maximum Rating
Frequency Range	Freq.	MHz	420-450
Insertion Loss	IL	dB	< 0.5
Return Loss	RL	dB	> 21
Rejection at 380MHz	Att	dB	> 40
Rejection at 490 MHz	Att	dB	> 40

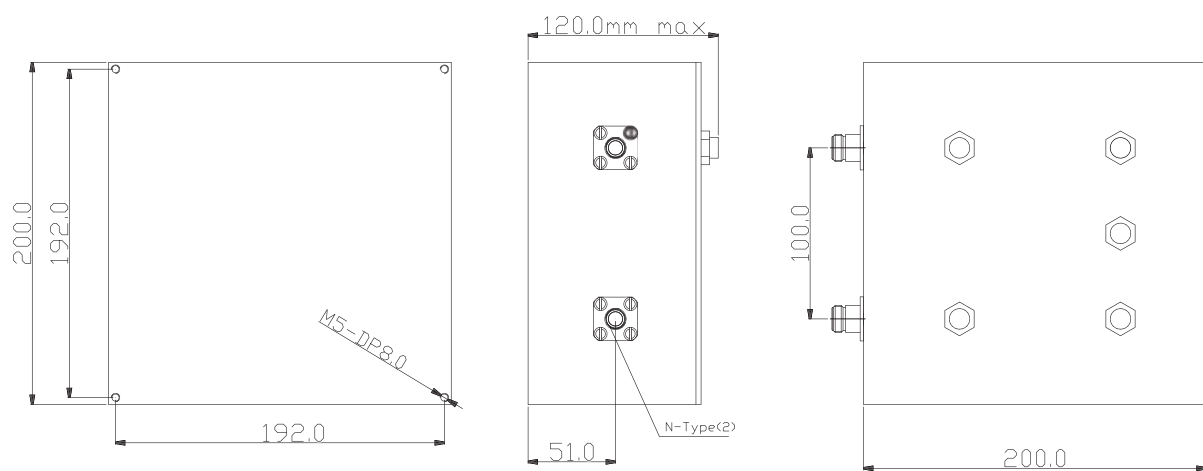
ENVIRONMENTAL SPECIFICATIONS

	Symbol	Unit	Value
Operating Temperature range	t	°C	-20 → +50
Storage Temperature range	t	°C	-30 → +60

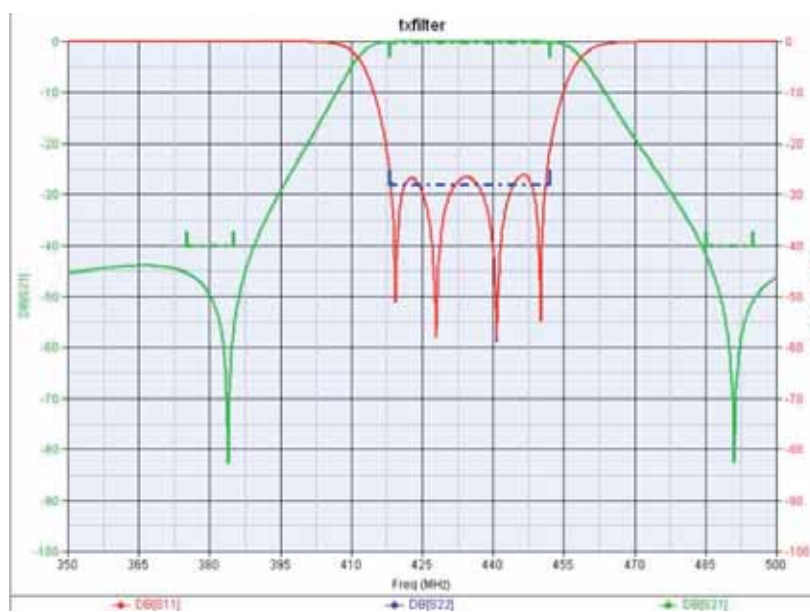
OTHER SPECIFICATIONS

	Symbol	Unit	Value
Dimensions	L x l x h	mm	200 x 200 x 120
Connectors			N Female

OUTLINE DRAWING



TYPICAL PERFORMANCES



Cob-fcav-006

Cavity Filters

FEATURES

- Center Frequency : 462 MHz
- Bandwidth : 461 MHz to 463 MHz
- Input Power (max) : 0 dBm
- Insertion losses @ fo : < 1 dB
- Operating temperature : -40°C to +85°C

DESCRIPTION

The cob-fcav-006 is a cavity filter ideal for pmr applications. Low in bandwidth insertion losses (< 1 dB) and excellent attenuation out of bandwidth (50dB at 400MHz) is achieved using state of the art design, assembly and tuning process. This product is designed for 1 mW input power.

APPLICATIONS

- Pmr

ELECTRICAL SPECIFICATIONS

	Value
Centre frequency	462.5 MHz
bandwidth	> 2 MHz
Insertion loss in Bandwidth	< 1 dB
Rejection at 401.635 MHz ± 30kHz	> 50 dB
Input / Output return loss	> 18 dB
Pressure	1.33 × 10 ⁻³ TORR

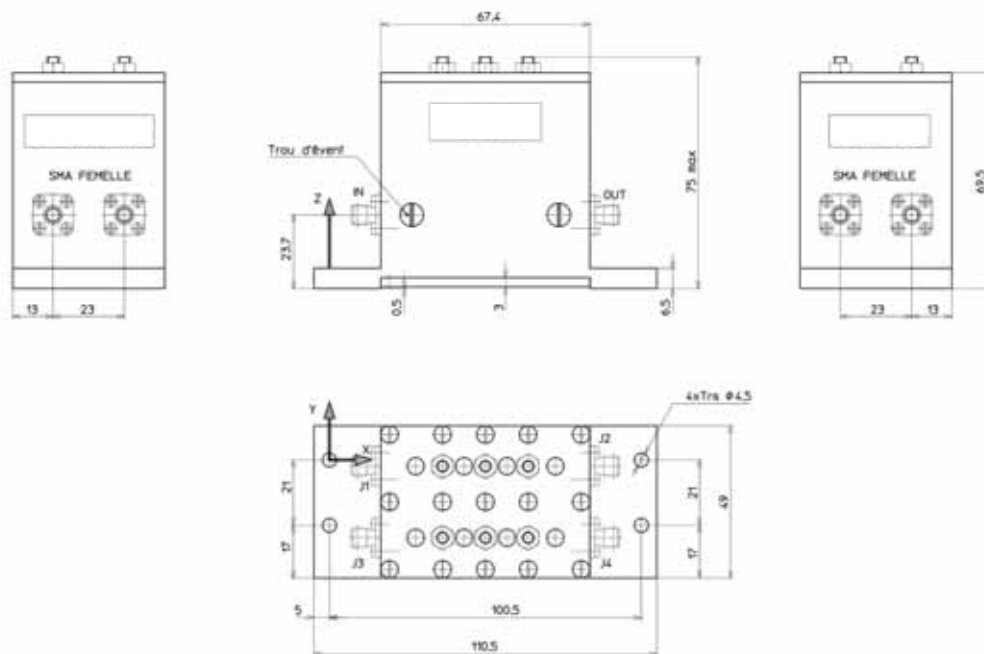
ENVIRONMENTAL SPECIFICATIONS

	Symbol	Unit	Value
Operating Temperature range	t	°C	-40 → +85
Storage Temperature range	t	°C	-45 → +90

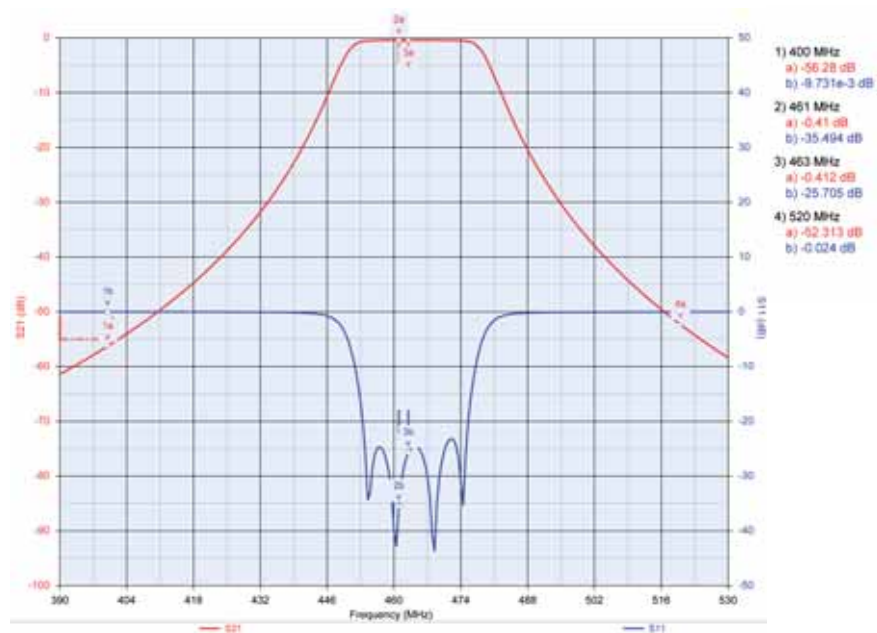
OTHER SPECIFICATIONS

	Symbol	Unit	Value
Dimensions	L x l x h	mm	110 x 43 x 71
Connectors			SMA Female

OUTLINE DRAWING



TYPICAL PERFORMANCES



Cob-fcav-008

Cavity Filters

FEATURES

- Center Frequency : 1090 MHz
- Bandwidth : 1080 MHz to 1100 MHz
- Input Power (max) : 5 W
- Insertion losses @ fo : < 1 dB
- Operating temperature : -20°C to +50°C

DESCRIPTION

The cob-fcav-008 is a cavity filter ideal for iff applications. Low in bandwidth insertion losses (< 1 dB) and excellent attenuation out of bandwidth (40dB at 1058MHz and 1120MHz) is achieved using state of the art design, assembly and tuning process. This product is designed for 5 W input power.

APPLICATIONS

- Iff
- Avionics

ELECTRICAL SPECIFICATIONS

	Unit	Value
Centre frequency	MHz	1090
Insertion loss max.	dB	< 1
Bandwidth at 3dB	MHz	> 20
VSWR	ratio	< 1.5:1
Rejection at 1058 MHz and 1120 MHz	dB	> 40
Average power	W	5
Input impedance		50
Output impedance		50

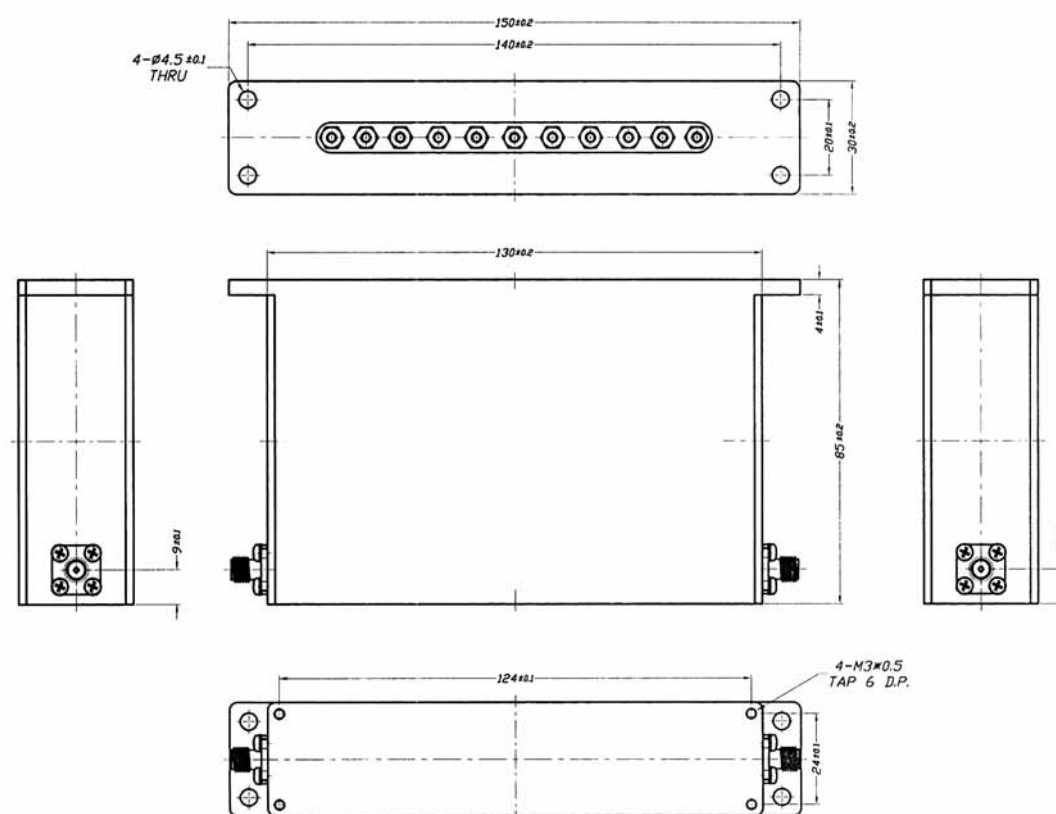
ENVIRONMENTAL SPECIFICATIONS

	Symbol	Unit	Value
Operating Temperature range	t	°C	-20 → +50
Storage Temperature range	t	°C	-30 → +60
Relative humidity		%	0-95%

OTHER SPECIFICATIONS

	Symbol	Unit	Value
Dimensions	L x l x h	mm	150 x 30 x 85
Connectors			SMA Female

OUTLINE DRAWING



Cob-fcav-011

Cavity Filters

FEATURES

- Center Frequency : 4500 MHz
- Bandwidth : 4480 MHz to 4520 MHz
- Input Power (max) : 1 W
- Insertion losses @ f_0 : < 2 dB
- Operating temperature : -20°C to +50°C

DESCRIPTION

The cob-fcav-011 is a cavity filter ideal for avionics applications. Low in bandwidth insertion losses (< 2 dB) and excellent attenuation out of bandwidth (100dB at $\pm 10\%$ of f_c) is achieved using state of the art design, assembly and tuning process. This product is designed for 1 W input power.

APPLICATIONS

- Space
- Avionics

ELECTRICAL SPECIFICATIONS

	Unit	Value
Center frequency	GHz	4.5
Power	W (cw)	1
Bandwidth	MHz	< 40
Insertion loss at f_0	dB	< 2
Return loss	dB	> 14
Attenuation at 4.5 ± 0.5 GHz	dB	> 100

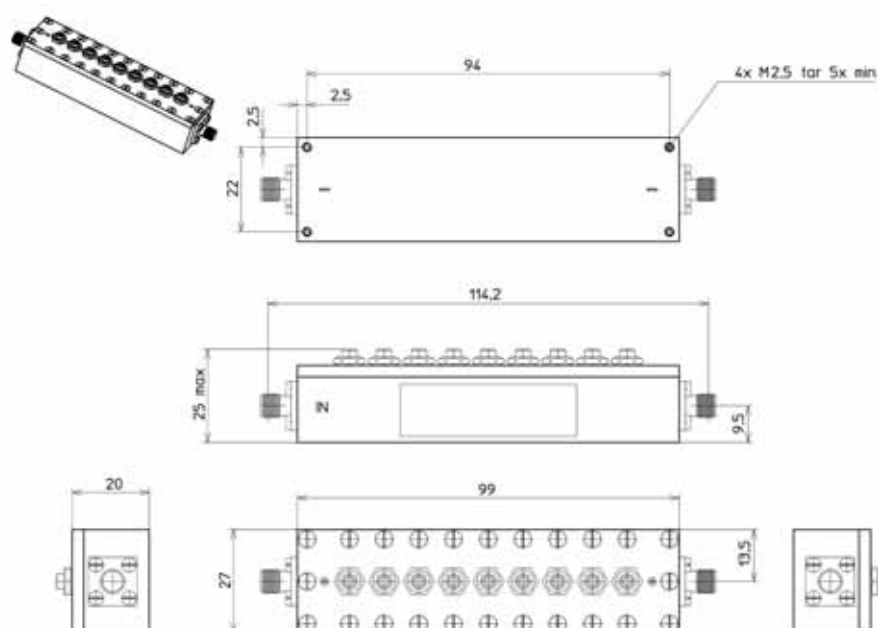
ENVIRONMENTAL SPECIFICATIONS

	Symbol	Unit	Value
Operating Temperature range	t	°C	-20 → +50
Storage Temperature range	t	°C	-30 → +60

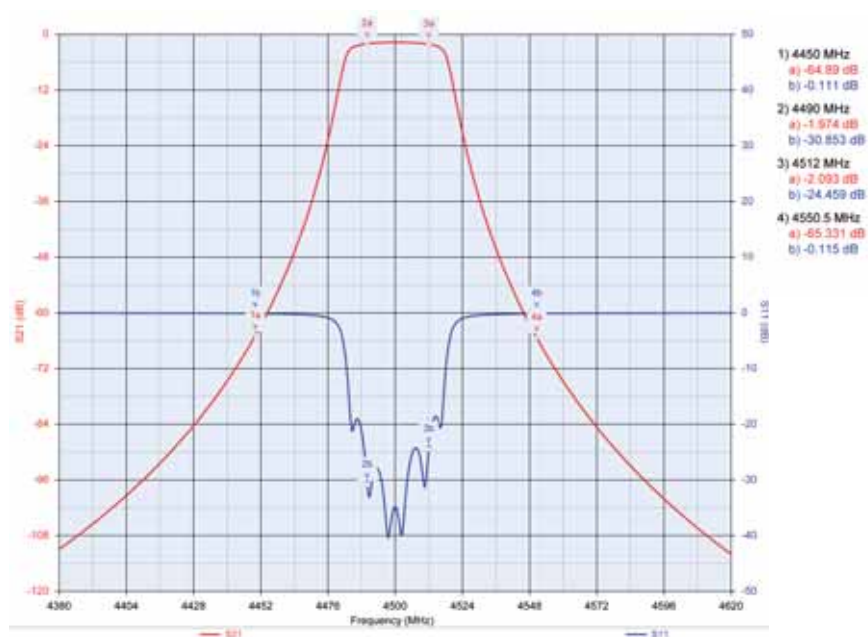
OTHER SPECIFICATIONS

	Symbol	Unit	Value
Dimensions	L x l x h	mm	114 x 27 x 25
Connectors			SMA Female

OUTLINE DRAWING



TYPICAL PERFORMANCES



Cob-fcav-012

Cavity Filters

FEATURES

- Center Frequency : 5410 MHz
- Bandwidth : 5235 MHz to 5585 MHz
- Input Power (max) : 1 W
- Insertion losses @ fo : < 0.3 dB
- Operating temperature : -15°C to +45°C

DESCRIPTION

The cob-fcav-012 is a cavity filter ideal for space applications. Low in bandwidth insertion losses (< 0.3 dB) and excellent attenuation out of bandwidth (50dB at 2300MHz and 800MHz) is achieved using state of the art design, assembly and tuning process. This product is designed for 1 W input power.

APPLICATIONS

- Space
- Avionics

ELECTRICAL SPECIFICATIONS

	Symbol	Unit	Value
Impedance	Z	Ω	50
RF Input Power (Average)		W	1
Reference Frequency Fo	Fo	MHz	5410
Useful Bandwidth		MHz	5235 – 5585
Insertion Loss in Bandwidth [5235 – 5585] MHz	I _L	dB	< 0.30
Insertion Loss Flatness in Bandwidth [5235 – 5585] MHz	IF _L	dBpp	< 0.15
Insertion Loss Ripple in Bandwidth [5235 – 5585] MHz	IR _L	dB/MHz	< 0.05
Insertion Loss Stability over Operating Temperature Range	I _{LS}	dB	< 0.1
Return Loss in Bandwidth [5235 – 5585] MHz	VSWR	dB	> 23 Ob. > 26
Attenuation From 2.2 GHz up to 2.3 GHz	R _J	dBc	> 50
Attenuation From 8.0 GHz up to 8.4 GHz	R _J	dBc	> 50
Group Delay Variation in Bandwidth [5235 – 5585] MHz	G _{DF}	pspp	< 70
Group Delay Stability over Operating Temperature Range	G _{DT}	ps/MHz	< 20
Phase Ripple in Bandwidth [5235 – 5585] MHz	P _R	°p-p	< 1

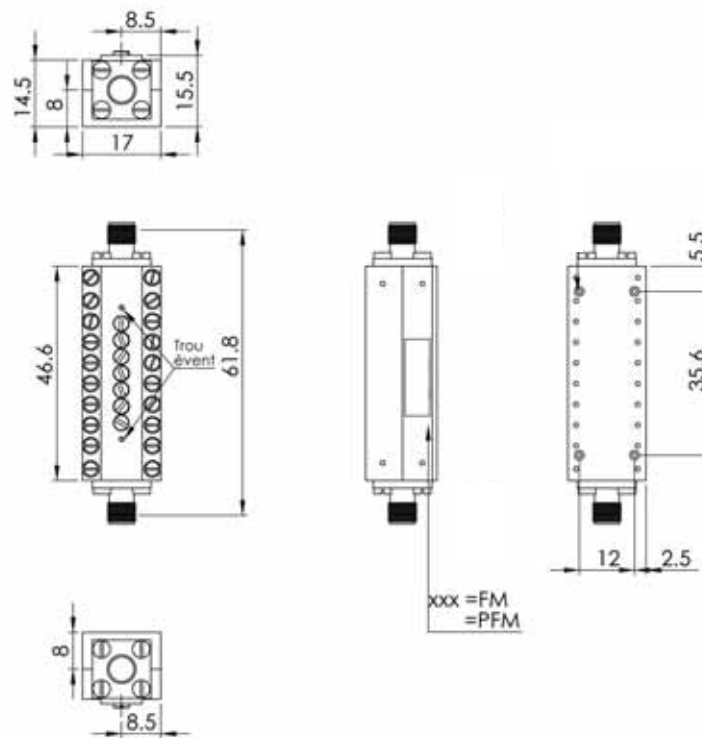
ENVIRONMENTAL SPECIFICATIONS

	Symbol	Unit	Value
Operating Temperature range		°C	-15 → +45
Storage Temperature range		°C	-30 → +60

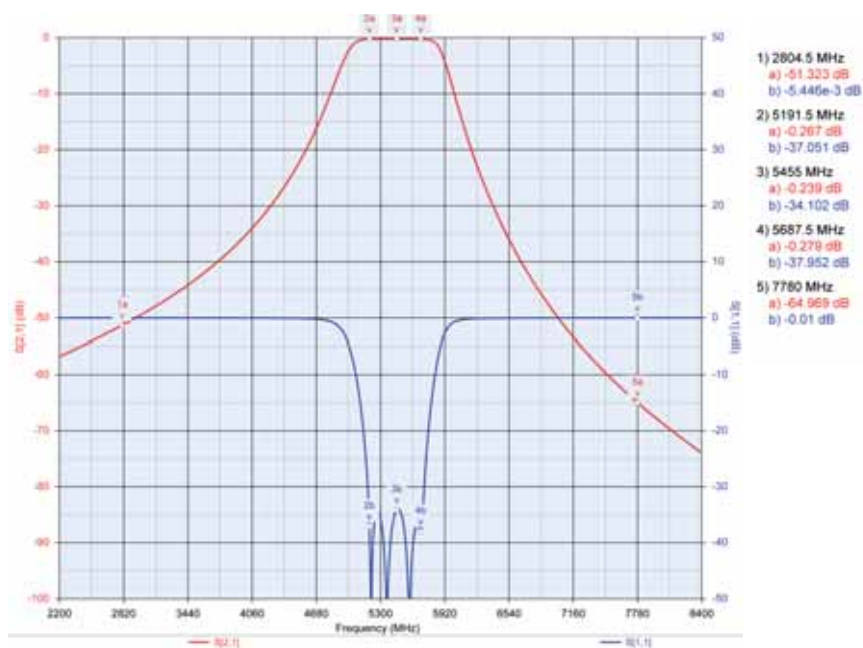
OTHER SPECIFICATIONS

	Symbol	Unit	Value
Dimensions	L x l x h	mm	46.6 x 17 x 15.5
Weight		g	< 80
Connectors			Spatial SMA Female

OUTLINE DRAWING



TYPICAL PERFORMANCES



Cob-fcav-016

Cavity Filters

FEATURES

- Center Frequency : 9200 MHz
- Bandwidth : 8900 MHz to 9500 MHz
- Input Power (max) : 0 dBm
- Insertion losses @ f_0 : < 2.2
- Operating temperature : -30°C to +70°C

DESCRIPTION

The cob-fcav-016 is a cavity filter ideal for radar applications. Low in bandwidth insertion losses (< 2.2) and excellent attenuation out of bandwidth (50dB at ± 500 MHz) is achieved using state of the art design, assembly and tuning process. This product is designed for 1 mW input power.

APPLICATIONS

- Radar
- Avionics

ELECTRICAL SPECIFICATIONS

(20 \pm 5) °C	Symbol	Unit	Value
Impedance	Z	Ω	50
Center frequency F_c		MHz	9200
Insertion loss @ F_c		dB	< 2.2
-3dB Bandwidth		MHz	[8900 - 9500]
Ripple in Band Bw1 [8930 – 9470] MHz		dBpp	< 1.2
Ripple in Bw1 in 80MHz under band		dBpp	< 1.0
Return loss in Bw1 bandwith		dB	> 14
80MHz under Band Group delay variation, in Bw1		ns	< 4
Attenuation [DC - 8700] MHz		dBc	> 55
Attenuation @ 9600 MHz		dBc	> 50
Attenuation [9700 - 18000] MHz		dBc	> 55

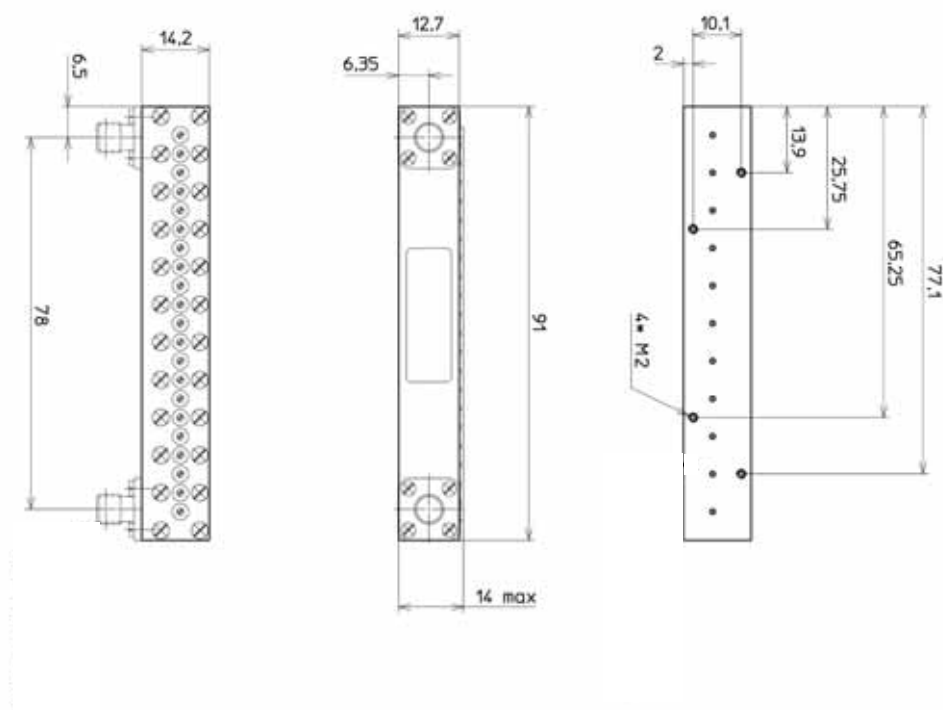
ENVIRONMENTAL SPECIFICATIONS

	Symbol	Unit	Value
Operating Temperature range	t	°C	-30 \rightarrow +70
Intermittent Operating T °C range : 6H max	t	°C	-40 \rightarrow 0 / +70 \rightarrow +85
Storage Temperature range	t	°C	-25 \rightarrow +70
Altitude		m	1500

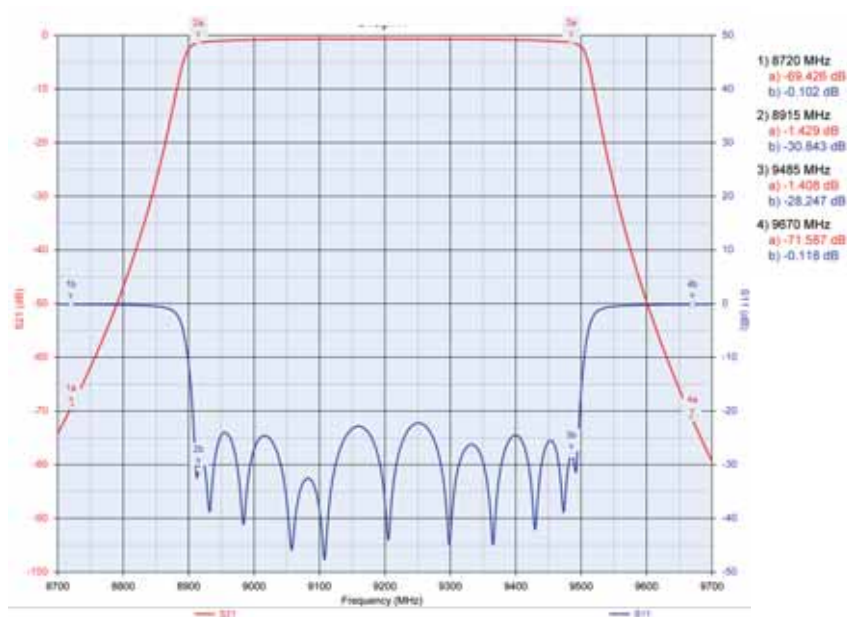
OTHER SPECIFICATIONS

	Symbol	Unit	Value
Dimensions	L x l x h	mm	91x14.2x14
Weight		g	< 50
Connectors			SMA Female

OUTLINE DRAWING



TYPICAL PERFORMANCES



Cob-fcav-020

Cavity Filters

FEATURES

- Center Frequency : 11975 MHz
- Bandwidth : 11700 MHz to 12250 MHz
- Input Power (max) : 20 dBm
- Insertion losses @ fo : < 1.5 dB
- Operating temperature : -10°C to +90°C

DESCRIPTION

The cob-fcav-020 is a cavity filter ideal for space applications. Low in bandwidth insertion losses (< 1.5 dB) and excellent attenuation out of bandwidth (40dB at 11000MHz and 13750MHz) is achieved using state of the art design, assembly and tuning process. This product is designed for 100 mW input power.

APPLICATIONS

- Space
- Avionics

ELECTRICAL SPECIFICATIONS

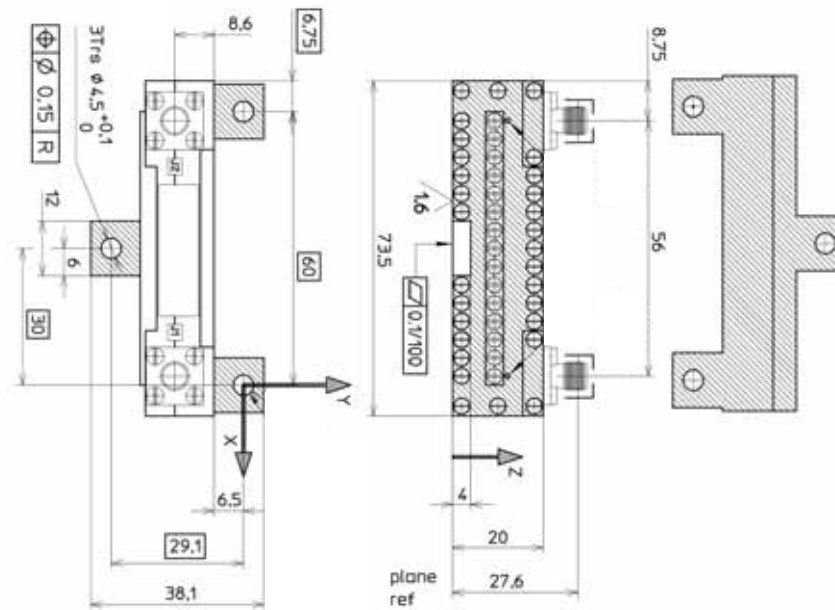
	Symbol	Unit	Value
Impedance	Z	Ω	50
RF Input Power		dBm	< 20
Reference Frequency Fo	Fo	GHz	11.975
Useful Bandwidth		GHz	11.70 – 12.25
Insertion Loss in Bandwidth [11.70 – 12.25] MHz		dB	< 1.50
Loss Stability over Operating Temperature Range		dB/MHz	< 0.25
Loss Stability over any 15°C Range		dB/MHz	< 0.03
Loss Flatness over any Band of 36 MHz, in Usefull Bandwidth		dBpp	< 0.20
Loss Flatness over any Band of 72 MHz, in Usefull Bandwidth		dBpp	< 0.35
Loss Slope over Usefull Bandwidth		dB/MHz	< 0.025
Group Delay Variation over any 36 MHz Band, in Usefull Bandwidth		nspp	< 1.0
Group Delay Variation over any 72 MHz Band, in Usefull Bandwidth		nspp	< 2.0
Group Delay Stability over Operating Temperature Range		ns/MHz	< 0.1
Group Delay Slope over Usefull Bandwidth		ns/MHz	< 0.05
Return Loss in Bandwidth [11.70 – 12.25] MHz		dB	> 21
Attenuation From 1.0 GHz up to 11.0 GHz		dBc	> 40
Attenuation From 12.75 GHz up to 13.5 GHz		dBc	> 35
Attenuation From 13.75 GHz up to 14.0 GHz		dBc	> 40
Attenuation From 17.3 GHz up to 18.4 GHz		dBc	> 70

ENVIRONMENTAL SPECIFICATIONS

	Symbol	Unit	Value
Operating Temperature range		°C	-10 → +90
Storage Temperature Range		°C	-35 → +95
Sine Vibrations (3 axis, 4 Oct./min.)			5 – 26 Hz : 11mm crête 26 – 100 Hz : 30 g 10 – 50 Hz : 9dB/Oct. 50 Hz : 0.444g ² /Hz
Random Vibrations (3 axis, 1 minute/axis)			50 – 500 Hz : 0.9dB/Hz 500 – 1000 Hz : 0.89g ² /Hz 1000 – 2000 Hz : -9dB/Hz
Shocks (3 Axes, 6 Directions)			100 Hz : 55g 1000 Hz : 500g 3000 Hz : 2000g 10000Hz : 2000g

OTHER SPECIFICATIONS

	Symbol	Unit	Value
Dimensions	L x l x h	mm	73.5 x 38.1 x 20
Weight		g	55 ± 5%
Connectors			Spatial SMA Female



TYPICAL PERFORMANCES

