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DUPLEX FILTER (Full–band PCS1900)

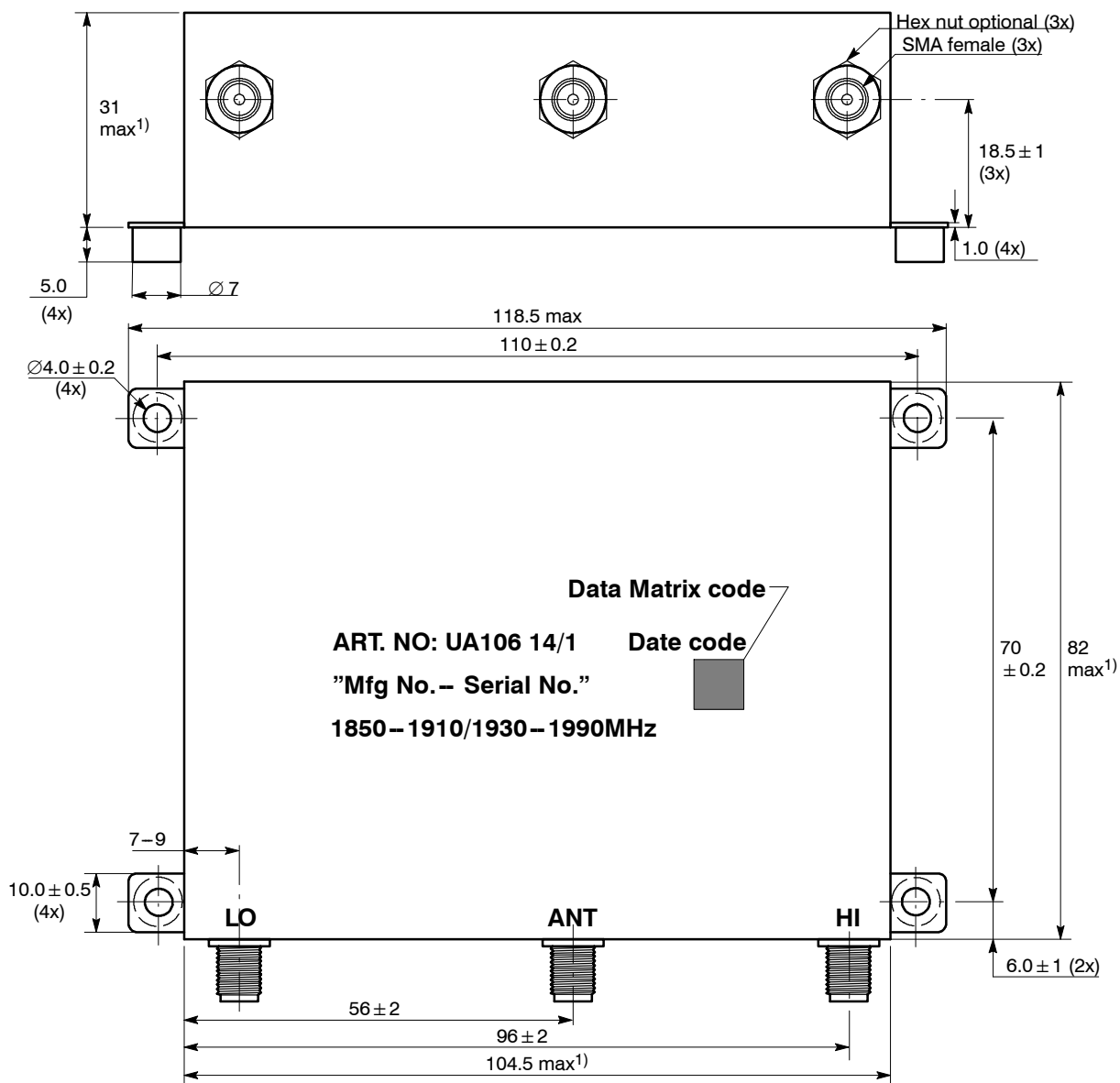
1 GENERAL SPECIFICATION

The filter shall be made in a RF–tight housing without openings that can cause RF–leakage. Metallic tape can cover trimming holes, as long as RF–tightness is achieved and adhesion is maintained through life. N.B. The tape is not allowed to cover any part of the marking. Furthermore the filter shall be made in accordance with good workmanship. It shall be built up as a three port device with the ports defined as follows: ANT= common port with interconnection between the two filter parts. HI=the higher pass band frequency port. LO=the lower pass band frequency port. The ANT port must be DC–connected to ground (chassis) of the unit. Both the LO to ANT and the HI to ANT filters shall be true pass band types.

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2 MECHANICAL DATA

All dimensions in mm.



Notes: 1) Including foldings around corners.

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2.1 Material

Housing: Copper
Connector bodies: Brass or beryllium copper.
Contact sockets: Beryllium copper

2.2 Surface treatment

Housing, incl. inner walls: Min 2µm Ag.
Connector bodies: Min 2µm Cu(55%) – Sn(25%) – Zn(20%) – alloy or min 0.8µm Au.
Contact sockets: Min 1.3µm Au.

3 ELECTRICAL SPECIFICATION

3.1 Maximum ratings

Quantity	Symbol	Condition	Value	Unit
Operating temp. range	T _{opr}	All data met, unless otherwise specified	–25 to +85	°C
Relative humidity, (steady state), without corrosion	RH	At +40 °C, @ 90 to 95 % RH	21	days
Power handling, continuous	P _{cont}		Min 20	W

3.2 Characteristics

Data given below is not allowed to alter when the filter is mated with cable connectors using a coupling nut torque of one (1) Nm.

Quantity	Symbol	Condition	Value	Unit
Port ANT to HI				
Insertion loss	I _L	1930 to 1990 MHz	Max 1.3	dB
Return loss in port HI	R _L	1930 to 1990 MHz	Min 17	dB
Attenuation	A	1685 to 1810 MHz	Min 50	dB
		1850 to 1910 MHz	Min 60	
Port ANT to LO				
Insertion loss	I _L	1850 to 1910 MHz	Max 1.3	dB
Return loss in port LO	R _L	1850 to 1910 MHz	Min 17	dB
Attenuation	A	1605 to 1730 MHz	Min 50	dB
		1930 to 1990 MHz	Min 60	
Intermodulation measurement in Port HI, when two 5 W signals, 1850 and 1910 MHz are fed into Port LO while Port ANT is terminated with a 50Ω load.				
Intermodulation	IM	As above. Measured at 1970 MHz.	Max – 116	dBm
Intermodulation measurement in Port LO, when two 5 W signals, 1930 and 1990 MHz are fed into Port HI while Port ANT is terminated with a 50Ω load.				
Intermodulation	IM	As above. Measured at 1870 MHz.	Max – 116	dBm

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4 FUTURE REQUIREMENTS

TBD

5 MARKING

Each filter shall be marked in accordance with the following:

- Powerwave article No in accordance with the Purchase Order (P/O).
- Date code with four digits (year and week, e.g. 9946).
- LGP Allgon code for the Manufacturer in question – Serial No (five digits).
- Data Matrix code containing Powerwave article No, Revision No= **NA** (= not applicable for this type of filter), Date code, Serial No with Manufacturer No.
- Frequency range for **LO** and **HI** band. I.e. 1850–1910/1930–1990 MHz.
- Port identification marking on the top of the filter, according to drawing.

The marking must resist normal mechanical wear that can occur during normal handling, storage and operation.

6 PACKAGE

The shipping package shall be marked according to the following:

- Powerwave Purchase Order No.
- Powerwave article No.
- Manufacturer's name and/or trade mark and article No.
- Date of manufacture as for marking.
- Number of filters.

7 ARTICLE NO LIST

Article No	Pass band width (MHz)
UA106 14/1	60

8 REVISION INFORMATION

Revision	Description of change(s) within Paragraph(s). (e.g. 1: = Paragraph 1)
B	Header, 2: Allgon Logo replaced by LGP Allgon Logo. 5, 6: Allgon replaced by LGP Allgon.
C	LGP Allgon logo erased. LGP Allgon name changed to Powerwave in the document