

1.0 TECHNICAL SPECIFICATION INTRODUCTION

This section defines the mechanical, electrical, and environmental characteristics, as well as the production schedule and quality assurance requirements, for three radio frequency filters. The three filters are:

- Filter 1 (CLIN 0001 and CLIN 0004) is a band-pass filter
- Filter 2 (CLIN 0002 and CLIN 0005) is a band-pass filter with similar electrical characteristics to Filter 1
- Filter 3 (CLIN 0003 and CLIN 0006) is a filter with several stop bands and pass bands

Unless otherwise marked, all characteristics described in this section are threshold requirements. In some cases desired or objective characteristics are described, but the products delivered will only be evaluated against the threshold specifications in determining technical acceptability.

2.0 FILTER 1 BAND-PASS FILTER REQUIREMENTS

2.1 MECHANICAL SPECIFICATIONS

The physical characteristics for Filter 1 are specified below. In addition, the following requirements apply:

- 2.1.1 The shape of the filter packaging shall conform to the options depicted in Figure 1.
- 2.1.2 Connector mounting plates shall not extend beyond the edges of the packaging.
- 2.1.3 Labels and quality assurance seals shall not bear any logos, company names, or cage codes. Labels shall include a six- to 13-digit part number (to be determined after award) and serial number, with no other markings.

DESCRIPTION	SPECIFICATION	COMMENTS
2.1.4 DIMENSIONS	0.75" x 1.0" x 2", NOM	MAX excluding RF connectors
2.1.5 WEIGHT	4 oz, MAX	
2.1.6 CONNECTORS	TNC, Male (Input) TNC, Female (Output)	On opposite ends, longest dimension
2.1.7 PACKAGING COATING	Painted Black, FED-STD-595C No. 37030, except for label	Excludes connectors; chemical coating not specified

2.2 ELECTRICAL SPECIFICATIONS

An example mask for the filter response for Filter 1 is provided in Figure 2 and Figure 3, below. Note that this mask is the same for Filter 2.

DESCRIPTION	SPECIFICATION	COMMENTS
2.2.1 IMPEDANCE	50 Ω	System, NOMINAL
2.2.2 POWER HANDLING CAPABILITY (OVER ANY 2 MHz BAND, 30 MHz TO 2700MHz)	10 Watts, MINIMUM	CONTINUOUS
2.2.3 POWER DRAIN	0 Watts	Passive Device
2.2.4 STOPBAND REJECTION 30 MHz to 1030 MHz	60 dB, MINIMUM	
2.2.5 STOPBAND REJECTION 1030 MHz to 1200 MHz	30 dB, MINIMUM	
2.2.6 INSERTION LOSS 1260 MHz to 1390 MHz	1.5 dB, MAXIMUM	
2.2.7 STOPBAND REJECTION 1465 MHz to 1650 MHz	30 dB, MINIMUM	
2.2.8 STOPBAND REJECTION 1650 MHz to 2700 MHz	60 dB, MINIMUM	

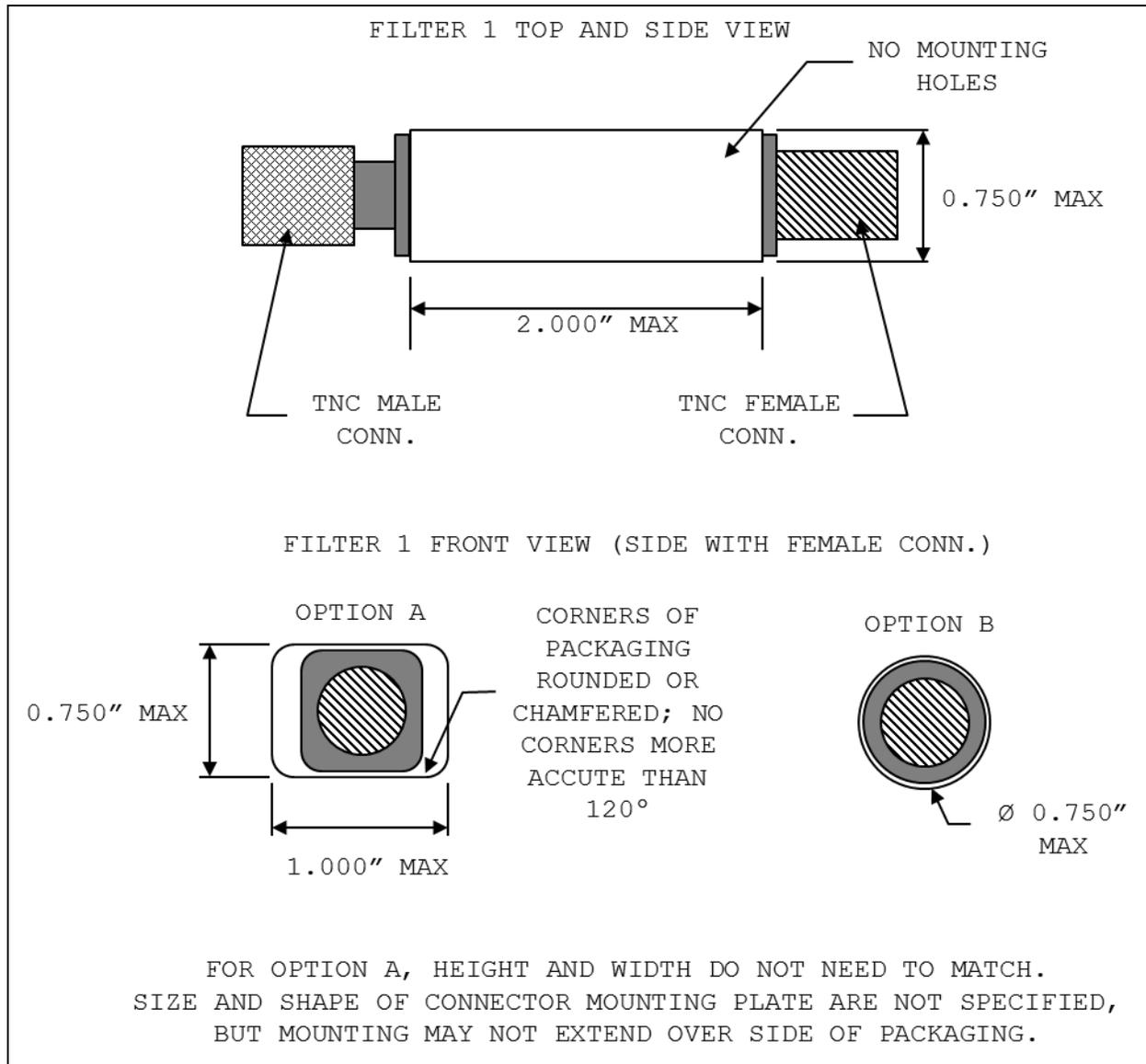


Figure 1. Mechanical Drawing for Filter 1

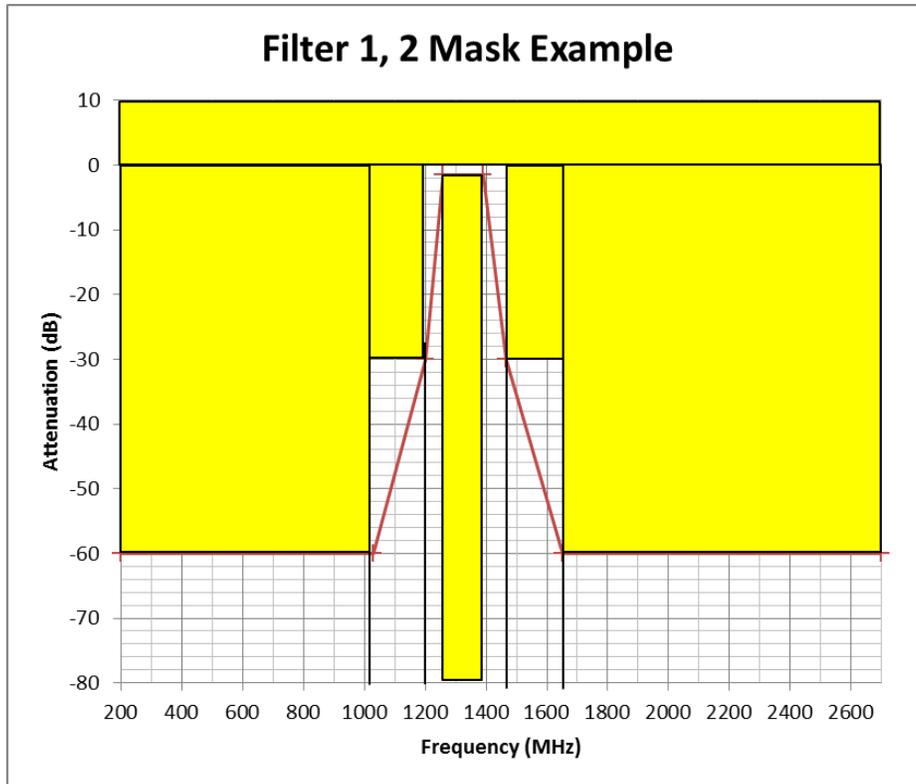


Figure 2: BAND-PASS ATTENUATION MASK - FULL BAND

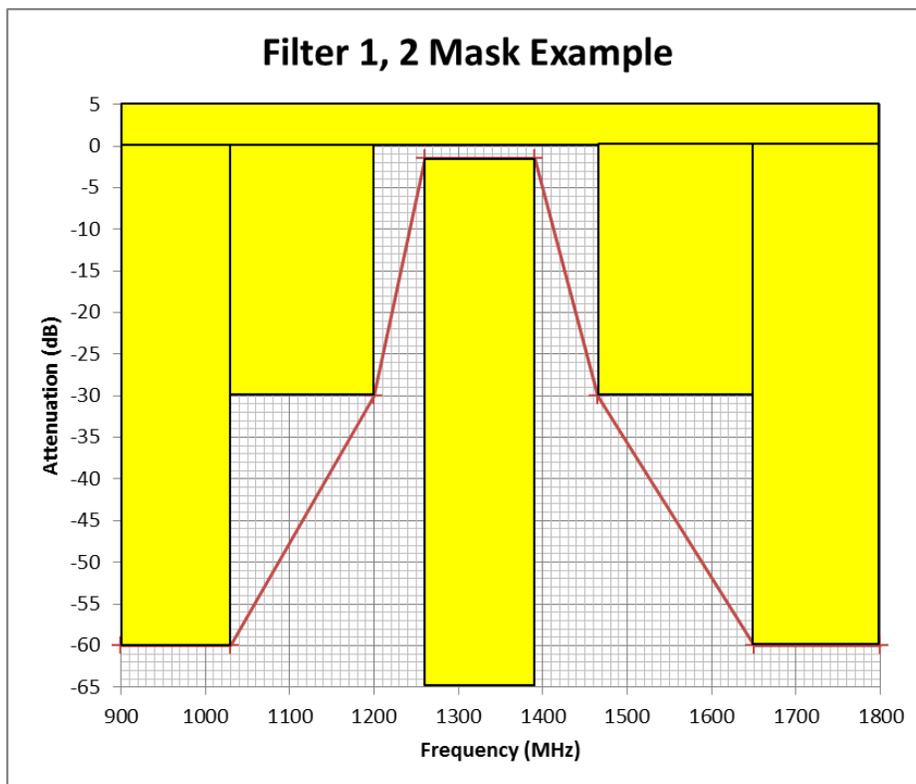


Figure 3: BAND-STOP ATTENUATION MASK - PRIMARY BAND

2.3 ENVIRONMENTAL SPECIFICATIONS

The filter, Filter 1, shall satisfy all electrical specifications while subject to every combination of the environmental conditions described in the table below.

RATING OR TEST	THRESHOLD METHOD/CONDITIONS	OBJECTIVE METHOD/CONDITIONS
2.3.1 Altitude, Low Pressure Storage	Withstand low pressure storage at altitude of 15000 feet above sea level (ASL) in accordance with MIL-STD-810G, Method 500.5, Procedure I – Storage/Air Transport	Same as threshold
2.3.2 Altitude, Low Pressure Operation	None	Operate at unpressurized altitude of 15000 feet ASL in accordance with MIL-STD-810G, Method 500.5, Procedure II – Operation/Air Carriage
2.3.3 Temperature, Operating	Operate in temperatures within -30°C / +55°C in accordance with MIL-STD-810G, Methods 501.5, Procedure II – Operation (three cycles) and 502.5, Procedure II – Operation	Operate in temperatures within -30°C / +70°C in accordance with MIL-STD-810G, Methods 501.5, Procedure II – Operation (three cycles) and 502.5, Procedure II – Operation
2.3.4 Temperature, Storage	Withstand storage in temperatures within -40°C/+65°C in accordance with MIL-STD-810G, Methods 501.5, Procedure I – High Temperature Storage (seven cycles) and 502.5, Procedure I – Low Temperature Storage	Withstand storage in temperatures within -45°C/+85 °C in accordance with MIL-STD-810G, Methods 501.5, Procedure I – High Temperature Storage (seven cycles) and 502.5, Procedure I – Low Temperature Storage
2.3.5 Solar Radiation	None	Operate during solar exposure in accordance with MIL-STD-810G, Method 505.5, Procedure I – Cycling, Cycles A1 and A2, and Procedure II – Steady, 56 cycles
2.3.6 Rain	Operate in 10.2 cm (4 inches) of rain per hour and 64 kph (40 mph) wind for 40 minutes in accordance with MIL-STD-810G, Method 506.5, Procedure I – Rain and Blowing Rain	Same as threshold
2.3.7 Humidity, Operation	None	Operate in relative humidity from 5% to 95% non-condensing, mist, and fog in accordance with MIL-STD-810G, Method 507.5, Procedure I – Induced, for Non-Hazardous Items, Normal Test Duration Cycle B1
2.3.8 Humidity, Storage	None	Withstand storage in hot, humid conditions in accordance with MIL-STD-810G, Method 507.5, Procedure I – Induced, for Non-Hazardous Items, Normal Test Duration Cycle B2
2.3.9 Humidity, Aggravated	None	Operate in hot, humid conditions in accordance with MIL-STD-810G, Method 507.5, Procedure II - Aggravated
2.3.10 Fungus	None	Withstand and operate during exposure to fungus growth and not support fungal growth in accordance with MIL-STD-810G, Method 508.6 using Table 508.6-I

2.3.11 Immersion	Withstand and operate during immersion in 1 meter of seawater for 30 minutes in accordance with MIL-STD-810G, Method 512.5, Procedure I - Immersion	Same as threshold
2.3.12 Thermal Shock	Withstand temperature shock in accordance with MIL-STD 810G, Method 503.5, Procedure I-D, one cycle from ambient to -30°C, and one cycle from ambient to +55°C	Withstand temperature shock in accordance with MIL-STD 810G, Method 503.5, Procedure I-D, one cycle from ambient to -30°C, and one cycle from ambient to +70°C
2.3.13 Shock Stability	Withstand and operate during shock associated with servicing and handling, and during ground, rail, sea, and air transport in accordance with MIL-STD-810G, Method 516.6, Procedure I – Functional Shock and Procedure IV – Transit Drop (48”)	Same as threshold
2.3.14 Vibration	Withstand and operate during vibration induced by vehicular transport (tracked and wheeled) over all types of roads and cross country terrain, and vibration associated with transportation, in accordance with MIL-STD-810G, Method 514.6, Procedure II, Loose Cargo Transportation	Same as threshold
2.3.15 Salt-Fog	Resist corrosion from salt-sea atmosphere in accordance with MIL-STD-810G, Method 509.5	Same as threshold
2.3.16 Sand and Dust	Withstand exposure to fine dust particles in wind speeds of 25 MPH (2200 feet per minute) and sand particles in wind speeds of 65 MPH (5700 feet per minute) in accordance with MIL-STD-810G, Method 510.5, Procedure I, Blowing Dust and Procedure II, Blowing Sand	Same as threshold

2.4 SCHEDULE REQUIREMENTS

Upon award of a DO of Filter 1, contractors shall satisfy the following schedule of delivery and testing, measured in time after DO award (ADA).

- First Articles quantity: 12 units
- Critical order quantity: 3,200 units
- Post-critical order weekly delivery quantity: 500 units

For orders that require First Article Testing (CLIN 0004):
 The intent is that First Articles will be divided into two deliveries. Half the order (six units) will be delivered first, after verification of threshold electrical and mechanical requirements. A report showing that the First Articles conform to threshold environmental will be delivered with the first six units. The other half of the order will be used to complete testing against environmental objectives. The articles used to complete threshold environmental testing may come from either half of the lot of First Articles. Quality Assurance requirements for testing are specified in Section 5.0.

- 2.4.1 Contractor shall deliver six (6) First Articles of Filter 1, six (6) corresponding electrical and mechanical test reports, and one (1) threshold environmental test report, in accordance with Quality Assurance requirements 5.1.1, 5.1.2, and 5.1.3, no more than ten (10) weeks ADA.**
- 2.4.2 Contractor shall deliver six (6) First Articles of Filter 1, six (6) corresponding electrical and mechanical test reports, and one (1) objective environmental test report, in accordance with Quality Assurance requirements 5.1.1, 5.1.2, and 5.1.4, no more than twenty-four (24) weeks ADA.**

For all other orders (CLIN 0001):

- 2.4.3 Contractor shall deliver the full quantity of Filter 1 ordered or 3,200 units of Filter 1, whichever is less, no more than twelve (12) weeks ADA.**
- 2.4.4 For orders of more than 3,200 units of Filter 1, contractor shall deliver the order balance beyond 3,200 units at a rate of no fewer than 500 filters per week.**

The table below shows a sample production schedule for an order of 4,200 units of Filter 1, with critical quantities highlighted that show minimum deliveries to conform to the requirements above.

Table 1. Sample Production Schedule for Filter 1

Weeks after DO Award	6	7	8	9	10	11	12	13	14
Weekly Production	200	500	500	500	500	500	500	500	500
Running Total	200	700	1200	1700	2200	2700	3200	3700	4200

3.0 FILTER 2 BAND-PASS FILTER REQUIREMENTS

3.1 MECHANICAL SPECIFICATIONS

The physical characteristics for Filter 2 are specified below. In addition, the following requirements apply:

- 3.1.1 The shape of the filter packaging shall conform to the options depicted in Figure 4.
- 3.1.2 Connector mounting plates shall not extend beyond the edges of the packaging.
- 3.1.3 Labels and quality assurance seals shall not bear any logos, company names, or cage codes. Labels shall include a six- to 13-digit part number (to be determined after award) and serial number, with no other markings.

DESCRIPTION	SPECIFICATION	COMMENTS
3.1.4 DIMENSIONS	1" x 1" x 2.5", NOM	MAX excluding RF connectors
3.1.5 WEIGHT	5 oz, MAX	
3.1.6 CONNECTORS	N-Type, Male (Input) N-Type, Female (Output)	On opposite ends, longest dimension
3.1.7 PACKAGING COATING	Painted Black, FED-STD-595C No. 37030, except for label	Excludes connectors; chemical coating not specified

3.2 ELECTRICAL SPECIFICATIONS

An example mask for the filter response for Filter 2 is provided in Figure 2 and Figure 3, above. Note that this mask is the same for Filter 1.

DESCRIPTION	SPECIFICATION	COMMENTS
3.2.1 IMPEDANCE	50 Ω	System, NOMINAL
3.2.2 POWER HANDLING CAPABILITY (OVER ANY 2 MHz BAND, 30 MHz TO 2700MHz)	20 Watts, MINIMUM	CONTINUOUS
3.2.3 POWER DRAIN	0 Watts	Passive Device
3.2.4 STOPBAND REJECTION 30 MHz to 1030 MHz	60 dB, MINIMUM	
3.2.5 STOPBAND REJECTION 1030 MHz to 1200 MHz	30 dB, MINIMUM	
3.2.6 INSERTION LOSS 1260 MHz to 1390 MHz	1.5 dB, MAXIMUM	
3.2.7 STOPBAND REJECTION 1465 MHz to 1650 MHz	30 dB, MINIMUM	
3.2.8 STOPBAND REJECTION 1650 MHz to 2700 MHz	60 dB, MINIMUM	

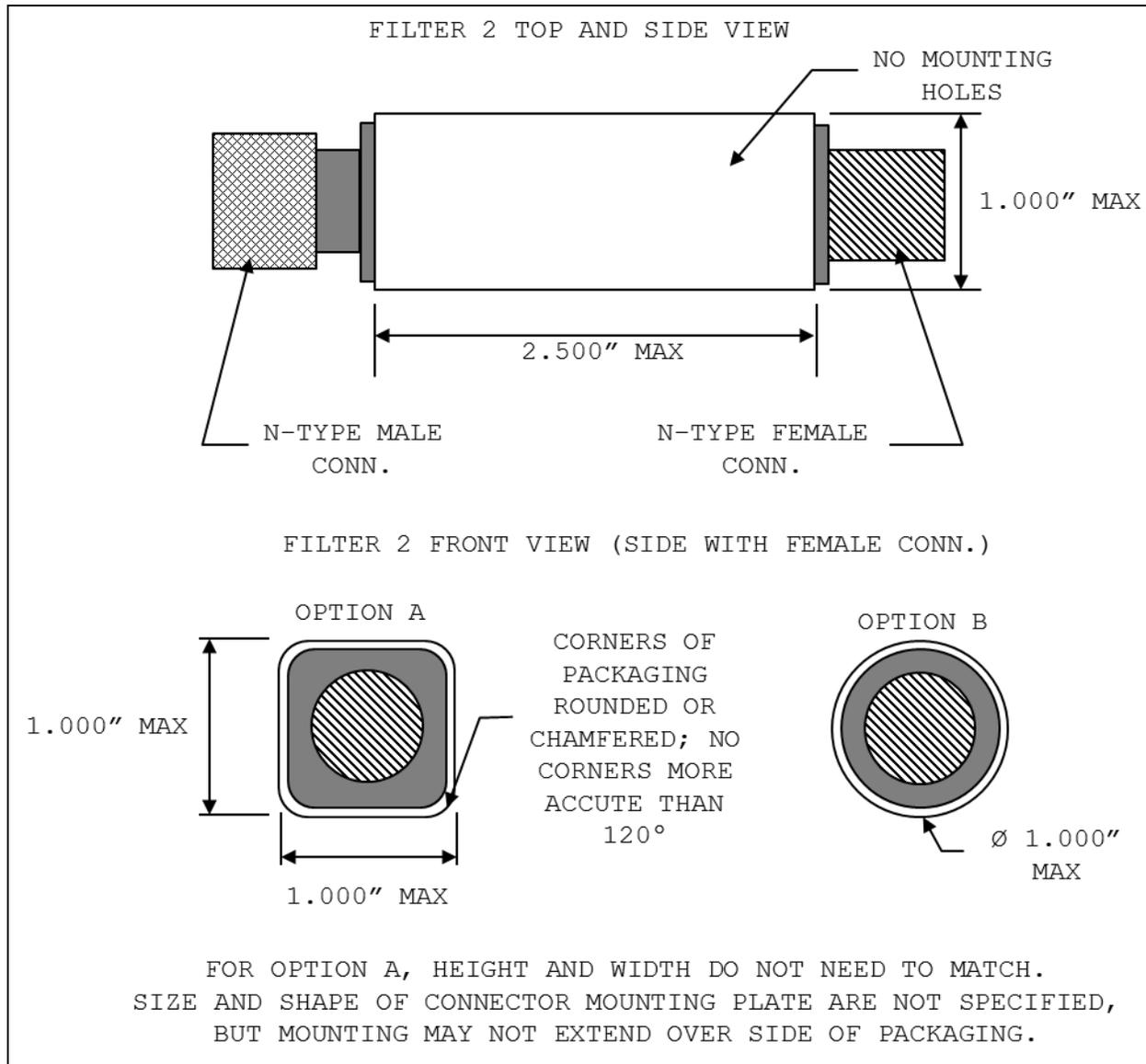


Figure 4. Mechanical Drawing for Filter 2

3.3 ENVIRONMENTAL SPECIFICATIONS

The filter, Filter 2, shall satisfy all electrical specifications while subject to every combination of the environmental conditions described in the table below.

RATING OR TEST	THRESHOLD METHOD/CONDITIONS	OBJECTIVE METHOD/CONDITIONS
3.3.1 Altitude, Low Pressure Storage	Withstand low pressure storage at altitude of 40000 feet above sea level (ASL) in accordance with MIL-STD-810G, Method 500.5, Procedure I – Storage/Air Transport	Same as threshold
3.3.2 Altitude, Low Pressure Operation	None	Operate at unpressurized altitude of 30000 feet ASL in accordance with MIL-STD-810G, Method 500.5, Procedure II – Operation/Air Carriage
3.3.3 Temperature, Operating	Operate in temperatures within -30°C / +55°C in accordance with MIL-STD-810G, Methods 501.5, Procedure II – Operation (three cycles) and 502.5, Procedure II – Operation	Operate in temperatures within -40°C / +55°C in accordance with MIL-STD-810G, Methods 501.5, Procedure II – Operation (seven cycles) and 502.5, Procedure II – Operation
3.3.4 Temperature, Storage	Withstand storage in temperatures within -40°C/+65°C in accordance with MIL-STD-810G, Methods 501.5, Procedure I – High Temperature Storage (seven cycles) and 502.5, Procedure I – Low Temperature Storage	Withstand storage in temperatures within -51.1°C/+71°C in accordance with MIL-STD-810G, Methods 501.5, Procedure I – High Temperature Storage (seven cycles) and 502.5, Procedure I – Low Temperature Storage
3.3.5 Solar Radiation	None	Operate during solar exposure in accordance with MIL-STD-810G, Method 505.5, Procedure I – Cycling, Cycles A1 and A2, and Procedure II – Steady, 56 cycles
3.3.6 Rain	Operate in 10.2 cm (4 inches) of rain per hour and 64 kph (40 mph) wind for 40 minutes in accordance with MIL-STD-810G, Method 506.5, Procedure I – Rain and Blowing Rain	Same as threshold
3.3.7 Humidity, Operation	None	Operate in relative humidity from 5% to 95% non-condensing, mist, and fog in accordance with MIL-STD-810G, Method 507.5, Procedure I – Induced, for Non-Hazardous Items, Normal Test Duration Cycle B1
3.3.8 Humidity, Storage	None	Withstand storage in hot, humid conditions in accordance with MIL-STD-810G, Method 507.5, Procedure I – Induced, for Non-Hazardous Items, Normal Test Duration Cycle B2
3.3.9 Humidity, Aggravated	None	Operate in hot, humid conditions in accordance with MIL-STD-810G, Method 507.5, Procedure II - Aggravated
3.3.10 Fungus	None	Withstand and operate during exposure to fungus growth and not support fungal growth in accordance with MIL-STD-810G, Method 508.6 using Table 508.6-I

3.3.11 Immersion	Withstand and operate during immersion in 1 meter of seawater for 30 minutes in accordance with MIL-STD-810G, Method 512.5, Procedure I - Immersion	Same as threshold
3.3.12 Thermal Shock	Withstand temperature shock in accordance with MIL-STD 810G, Method 503.5, Procedure I-D, one cycle from ambient to -30°C, and one cycle from ambient to +55°C	Withstand temperature shock in accordance with MIL-STD 810G, Method 503.5, Procedure I-D, one cycle from ambient to -40°C, and one cycle from ambient to +55°C
3.3.13 Shock Stability	Withstand and operate during shock associated with servicing and handling, and during ground, rail, sea, and air transport in accordance with MIL-STD-810G, Method 516.6, Procedure I – Functional Shock and Procedure IV – Transit Drop (48’’))	Same as threshold
3.3.14 Vibration	Withstand and operate during vibration induced by vehicular transport (tracked and wheeled) over all types of roads and cross country terrain, and vibration associated with transportation, in accordance with MIL-STD-810G, Method 514.6, Procedure II, Loose Cargo Transportation	Same as threshold
3.3.15 Salt-Fog	Resist corrosion from salt-sea atmosphere in accordance with MIL-STD-810G, Method 509.5	Same as threshold
3.3.16 Sand and Dust	Withstand exposure to fine dust particles in wind speeds of 25 MPH (2200 feet per minute) and sand particles in wind speeds of 65 MPH (5700 feet per minute) in accordance with MIL-STD-810G, Method 510.5, Procedure I, Blowing Dust and Procedure II, Blowing Sand	Same as threshold

3.4 SCHEDULE REQUIREMENTS

Upon award of a DO for Filter 2, contractors shall satisfy the following schedule of delivery and testing, measured in time after DO award (ADA).

First Articles quantity: 12 units

Critical order quantity: 400 units

Post-critical order weekly delivery quantity: 75 units

For orders that require First Article Testing (CLIN 0005):

The intent is that First Articles will be divided into two deliveries. Half the order (six units) will be delivered first, after verification of threshold electrical and mechanical requirements. A report showing that the First Articles conform to threshold environmental will be delivered with the first six units. The other half of the order will be used to complete testing against environmental objectives. The articles used to complete threshold environmental testing may come from either half of the lot of First Articles. Quality Assurance requirements for testing are specified in Section 5.0.

3.4.1 Contractor shall deliver six (6) First Articles of Filter 2, six (6) corresponding electrical and mechanical test reports, and one (1) threshold environmental test report, in accordance with Quality Assurance requirements 5.1.1, 5.1.2, and 5.1.3, no more than ten (10) weeks ADA.

3.4.2 Contractor shall deliver six (6) First Articles of Filter 2, six (6) corresponding electrical and mechanical test reports, and one (1) objective environmental test report, in accordance with Quality Assurance requirements 5.1.1, 5.1.2, and 5.1.4, no more than twenty-four (24) weeks ADA.

For all other orders (CLIN 0002):

3.4.3 Contractor shall deliver the full quantity of Filter 2 ordered or 400 units of Filter 2, whichever is less, no more than twelve (12) weeks ADA.

3.4.4 For orders of more than 400 units of Filter 2, contractor shall deliver the order balance beyond 400 units at a rate of no fewer than 75 filters per week.

The table below shows a sample production schedule for 550 units of Filter 2, with critical quantities highlighted that show minimum deliveries to conform to the requirements above.

Table 2. Sample Production Schedule for Filter 2

Weeks after DO Award	6	7	8	9	10	11	12	13	14
Weekly Production	12	38	50	75	75	75	75	75	75
Running Total	12	50	100	175	250	325	400	475	550

4.0 FILTER 3 BAND-STOP FILTER REQUIREMENTS

4.1 MECHANICAL SPECIFICATIONS

The physical characteristics for Filter 3 are specified below. In addition, the following requirements apply:

- 4.1.1 The shape of the filter packaging shall conform to the options depicted in Figure 5.
- 4.1.2 The N-type female bulkhead connector shall fit through the cut-out specified in the drawing.
- 4.1.3 Connector mounting plates shall not extend beyond the edges of the packaging.
- 4.1.4 Labels and quality assurance seals shall not bear any logos, company names, or cage codes. Labels shall include a six- to 13-digit part number (to be determined after award) and serial number, with no other markings.

DESCRIPTION	SPECIFICATION	COMMENTS
4.1.5 DIMENSIONS	1" x 1" x 2.5", NOM	MAX excluding RF connectors
4.1.6 WEIGHT	5 oz, MAX	
4.1.7 CONNECTORS	N-type, Male (Input) N-type, Female Bulkhead (Output) with mounting nut	On opposite ends, longest dimension. Bulkhead connector must fit within example cut-out specified in Figure 5.
4.1.8 PACKAGING COATING	Painted Tan 686A, FED-STD-595C No. 33446, except for label	Excludes connectors; chemical coating not specified

4.2 ELECTRICAL SPECIFICATIONS

An example mask for the filter response for Filter 3 is provided in Figure 6 and Figure 7, below.

DESCRIPTION	SPECIFICATION	COMMENTS
4.2.1 IMPEDANCE	50 Ω	System, NOMINAL
4.2.2 POWER HANDLING CAPABILITY (OVER ANY 2 MHz BAND, 30 MHz TO 2700MHz)	10 Watts, MINIMUM	CONTINUOUS
4.2.3 POWER DRAIN	0 Watts	Passive Device
4.2.4 STOPBAND REJECTION 30 MHz to 450 MHz	50 dB, MINIMUM	
4.2.5 INSERTION LOSS 800 MHz to 1000 MHz	1.0 dB, MAXIMUM	800 MHz to 1030 MHz desired
4.2.6 STOPBAND REJECTION 1225 MHz to 1390 MHz	70 dB, MINIMUM	
4.2.7 STOPBAND REJECTION 1390 MHz to 1560 MHz	30 dB, MINIMUM	
4.2.8 INSERTION LOSS 1700 MHz to 1800 MHz	1.5 dB, MAXIMUM	1.0 dB, MAXIMUM desired
4.2.9 INSERTION LOSS 1800 MHz to 2700 MHz	1.0 dB, MAXIMUM	

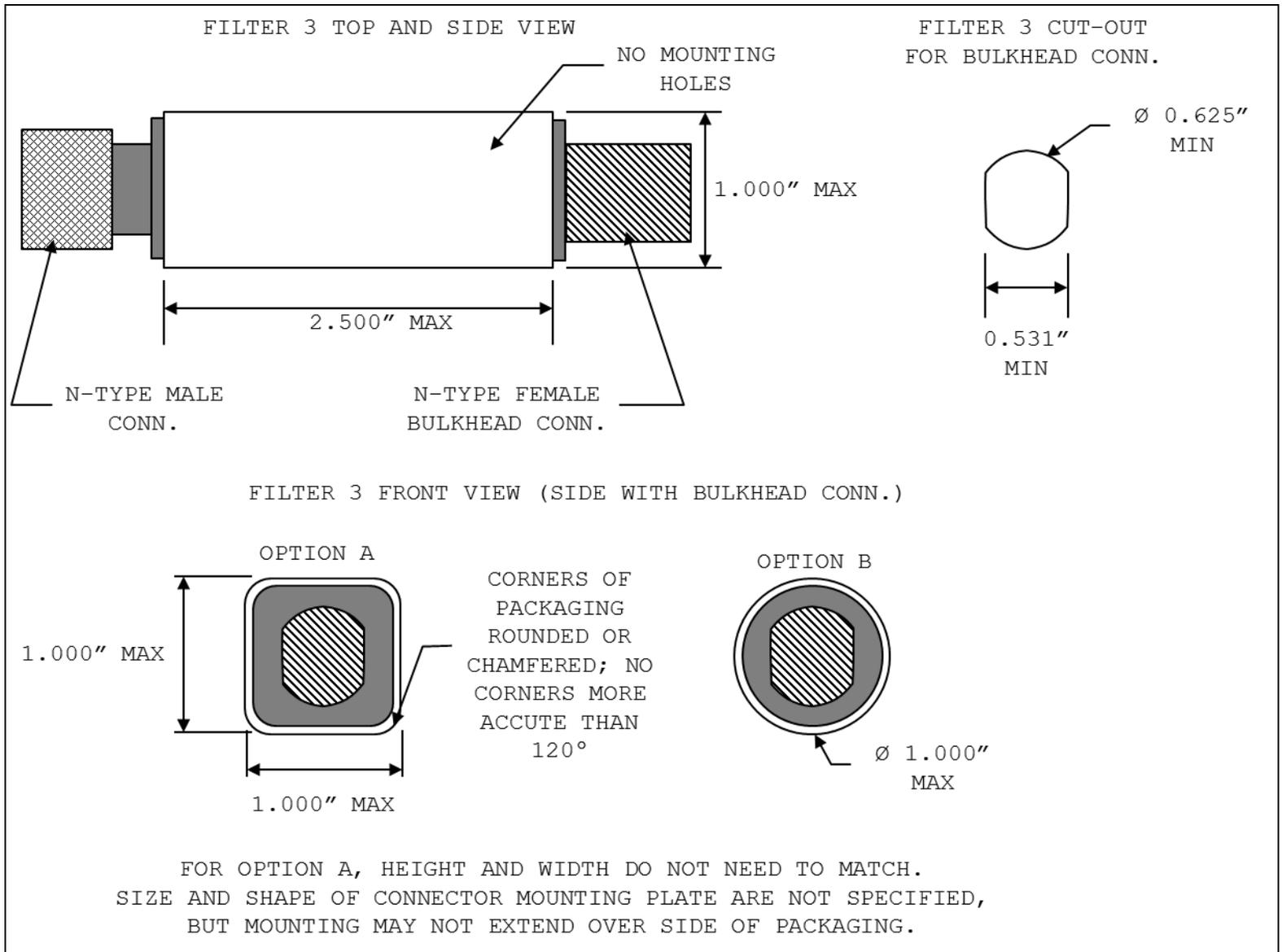


Figure 5. Mechanical Drawing for Filter 3

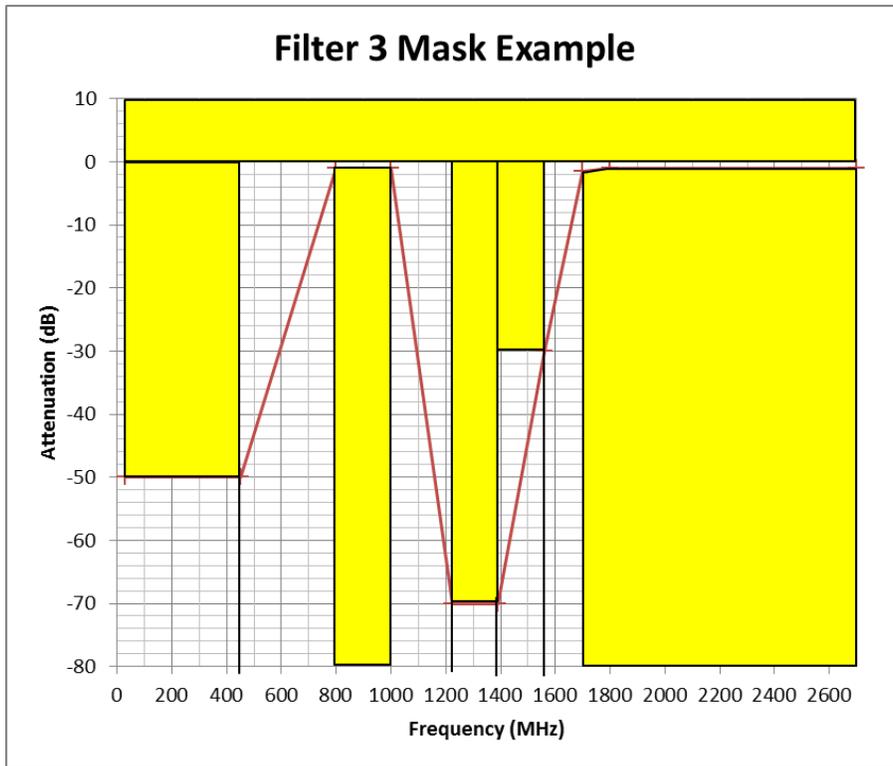


Figure 6: BAND-STOP THRESHOLD ATTENUATION MASK - FULL BAND

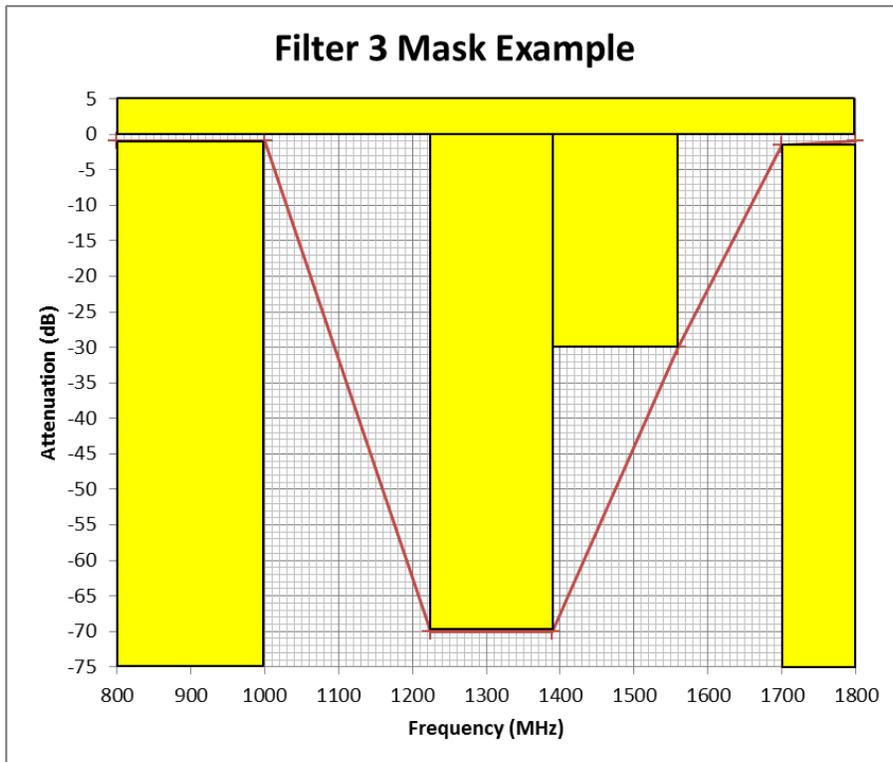


Figure 7: BAND-STOP THRESHOLD ATTENUATION MASK - SUB BAND

4.3 ENVIRONMENTAL SPECIFICATIONS

The filter, Filter 3, shall satisfy all electrical specifications while subject to every combination of the environmental conditions described in the table below.

RATING OR TEST	THRESHOLD METHOD/CONDITIONS	OBJECTIVE METHOD/CONDITIONS
4.3.1 Altitude, Low Pressure Storage	Withstand low pressure storage at altitude of 40000 feet above sea level (ASL) in accordance with MIL-STD-810G, Method 500.5, Procedure I – Storage/Air Transport	Same as threshold
4.3.2 Altitude, Low Pressure Operation	None	Operate at unpressurized altitude of 30000 feet ASL in accordance with MIL-STD-810G, Method 500.5, Procedure II – Operation/Air Carriage
4.3.3 Temperature, Operating	Operate in temperatures within -30°C / +55°C in accordance with MIL-STD-810G, Methods 501.5, Procedure II – Operation (three cycles) and 502.5, Procedure II – Operation	Operate in temperatures within -40°C / +55°C in accordance with MIL-STD-810G, Methods 501.5, Procedure II – Operation (seven cycles) and 502.5, Procedure II – Operation
4.3.4 Temperature, Storage	Withstand storage in temperatures within -40°C/+65°C in accordance with MIL-STD-810G, Methods 501.5, Procedure I – High Temperature Storage (seven cycles) and 502.5, Procedure I – Low Temperature Storage	Withstand storage in temperatures within -51.1°C/+71°C in accordance with MIL-STD-810G, Methods 501.5, Procedure I – High Temperature Storage (seven cycles) and 502.5, Procedure I – Low Temperature Storage
4.3.5 Solar Radiation	None	Operate during solar exposure in accordance with MIL-STD-810G, Method 505.5, Procedure I – Cycling, Cycles A1 and A2, and Procedure II – Steady, 56 cycles
4.3.6 Rain	Operate in 10.2 cm (4 inches) of rain per hour and 64 kph (40 mph) wind for 40 minutes in accordance with MIL-STD-810G, Method 506.5, Procedure I – Rain and Blowing Rain	Same as threshold
4.3.7 Humidity, Operation	None	Operate in relative humidity from 5% to 95% non-condensing, mist, and fog in accordance with MIL-STD-810G, Method 507.5, Procedure I – Induced, for Non-Hazardous Items, Normal Test Duration Cycle B1
4.3.8 Humidity, Storage	None	Withstand storage in hot, humid conditions in accordance with MIL-STD-810G, Method 507.5, Procedure I – Induced, for Non-Hazardous Items, Normal Test Duration Cycle B2
4.3.9 Humidity, Aggravated	None	Operate in hot, humid conditions in accordance with MIL-STD-810G, Method 507.5, Procedure II - Aggravated
4.3.10 Fungus	None	Withstand and operate during exposure to fungus growth and not support fungal growth in accordance with MIL-STD-810G, Method 508.6 using Table 508.6-I

4.3.11 Immersion	Withstand and operate during immersion in 1 meter of seawater for 30 minutes in accordance with MIL-STD-810G, Method 512.5, Procedure I - Immersion	Same as threshold
4.3.12 Thermal Shock	Withstand temperature shock in accordance with MIL-STD 810G, Method 503.5, Procedure I-D, one cycle from ambient to -30°C, and one cycle from ambient to +55°C	Withstand temperature shock in accordance with MIL-STD 810G, Method 503.5, Procedure I-D, one cycle from ambient to -40°C, and one cycle from ambient to +55°C
4.3.13 Shock Stability	Withstand and operate during shock associated with servicing and handling, and during ground, rail, sea, and air transport in accordance with MIL-STD-810G, Method 516.6, Procedure I – Functional Shock and Procedure IV – Transit Drop (48’’)	Same as threshold
4.3.14 Vibration	Withstand and operate during vibration induced by vehicular transport (tracked and wheeled) over all types of roads and cross country terrain, and vibration associated with transportation, in accordance with MIL-STD-810G, Method 514.6, Procedure II, Loose Cargo Transportation	Same as threshold
4.3.15 Salt-Fog	Resist corrosion from salt-sea atmosphere in accordance with MIL-STD-810G, Method 509.5	Same as threshold
4.3.16 Sand and Dust	Withstand exposure to fine dust particles in wind speeds of 25 MPH (2200 feet per minute) and sand particles in wind speeds of 65 MPH (5700 feet per minute) in accordance with MIL-STD-810G, Method 510.5, Procedure I, Blowing Dust and Procedure II, Blowing Sand	Same as threshold

4.4 SCHEDULE REQUIREMENTS

Upon award of a DO for Filter 3, contractors shall satisfy the following schedule of delivery and testing, measured in time after DO award (ADA).

- First Articles quantity: 12 units
- Critical order quantity: 2,000 units
- Post-critical order weekly delivery quantity: 350 units

For orders that require First Article Testing (CLIN 0006):
 The intent is that First Articles will be divided into two deliveries. Half the order (six units) will be delivered first, after verification of threshold electrical and mechanical requirements. A report showing that the First Articles conform to threshold environmental will be delivered with the first six units. The other half of the order will be used to complete testing against environmental objectives. The articles used to complete threshold environmental testing may come from either half of the lot of First Articles. Quality Assurance requirements for testing are specified in Section 5.0.

- 4.4.1 Contractor shall deliver six (6) First Articles of Filter 3, six (6) corresponding electrical and mechanical test reports, and one (1) threshold environmental test report, in accordance with Quality Assurance requirements 5.1.1, 5.1.2, and 5.1.3, no more than ten (10) weeks ADA.**
- 4.4.2 Contractor shall deliver six (6) First Articles of Filter 3, six (6) corresponding electrical and mechanical test reports, and one (1) objective environmental test report, in accordance with Quality Assurance requirements 5.1.1, 5.1.2, and 5.1.4, no more than twenty-four (24) weeks ADA.**

For all other orders (CLIN 0003):

- 4.4.3 Contractor shall deliver the full quantity of Filter 3 ordered or 2,000 units of Filter 3, whichever is less, no more than twelve (12) weeks ADA.**
- 4.4.4 For orders of more than 2,000 units of Filter 3, contractor shall deliver the order balance beyond 2,000 units at a rate of no fewer than 350 filters per week.**

The table below shows a sample production schedule for 2,700 units of Filter 3, with critical quantities highlighted that show minimum deliveries to conform to the requirements above.

Table 3. Sample Production Schedule for Filter 3

Weeks after DO Award	6	7	8	9	10	11	12	13	14
Weekly Production	50	200	350	350	350	350	350	350	350
Running Total	50	250	600	950	1300	1650	2000	2350	2700

5.0 Quality Assurance Plan

The following tests are required to be conducted by the contractor. The Government reserves the right to observe any required contractor tests, and to replicate any tests on its own, including for purposes of acceptance.

For orders that require First Article Testing (CLINs 0004, 0005, and 0006):

- 5.1.1 The contractor shall inspect all First Articles produced in each DO, before delivery, to verify that the mechanical characteristics conform to the specification for the appropriate filter type.**
- 5.1.2 The contractor shall test all First Articles produced in each DO, before delivery, to verify that the electrical characteristics conform to the specification for the appropriate filter type.**
- 5.1.3 The contractor shall test at least one (1) First Article produced in each DO, before delivery, to verify that the filters conform to the environmental characteristics listed as “Threshold” in the specification for the appropriate filter type.**
- 5.1.4 The contractor shall test at least one (1) First Article produced in each DO to evaluate the performance of the filters against the environmental characteristics listed as “Objective” in the specification for the appropriate filter type.**

For all other orders (CLINs 0001, 0002, and 0003):

- 5.1.5 The contractor shall inspect and test randomly-selected units in every lot of filters produced to verify conformance with the mechanical and electrical requirements specified for the appropriate filter type. Random sample verification shall be conducted in accordance with MIL-STD-1916, using a minimum of Verification Level IV. The contractor is free, with advance notice to the Government, to break orders into multiple production lots for the purpose of lot acceptance testing.**

For all orders

- 5.1.6 If the contractor discovers through any of the above tests that its product does not meet the required specifications of the contract, the contractor shall correct all such non-conformances, at no cost to the Government, before delivering or continuing to deliver any product to the Government.