

Fixed Attenuators

The name JFW has been synonymous with RF attenuators almost since our inception in 1979. Designed to meet and exceed the demanding requirements of our customers, each fixed attenuator from JFW is manufactured to the highest quality standards. We have thousands of different models with countless combinations of features available to meet almost any RF application



Available Features

- Fixed attenuators from 1/2 Watt to 1000 Watts (CW)
- Fixed attenuators from DC-26.5 GHz
- 50 Ohm, 75 Ohm attenuators (other impedance values also available upon request)
- Choose any RF connector combination (BNC, SMA, N, TNC, 7/16, F, reverse polarity and more)
- Ask about DC passing and DC blocking attenuators
- Bulkhead, panel-mount or right angle

AFFORDABLE CUSTOM DESIGNS ARE ALSO AVAILABLE!

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Fixed Attenuators

Model Number Index

Please add connector type to the end of part number to complete model number (Example: 50F-003 SMA).

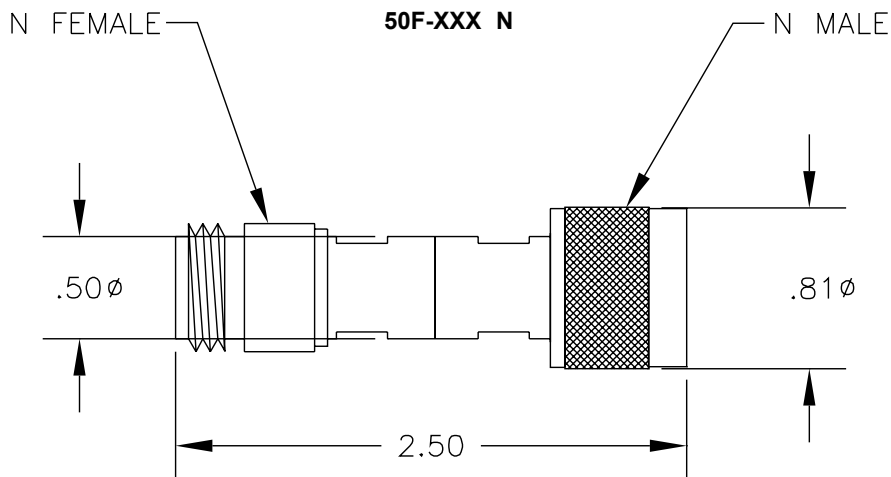
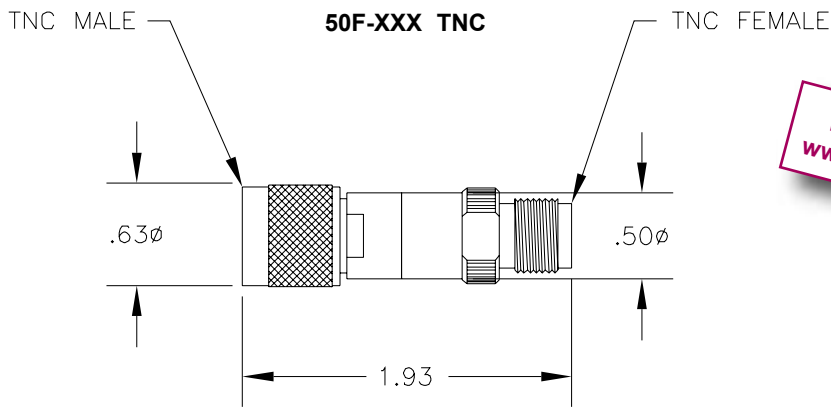
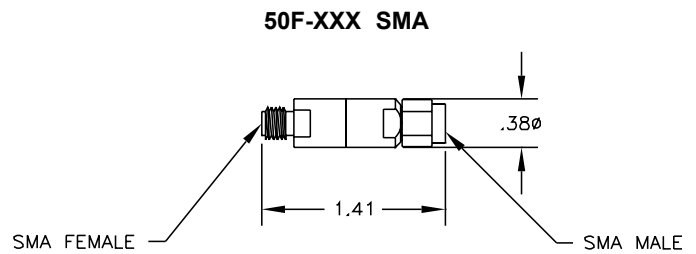
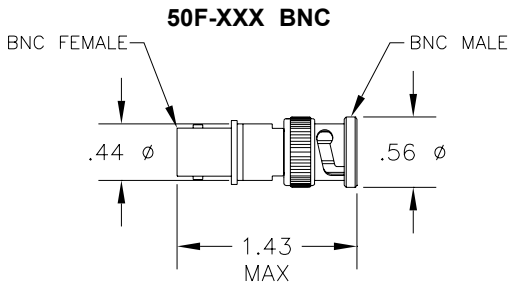
| Low Power - 50 Ohm | | | | Medium Power - 50 Ohm | | | |
|--------------------------------|-----------------|---------------|------|-----------------------|-----------------|---------------|------|
| Model Number | Frequency Range | Average Power | Page | Model Number | Frequency Range | Average Power | Page |
| 50F-XXX | DC-2200 MHz | 1 Watt | 4-3 | 50FH-XXX-5 | DC-2000 MHz | 5 Watts | 4-14 |
| 50FFD-XXX | 600-1950 MHz | DC Passing | 4-9 | 50FH-XXX-10 | DC-2000 MHz | 10 Watts | 4-14 |
| 50FFP-XXX | 400-2500 MHz | DC Passing | 4-9 | 50FH-XXX-30 | DC-2000 MHz | 30 Watts | 4-16 |
| 50FP-XXX-H2 | DC-2000 MHz | 2 Watts | 4-12 | 50FH-XXX-30-3 | DC-3000 MHz | 30 Watts | 4-16 |
| 50FP-XXX-H3 | DC-3000 MHz | 2 Watts | 4-12 | 50FH-XXX-50 | DC-2000 MHz | 50 Watts | 4-16 |
| 50FP-XXX-H4 | DC-4000 MHz | 2 Watts | 4-12 | 50FH-XXX-50-3 | DC-3000 MHz | 50 Watts | 4-16 |
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| 50HB-XX | DC-6000 MHz | 2 Watts | 4-6 | 50FHC-XXX-15 | DC-4000 MHz | 15 Watts | 4-15 |
| 50HN-XX | DC-6000 MHz | 2 Watts | 4-6 | 50FHC-XXX-20 | DC-4000 MHz | 20 Watts | 4-15 |
| 50HF-XXX | DC-18 GHz | 2 Watts | 4-7 | 50FHC-XXX-25 | DC-4000 MHz | 25 Watts | 4-15 |
| Low Power - 75 Ohm | | | | 50FHXC-XXX-40 | DC-4000 MHz | 40 Watts | 4-15 |
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| 75F-XXX | DC-1000 MHz | 1 Watt | 4-4 | 50FPE-XXX | DC-6000 MHz | 5 Watts | 4-13 |
| 75FFB-XXX | 950-2150 MHz | DC Passing | 4-10 | 50HF-XXX-5 | DC-18 GHz | 5 Watts | 4-7 |
| 75FFD-XXX | 450-2000 MHz | DC Passing | 4-10 | 50HFP-XXX-10 | DC-18 GHz | 10 Watts | 4-8 |
| 75FP-XXX-2G | DC-2000 MHz | 1 Watt | 4-5 | 50HFP-XXX-25 | DC-18 GHz | 25 Watts | 4-8 |
| 75FP-XXX-3G | DC-3000 MHz | 0.5 Watt | 4-5 | 50HFP-XXX-50 | DC-18 GHz | 50 Watts | 4-8 |
| Fixed Attenuator Kits - 50 Ohm | | | | High Power - 50 Ohm | | | |
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| 50KFA-008 | DC-18 GHz | 2 Watts | 4-11 | 50FH-XXX-100-3 | DC-3000 MHz | 100 Watts | 4-17 |
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| | | | | 50FHIE-XXX-1000 | DC-3000 MHz | 1000 Watts | 4-23 |
| | | | | 50FHIQ-XXX-1000 | DC-1000 MHz | 1000 Watts | 4-23 |

1 Watt Fixed Attenuators F Series

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy (maximum) | VSWR (maximum) | RF Connectors |
|---------|-----------------|-------------------------------------|----------------------------------------------------|------------------------------------------|--------------------|
| 50F-XXX | DC-2200 MHz | 1 thru 20 dB in any 1 dB increment | +/- 0.5 dB DC-1000 MHz +/- 0.8 dB 1000-2200 MHz | 1.2:1 DC-1000 MHz 1.4:1 1000-2200 MHz | BNC, TNC, SMA or N |
| 50F-XXX | DC-1000 MHz | 21 thru 30 dB in any 1 dB increment | +/- 0.5 dB or 2% | 1.2:1 | BNC, TNC, SMA or N |

* (XXX) insert attenuation value

| Common Specifications | | | |
|-----------------------|-----------------------|------------|-----------------------|
| Impedance | Input Power (average) | Peak Power | Operating Temperature |
| 50 Ohms | 1 Watt | 1000 Watts | -55° C to +125° C |



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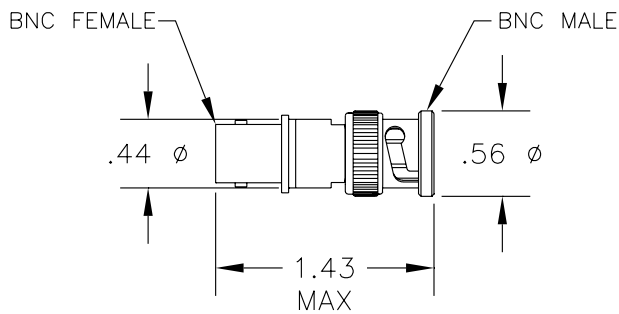
Fixed Attenuators F Series

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connectors |
|---------|-----------------|------------------------------------|--------------------------------------------------|---------------------------------------|-------------------|
| 75F-XXX | DC-500 MHz | 1 thru 30 dB in any 1 dB increment | +/- 0.2 dB DC-100 MHz +/- 0.4 dB 100-500 MHz | 1.3:1 | BNC |
| 75F-XXX | DC-1000 MHz | 1 thru 20 dB in any 1 dB increment | +/- 0.3 dB DC-500 MHz +/- 0.5 dB 500-1000 MHz | 1.2:1 @ 500 MHz 1.3:1 @ 1000 MHz | N or F (Screw On) |
| 75F-XXX | DC-1000 MHz | 1 thru 20 dB in any 1 dB increment | +/- 0.3 dB DC-500 MHz +/- 0.5 dB 500-1000 MHz | 1.15:1 @ 500 MHz 1.30:1 @ 1000 MHz | TNC |

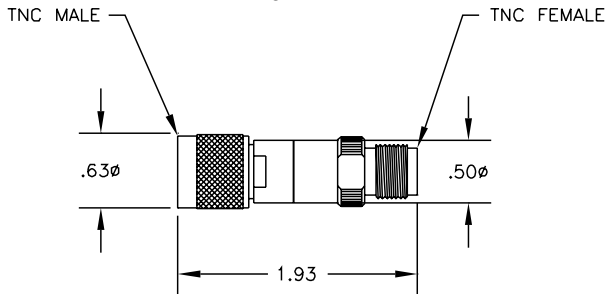
* (XXX) insert attenuation value

| Common Specifications | | | |
|-----------------------|-----------------------|------------|-----------------------|
| Impedance | Input Power (average) | Peak Power | Operating Temperature |
| 75 Ohms | 1 Watt | 1000 Watts | -55° C to +125° C |

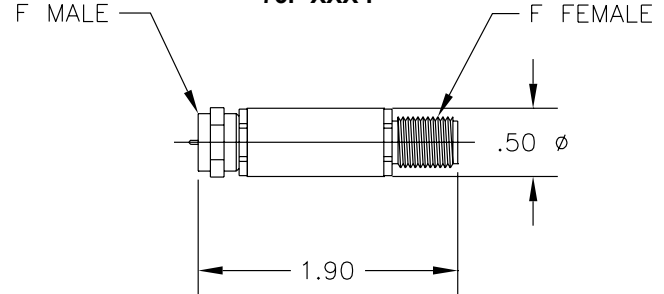
75F-XXX BNC



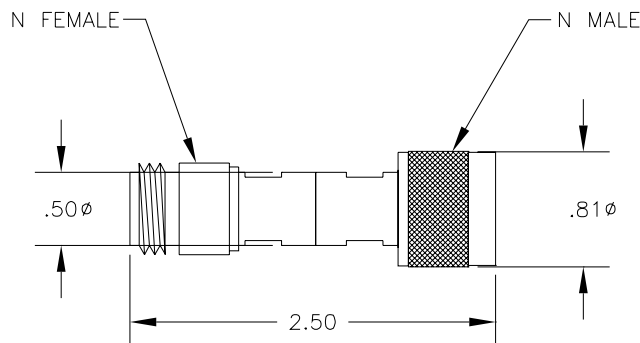
75F-XXX TNC



75F-XXX F



75F-XXX N



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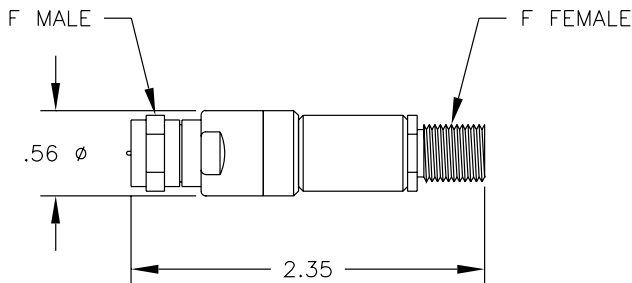
Fixed Attenuators FP Series

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connectors |
|-------------|-----------------|------------------------------------|----------------------------------------------------------|---------------------------------------------------------------|------------------|
| 75FP-XXX-2G | DC-2000 MHz | 1 thru 20 dB in any 1 dB increment | +/- 0.3 dB DC-1000 MHz +/- 0.5 dB or 3% 1000-2000 MHz | 1.2:1 DC-500 MHz 1.3:1 500-1000 MHz 1.4:1 1000-2000 MHz | F, BNC, TNC or N |
| 75FP-XXX-3G | DC-3000 MHz | 3 thru 20 dB in any 1 dB increment | +/- 0.3 dB DC-1300 MHz +/- 0.5 dB 1300-3000 MHz | 1.12:1 DC-1300 MHz 1.3:1 1300-3000 MHz | F or N |

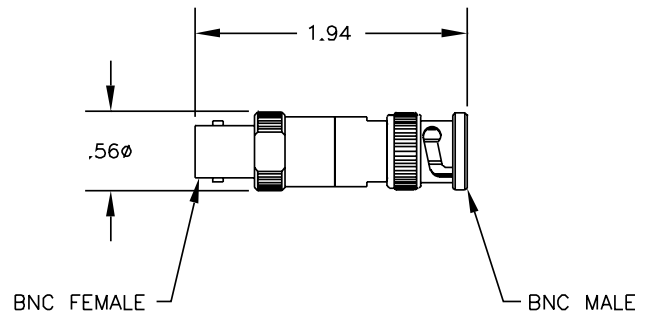
* (XXX) insert attenuation value

| Model | Impedance | Input Power (average) | Peak Power | Operating Temperature |
|-------------|-----------|-----------------------|------------|-----------------------|
| 75FP-XXX-2G | 75 Ohms | 1 Watt @ +25° C | 1000 Watts | -55° C to +125° C |
| 75FP-XXX-3G | 75 Ohms | 0.5 Watt @ +25° C | 100 Watts | -55° C to +125° C |

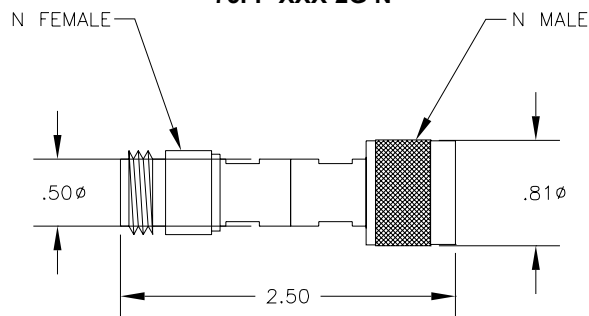
75FP-XXX-2G F



75FP-XXX-2G BNC

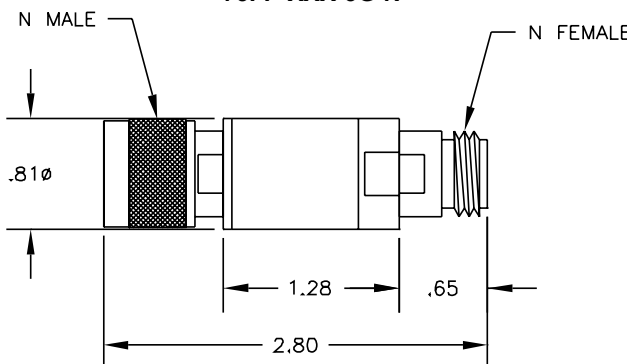


75FP-XXX-2G N

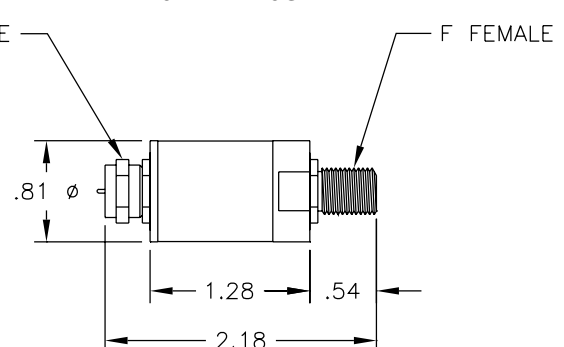


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75FP-XXX-3G N



75FP-XXX-3G F



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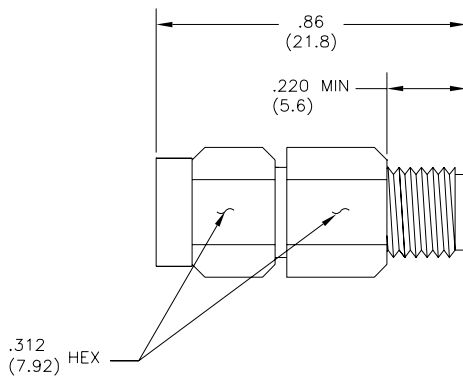
LOW COST!

Low Cost Fixed Attenuators

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy (maximum) | VSWR (maximum) | RF Connectors |
|----------------------------------|-----------------|--------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 50HB-XX | DC-6000 MHz | 1-12, 15, 20 or 30 dB | +/- 0.5 dB (1-20 dB) +/- 0.75 dB (30 dB) | 1.15:1 DC-2.5 GHz 1.20:1 2.5-6 GHz (1-6 dB) 1.25:1 2.5-6 GHz (7-12 dB) 1.30:1 2.5-6 GHz (15, 20 dB) 1.35:1 2.5-6 GHz (30 dB) | SMA |
| 50HN-XX | DC-6000 MHz | 1, 3, 6, 10, 20 or 30 dB | +/- 0.30 dB (1, 3 & 6 dB) +/- 0.50 dB (10 dB) +/- 0.75 dB (20 dB) +/- 1.00 dB (30 dB) | 1.25:1 | N |
| * (XXX) insert attenuation value | | | | | |

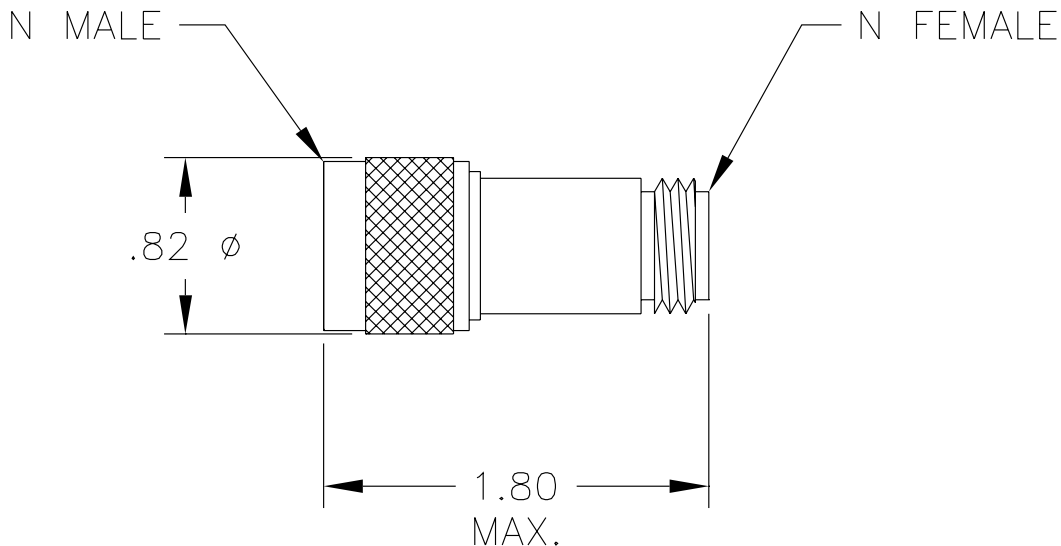
| Common Specifications | | | |
|-----------------------|---------------------------------------------------|-----------------------------------------------------|-----------------------|
| Impedance | Input Power (average) | Peak Power | Operating Temperature |
| 50 Ohms | 2 Watts @ +25° C Derate to 0.5 Watts @ +125° C | 200 Watts (5 microsecond pulse, 0.1% duty cycle) | -65° C to +125° C |

50HB-XX SMA



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50HN-XX N



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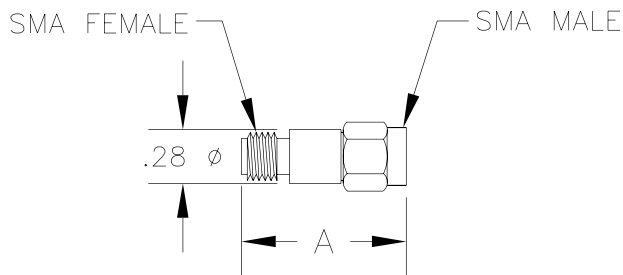
High Frequency Fixed Attenuators

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connectors |
|------------|-----------------|--------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------|---------------|
| 50HF-XXX | DC-18 GHz | 0-10, 12, 15, 20 & 30 dB | +/- 0.3 dB 1-6 dB +/- 0.5 dB 7-20 dB +/- 0.75 dB 21-30 dB | 1.2:1 DC-4 GHz 1.25:1 4-8 GHz 1.3:1 8-12.4 GHz 1.4:1 12.4-18 GHz | N or SMA |
| 50HF-XXX-5 | DC-18 GHz | 0-10, 12, 15, 20 & 30 dB | +/- 0.3 dB 1-6 dB +/- 0.5 dB 7-20 dB +/- 0.75 dB 21-30 dB | 1.2:1 DC-4 GHz 1.25:1 4-8 GHz 1.3:1 8-12.4 GHz 1.4:1 12.4-18 GHz | N or SMA |

* (XXX) insert attenuation value - Consult Factory for other dB Values

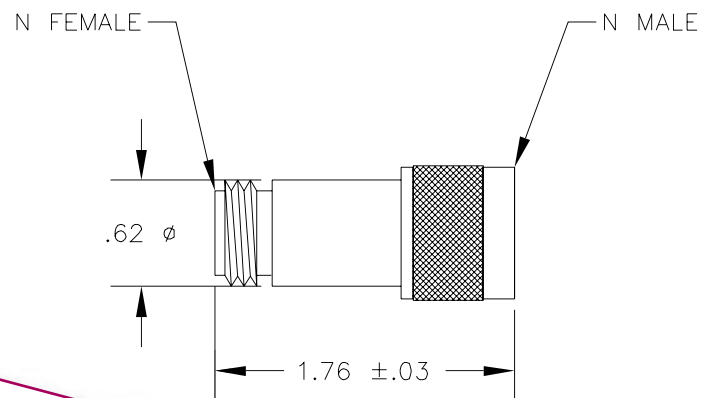
| Model | Impedance | Input Power (average) | Peak Power | Operating Temperature |
|------------|-----------|-------------------------------------------------|------------|-----------------------|
| 50HF-XXX | 50 Ohms | 2 Watts @ +25° C (derate to 0.5 Watt @ +125° C) | 250 Watts | -65° C to +125° C |
| 50HF-XXX-5 | 50 Ohms | 5 Watts @ +25° C (derate to 1 Watt @ +125° C) | 250 Watts | -65° C to +125° C |

50HF-XXX SMA



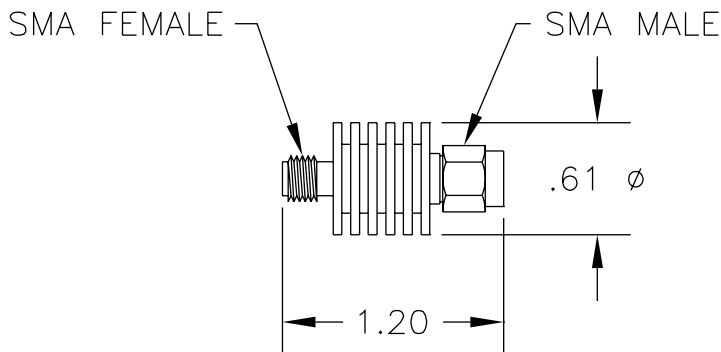
| dB VALUE | DIM. A |
|----------|----------|
| 1-12dB | .86 ±.03 |
| 13-30dB | .99 ±.03 |

50HF-XXX N

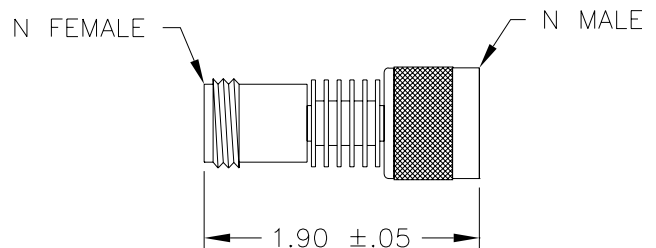


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50HF-XXX-5 SMA



50HF-XXX-5 N



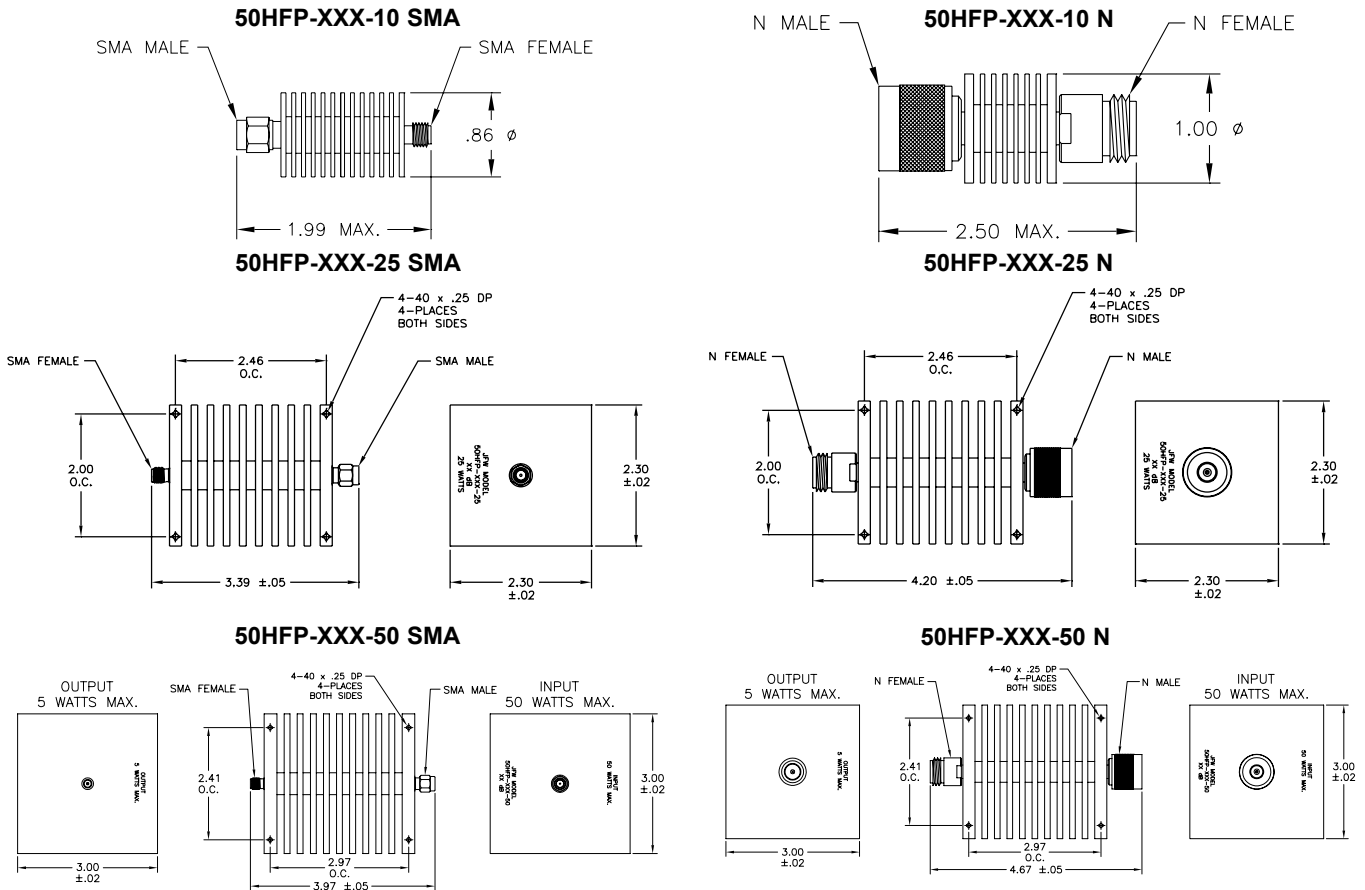
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High Frequency Fixed Attenuators

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|-----------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|--|--|--|--|---------|-----------|------------|--------|-----------|-----------|-----------|----------|-----------|-----------|----------|------|-----------|----------|-----------|------|----------|-----------|----------|------------------------------------------------------------|
| 50HFP-XXX-10 | DC-18 GHz | 3, 6, 10, 20 and 30 dB | 3, 6 dB +/- 0.5 dB 10 dB +/- 0.75 dB 20 dB +/- 1.0 dB 30 dB +/- 1.25 dB | 1.2:1 DC-4 GHz 1.3:1 4-12.4 GHz 1.4:1 12.4-15 GHz 1.45:1 15-18 GHz | | | | | | | | | | | | | | | | | | | | | | | | |
| 50HFP-XXX-25 | DC-18 GHz | 3, 6, 10, 20, 30 and 40 dB | <table border="1"> <thead> <tr> <th colspan="4">50HFP-XX-25</th> </tr> <tr> <th></th> <th>DC-6GHz</th> <th>6-12.4GHz</th> <th>12.4-18GHz</th> </tr> </thead> <tbody> <tr> <td>3, 6dB</td> <td>+/-0.3dB</td> <td>+/-0.5dB</td> <td>+/-0.75dB</td> </tr> <tr> <td>10, 20dB</td> <td>+/-0.5dB</td> <td>+/-0.75dB</td> <td>+/-1.0dB</td> </tr> <tr> <td>30dB</td> <td>+/-0.75dB</td> <td>+/-1.0dB</td> <td>+/-1.25dB</td> </tr> <tr> <td>40dB</td> <td>+/-1.0dB</td> <td>+/-1.25dB</td> <td>+/-1.5dB</td> </tr> </tbody> </table> | 50HFP-XX-25 | | | | | DC-6GHz | 6-12.4GHz | 12.4-18GHz | 3, 6dB | +/-0.3dB | +/-0.5dB | +/-0.75dB | 10, 20dB | +/-0.5dB | +/-0.75dB | +/-1.0dB | 30dB | +/-0.75dB | +/-1.0dB | +/-1.25dB | 40dB | +/-1.0dB | +/-1.25dB | +/-1.5dB | 1.2:1 DC-6 GHz 1.3:1 6-12.4 GHz 1.4:1 12.4-18 GHz |
| 50HFP-XX-25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DC-6GHz | 6-12.4GHz | 12.4-18GHz | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3, 6dB | +/-0.3dB | +/-0.5dB | +/-0.75dB | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10, 20dB | +/-0.5dB | +/-0.75dB | +/-1.0dB | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30dB | +/-0.75dB | +/-1.0dB | +/-1.25dB | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40dB | +/-1.0dB | +/-1.25dB | +/-1.5dB | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50HFP-XXX-50 | DC-18 GHz | 3, 6, 10, 20, 30 and 40 dB | <table border="1"> <thead> <tr> <th colspan="4">50HFP-XX-50</th> </tr> <tr> <th></th> <th>DC-6GHz</th> <th>6-12.4GHz</th> <th>12.4-18GHz</th> </tr> </thead> <tbody> <tr> <td>3, 6dB</td> <td>+/-0.75dB</td> <td>+/-0.75dB</td> <td>+/-0.75dB</td> </tr> <tr> <td>10, 20dB</td> <td>+/-0.75dB</td> <td>+/-0.75dB</td> <td>+/-1.0dB</td> </tr> <tr> <td>30dB</td> <td>+/-0.75dB</td> <td>+/-1.0dB</td> <td>+/-1.25dB</td> </tr> <tr> <td>40dB</td> <td>+/-1.0dB</td> <td>+/-1.25dB</td> <td>+/-1.5dB</td> </tr> </tbody> </table> | 50HFP-XX-50 | | | | | DC-6GHz | 6-12.4GHz | 12.4-18GHz | 3, 6dB | +/-0.75dB | +/-0.75dB | +/-0.75dB | 10, 20dB | +/-0.75dB | +/-0.75dB | +/-1.0dB | 30dB | +/-0.75dB | +/-1.0dB | +/-1.25dB | 40dB | +/-1.0dB | +/-1.25dB | +/-1.5dB | 1.25:1 DC-6 GHz 1.35:1 6-12.4 GHz 1.45:1 12.4-18 GHz |
| 50HFP-XX-50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DC-6GHz | 6-12.4GHz | 12.4-18GHz | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3, 6dB | +/-0.75dB | +/-0.75dB | +/-0.75dB | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10, 20dB | +/-0.75dB | +/-0.75dB | +/-1.0dB | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30dB | +/-0.75dB | +/-1.0dB | +/-1.25dB | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40dB | +/-1.0dB | +/-1.25dB | +/-1.5dB | | | | | | | | | | | | | | | | | | | | | | | | | |

* (XXX) insert attenuation value - Consult Factory for other dB Values

| Model | Impedance | Input Power (average) | Peak Power | Operating Temperature | RF Connectors |
|--------------|-----------|--------------------------|------------|-----------------------|---------------|
| 50HFP-XXX-10 | 50 Ohms | 10 Watts | 500 Watts | -65° C to +125° C | SMA or N |
| 50HFP-XXX-25 | 50 Ohms | 25 Watts | 500 Watts | -65° C to +125° C | SMA or N |
| 50HFP-XXX-50 | 50 Ohms | 50 Watts Uni-directional | 500 Watts | -65° C to +125° C | SMA or N |



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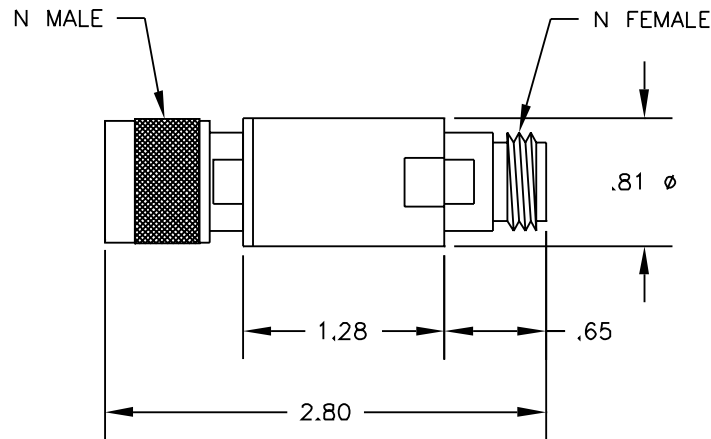
50 Ohm DC Passing Attenuators

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connectors | Input Power (average) |
|-----------|-----------------|----------------------|----------------------|----------------|--------------------|-----------------------|
| 50FFD-XXX | 600-1950 MHz | 1-30 dB | +/- 0.25 dB | 1.3:1 | N, TNC, BNC or SMA | +21 dBm |
| 50FFP-XXX | 400-2500 MHz | 1-10 dB | +/- 0.4 dB | 1.4:1 | N, TNC, BNC or SMA | +21 dBm |

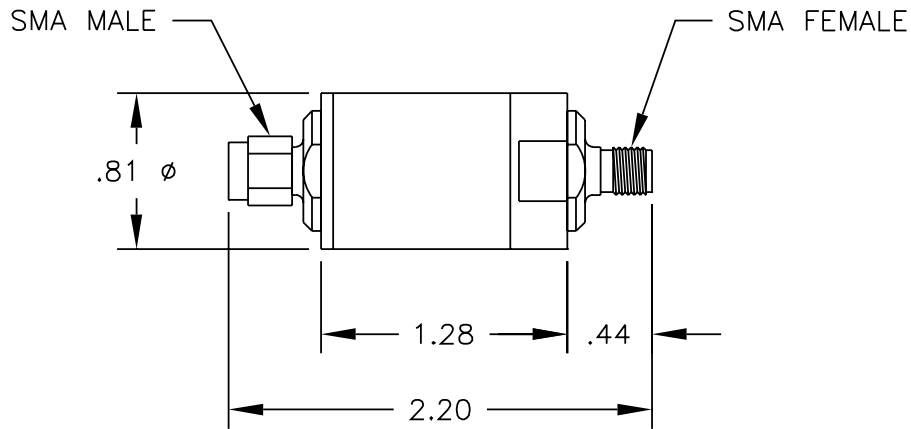
* (XXX) insert attenuation value - Consult Factory for other dB Values

| Model | Impedance | Operating Temperature | Insertion Loss @ 10MHz | DC Ratings | DC Resistance (Input to Output) |
|-----------|-----------|-----------------------|------------------------|------------------|---------------------------------|
| 50FFD-XXX | 50 Ohms | -40° C to +85° C | 0.75 dB nominal | 4 Amps/150 Volts | 0.05 Ohms nominal |
| 50FFP-XXX | 50 Ohms | -40° C to +85° C | 0.75 dB nominal | 4 Amps/150 Volts | 0.05 Ohms nominal |

50FFD-XXX N / 50FFP-XXX N



50FFD-XXX SMA / 50FFP-XXX SMA



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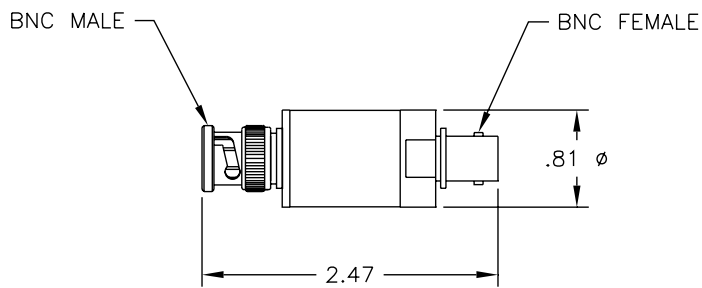
75 Ohm DC Passing Attenuators

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connectors | Input Power (average) |
|-----------|-----------------|----------------------|----------------------|----------------|---------------|-----------------------|
| 75FFB-XXX | 950-2150 MHz | 3-20 dB | +/- 0.5 dB | 1.5:1 | BNC or F | 1 Watt |
| 75FFD-XXX | 450-2000 MHz | 3-20 dB | +/- 0.5 dB | 1.4:1 | BNC or F | 1 Watt |

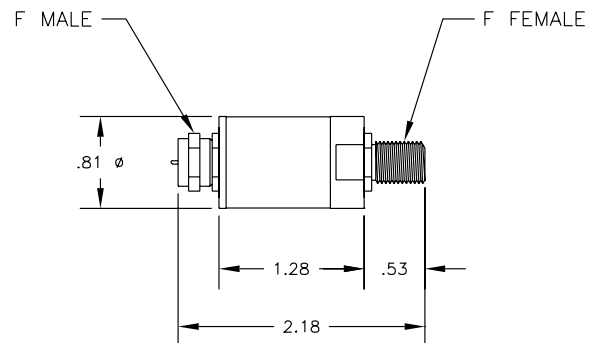
* (XXX) insert attenuation value - Consult Factory for other dB Values

| Model | Impedance | Operating Temperature | Insertion Loss @ 10MHz | DC Ratings | DC Resistance (Input to Output) |
|-----------|-----------|-----------------------|------------------------|-----------------|---------------------------------|
| 75FFB-XXX | 75 Ohms | -40° C to +85° C | 0.75 dB nominal | 2 Amps/50 Volts | 0.1 Ohms nominal |
| 75FFD-XXX | 75 Ohms | -40° C to +85° C | 0.75 dB nominal | 4 Amps/50 Volts | 0.1 Ohms nominal |

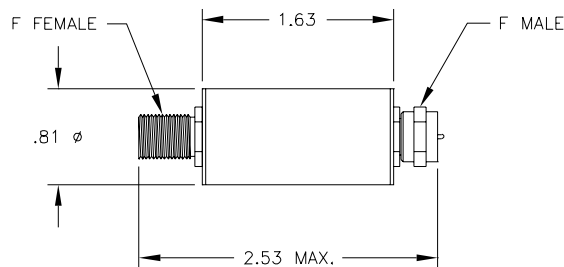
75FFB-XXX BNC



75FFB-XXX F



75FFD-XXX F



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Fixed Attenuator Kits

| Model | Frequency Range | Impedance | Attenuators and Accessories | RF Connectors | Calibration Frequencies DC-18 GHz Models Only |
|-----------|-----------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------------------|
| 50KFA-005 | DC-2200 MHz | 50 Ohms | one each: 1,2,3,6,10 and 20 dB Fixed Attenuators one each: 50 Ohm and 75 Ohm Feedthru Terminations one each: Impedance Matching Pad one each: N male to BNC female adapter one each: N female to BNC male adapter | BNC male/female | |
| 50KFA-006 | DC-2200 MHz | 50 Ohms | one each: 1,2,3,6,10 and 20 dB Fixed Attenuators one each: BNC female to SMA male adapter one each: BNC male to SMA female adapter one each: N female to SMA male adapter | SMA male/female | |
| 50KFA-008 | DC-18 GHz | 50 Ohms | one each: 50HF-003 N one each: 50HF-006 N one each: 50HF-010 N one each: 50HF-020 N | N male/female | DC, 4 GHz, 8 GHz, 12.4 GHz and 18 GHz |
| 50KFA-014 | DC-18 GHz | 50 Ohms | one each: 50HF-003 SMA one each: 50HF-006 SMA one each: 50HF-010 SMA one each: 50HF-020 SMA | SMA male/female | DC, 4 GHz, 8 GHz, 12.4 GHz and 18 GHz |
| 50KFA-074 | DC-2200 MHz | 50 Ohms | one each: 3,6,10 and 20 dB one each: male termination | BNC, N or SMA male/female | |



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JFW designs Attenuator Kits for a wide range of applications.

Kits can include: Attenuators, Terminations, DC Blocks, Adapters and Mismatches. Please contact us for a cost effective solution for your requirement.

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2 Watt Fixed Attenuators FP Series

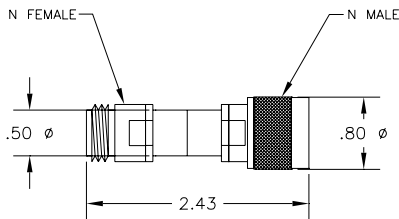
| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connectors |
|-------------|-----------------|-------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------|
| 50FP-XXX-H2 | DC-2000 MHz | 1 thru 30 dB in any 1 dB increment | +/- 0.3 dB or 2% | 1.1:1 DC-500 MHz 1.3:1 500-2000 MHz | BNC, N, SMA, 7/16, TNC or rev. pol.TNC |
| 50FP-XXX-H2 | DC-2000 MHz | 31 thru 65 dB in any 1 dB increment | +/- 0.4 dB DC-500 MHz +/- 0.8 dB 500-1000 MHz +/- 1.0 dB 1000-2000 MHz | 1.1:1 DC-500 MHz 1.3:1 500-2000 MHz | BNC, N, SMA, 7/16, TNC or rev. pol.TNC |
| 50FP-XXX-H3 | DC-3000 MHz | 1 thru 30 dB in any 1 dB increment | +/- 0.3 dB or 2% | 1.3:1 | BNC, N, SMA, 7/16, TNC |
| 50FP-XXX-H4 | DC-4000 MHz | 1 thru 30 dB in any 1 dB increment | +/- 0.3 dB or 2% DC-2000 MHz +/- 0.4 dB or 2% 2000-4000 MHz | 1.15:1 DC-2000 MHz 1.25:1 2000-4000 MHz | BNC, N, TNC or SMA |
| 50FP-XXX-H6 | DC-6000 MHz | 1 thru 20 dB in any 1 dB increment | +/- 0.3 dB DC-3000 MHz +/- 0.4 dB 3000-4000 MHz +/- 0.5 dB 4000-6000 MHz | 1.15:1 DC-3000 MHz 1.30:1 3000-4000 MHz 1.35:1 4000-6000 MHz | N or SMA |

* (XXX) insert attenuation value

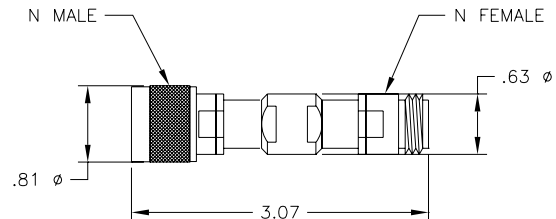
Common Specifications

| Impedance | Input Power (average) | Peak Power | Operating Temperature |
|-----------|----------------------------------------------|------------|-----------------------|
| 50 Ohms | 2 Watts @ +25° C (derate to 1 Watt @ +85° C) | 1000 Watts | -55° C to +100° C |

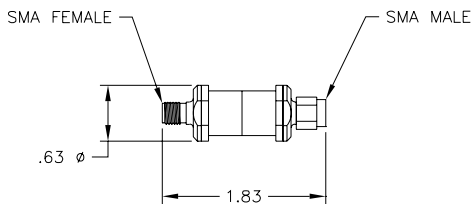
50FP-XXX-XX N (1-30 dB)



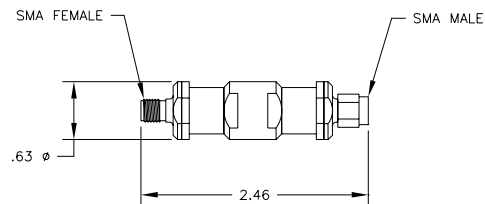
50FP-XXX-H2 N (31-65 dB)



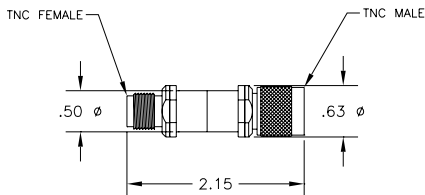
50FP-XXX-XX SMA (1-30 dB)



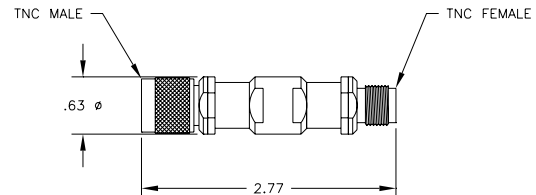
50FP-XXX-H2 SMA (31-65 dB)



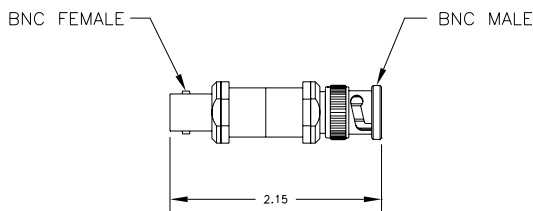
50FP-XXX-XX TNC (1-30 dB)



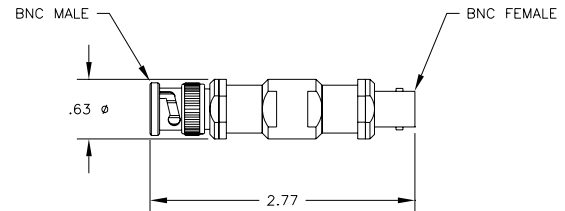
50FP-XXX-H2 TNC (31-65 dB)



50FP-XXX-XX BNC (1-30 dB)



50FP-XXX-H2 BNC (31-65 dB)



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5 Watt Fixed Attenuators FPE Series

LOW COST!

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connectors |
|-----------|-----------------|-------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------|
| 50FPE-XXX | DC-6000 MHz | 1 thru 40 dB in any 1 dB increment | +/- 0.30 dB DC-3000 MHz +/- 0.40 dB 3000-4000 MHz +/- 0.50 dB 4000-6000 MHz | 1.1:1 DC-1000 MHz 1.2:1 1000-3000 MHz 1.3:1 3000-5000 MHz 1.35:1 5000-6000 MHz | N, TNC, SMA or reverse polarity TNC |
| 50FPE-XXX | DC-4000 MHz | 41 thru 60 dB in any 1 dB increment | +/- 0.75 dB | 1.25:1 | N, TNC, SMA or reverse polarity TNC |
| 50FPE-XXX | DC-4000 MHz | 1 thru 40 dB in any 1 dB increment | +/- 0.30 dB DC-3000 MHz +/- 0.40 dB 3000-4000 MHz | 1.1:1 DC-1000 MHz 1.2:1 1000-3000 MHz 1.3:1 3000-4000 MHz | BNC |

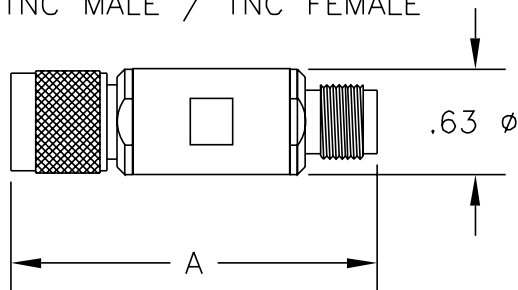
* (XXX) insert attenuation value

Common Specifications

| Impedance | Input Power (average) | Peak Power | Operating Temperature |
|-----------|----------------------------------------------|------------|-----------------------|
| 50 Ohms | 5 Watts @ +25° C (derate to 1 Watt @ +85° C) | 1000 Watts | -55° C to +100° C |

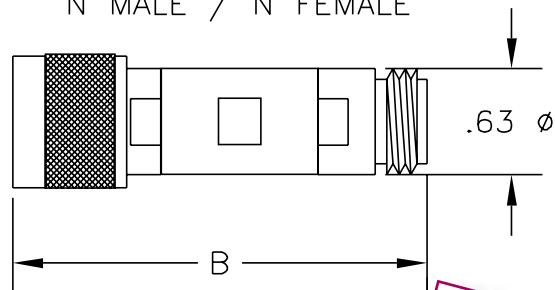
50FPE-XXX TNC

TNC MALE / TNC FEMALE



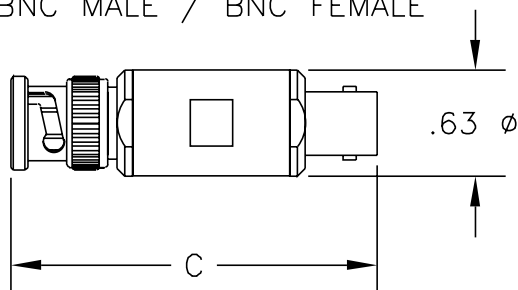
50FPE-XXX N

N MALE / N FEMALE



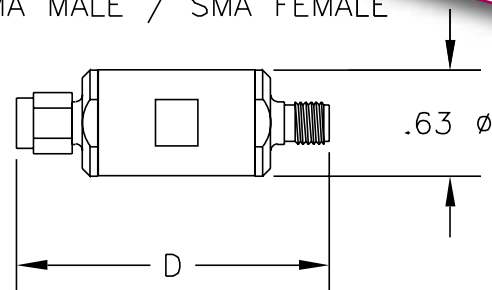
50FPE-XXX BNC

BNC MALE / BNC FEMALE



50FPE-XXX SMA

SMA MALE / SMA FEMALE



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| ATTENUATION | DIM: A | DIM: B | DIM: C | DIM: D |
|-------------|--------|--------|--------|--------|
| 0-20 dB | 2.16 | 2.45 | 2.16 | 1.85 |
| 21-60 dB | 2.57 | 2.86 | 2.57 | 2.26 |

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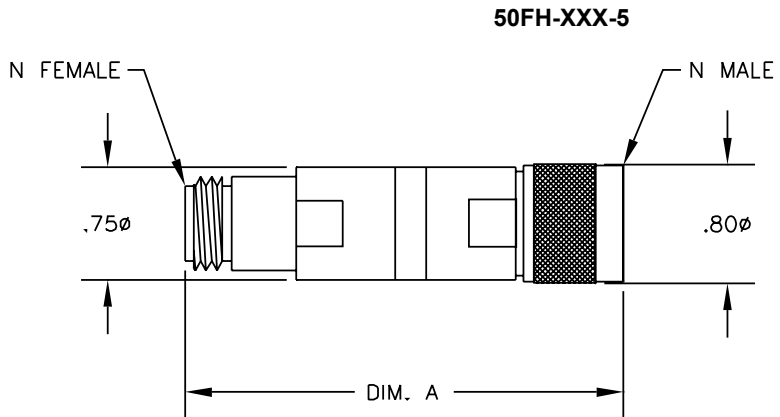
High Peak Power

5 & 10 Watt Fixed Attenuators FH Series

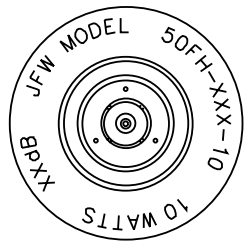
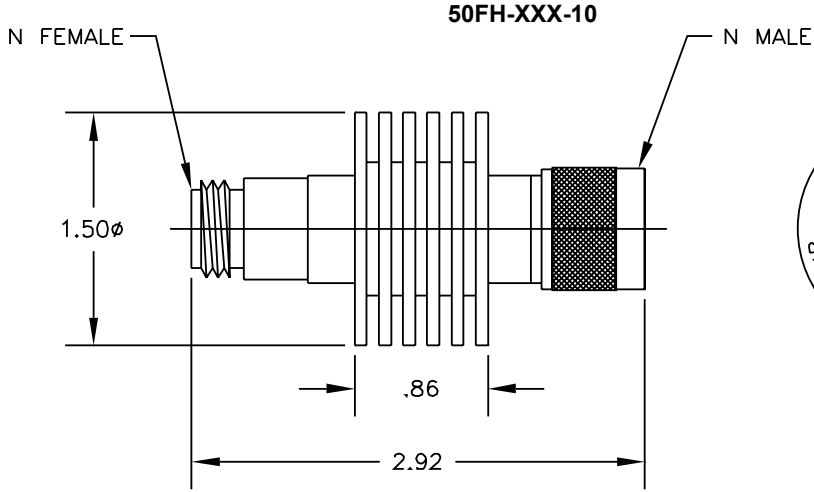
| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connectors |
|-------------|-----------------|-------------------------------------|------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------|
| 50FH-XXX-5 | DC-2000 MHz | 1 thru 20 dB in any 1 dB increment | +/- 0.2 dB DC-500 MHz +/- 0.5 dB 500-1000 MHz +/- 0.8 dB 1000-2000 MHz | 1.1:1 DC-500 MHz 1.2:1 500-1000 MHz 1.5:1 1000-2000 MHz | BNC, N, TNC, 7/16 or SMA |
| 50FH-XXX-5 | DC-1000 MHz | 21 thru 60 dB in any 1 dB increment | +/- 0.5 dB or 2% DC-500 MHz +/- 4% 500-1000 MHz | 1.2:1 | BNC, N, TNC, 7/16 or SMA |
| 50FH-XXX-10 | DC-2000 MHz | 1 thru 20 dB in any 1 dB increment | +/- 0.2 dB DC-500 MHz +/- 0.5 dB 500-1000 MHz +/- 0.8 dB 1000-2000 MHz | 1.1:1 DC-500 MHz 1.2:1 500-1000 MHz 1.5:1 1000-2000 MHz | BNC, N, TNC, 7/16 or SMA |

* (XXX) insert attenuation value

| Model | Impedance | Input Power (average) | Peak Power | Operating Temperature |
|-------------|-----------|-----------------------|------------|-----------------------|
| 50FH-XXX-5 | 50 Ohms | 5 Watts | 2000 Watts | -55° C to +100° C |
| 50FH-XXX-10 | 50 Ohms | 10 Watts | 2000 Watts | -55° C to +100° C |



| dB VALUE | DIM. A |
|----------|--------|
| 0-30 dB | 2.92 |
| 31-60 dB | 4.04 |



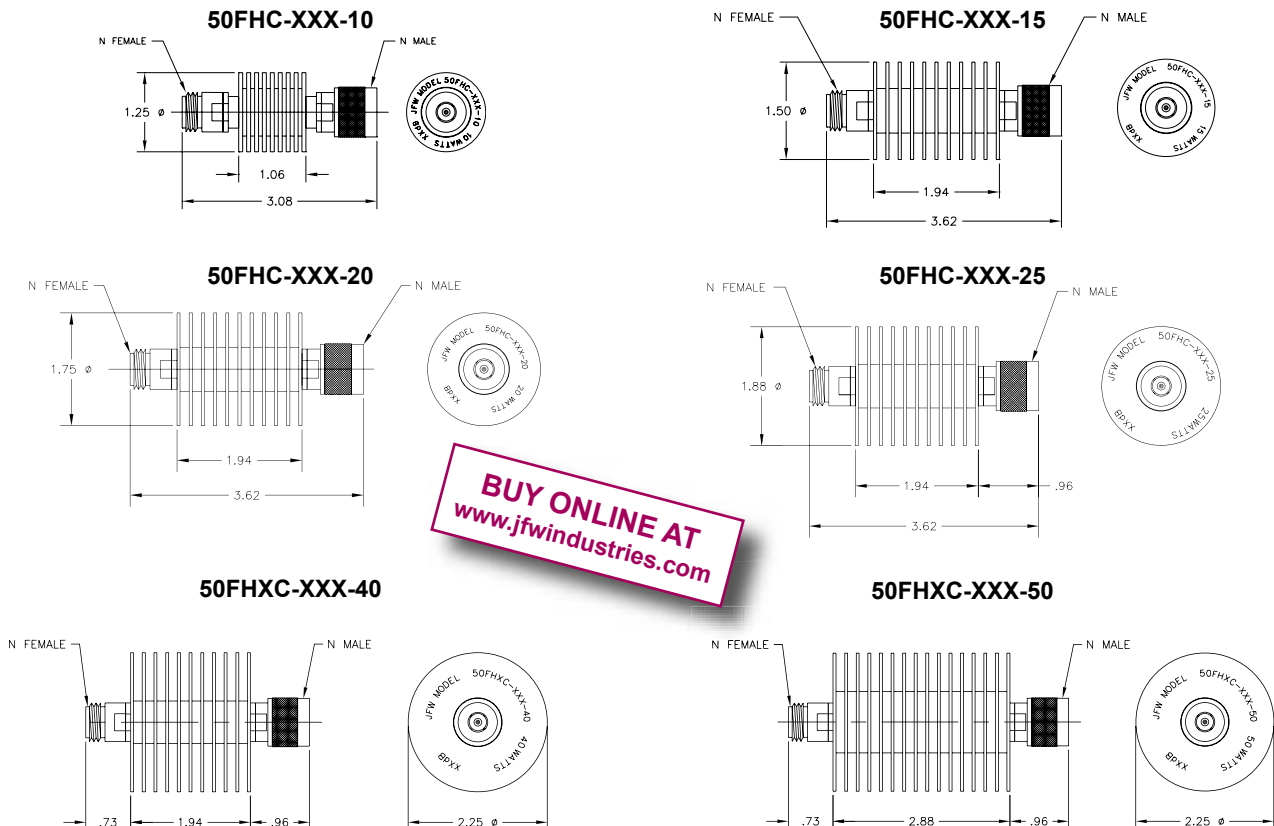
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Medium Power Fixed Attenuators FHC Series

| Model | Input Power (average) | Input Power Derating (average) | Impedance | RF Connectors |
|---------------|-----------------------|--------------------------------|-----------|------------------------------------------------|
| 50FHC-XXX-10 | 10 Watts @ +25° C | 5.0 Watts @ +70° C | 50 Ohms | N, BNC, SMA, TNC or reverse polarity TNC |
| 50FHC-XXX-15 | 15 Watts @ +25° C | 7.5 Watts @ +70° C | 50 Ohms | N, BNC, SMA, TNC, 7/16 or reverse polarity TNC |
| 50FHC-XXX-20 | 20 Watts @ +25° C | 10.0 Watts @ +70° C | 50 Ohms | N, BNC, SMA, TNC, 7/16 or reverse polarity TNC |
| 50FHC-XXX-25 | 25 Watts @ +25° C | 12.5 Watts @ +70° C | 50 Ohms | N, BNC, SMA, TNC, 7/16 or reverse polarity TNC |
| 50FHXC-XXX-40 | 40 Watts @ +25° C | 20.0 Watts @ +70° C | 50 Ohms | N, BNC, SMA, TNC, 7/16 or reverse polarity TNC |
| 50FHXC-XXX-50 | 50 Watts @ +25° C | 25.0 Watts @ +70° C | 50 Ohms | N, BNC, SMA, TNC, 7/16 or reverse polarity TNC |

* (XXX) insert attenuation value

| Common Specifications | | | | | |
|-------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|------------|-----------------------|
| Attenuation Values* | Frequency Range | Attenuation Accuracy | VSWR (maximum) | Peak Power | Operating Temperature |
| 1 thru 30 dB in any 1 dB increment | DC-4000 MHz | DC-1000 MHz +/- 0.25 dB 1-20 dB +/- 0.5 dB 21-30 dB 1000-4000 MHz +/- 0.5 dB 1-20 dB +/- 0.75 dB 21-30 dB | 1.15:1 DC-1000 MHz 1.35:1 1000-4000 MHz | 1000 Watts | -55° C to +100° C |
| 31 thru 60 dB in any 1 dB increment | DC-3000 MHz | +/- 2% DC-2000 MHz +/- 3% 2000-3000 MHz | 1.15:1 DC-1000 MHz 1.35:1 1000-3000 MHz | 1000 Watts | -55° C to +100° C |



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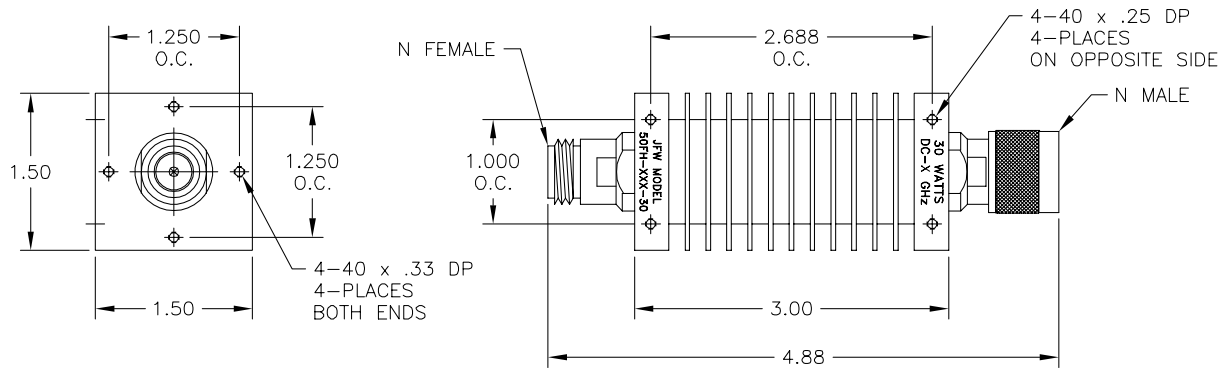
30 & 50 Watt Fixed Attenuators FH Series

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connectors |
|---------------|-----------------|------------------------------------|----------------------|------------------------------------------|--------------------------|
| 50FH-XXX-30 | DC-2000 MHz | 1 thru 50 dB in any 1 dB increment | +/- 0.5 dB | 1.3:1 DC-1000 MHz 1.4:1 1000-2000 MHz | BNC, N, TNC, 7/16 or SMA |
| 50FH-XXX-30-3 | DC-3000 MHz | 1 thru 50 dB in any 1 dB increment | +/- 0.5 dB | 1.4:1 | BNC, N, TNC, 7/16 or SMA |
| 50FH-XXX-50 | DC-2000 MHz | 1 thru 50 dB in any 1 dB increment | +/- 0.5 dB | 1.3:1 DC-1000 MHz 1.4:1 1000-2000 MHz | BNC, N, TNC, 7/16 or SMA |
| 50FH-XXX-50-3 | DC-3000 MHz | 1 thru 50 dB in any 1 dB increment | +/- 0.5 dB | 1.4:1 | BNC, N, TNC, 7/16 or SMA |

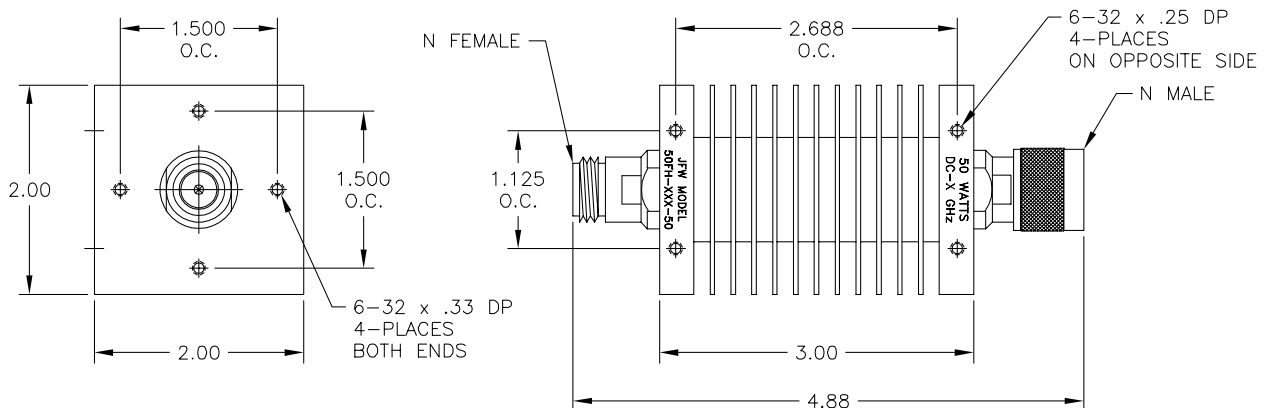
* (XXX) insert attenuation value

| Model | Impedance | Input Power (average) | Peak Power | Operating Temperature |
|-----------------------|-----------|-----------------------|------------|-----------------------|
| 50FH-XXX-30 and -30-3 | 50 Ohms | 30 Watts @ +25° C | 1000 Watts | -55° C to +100° C |
| 50FH-XXX-50 and -50-3 | 50 Ohms | 50 Watts @ +25° C | 1000 Watts | -55° C to +100° C |

50FH-XXX-30



50FH-XXX-50



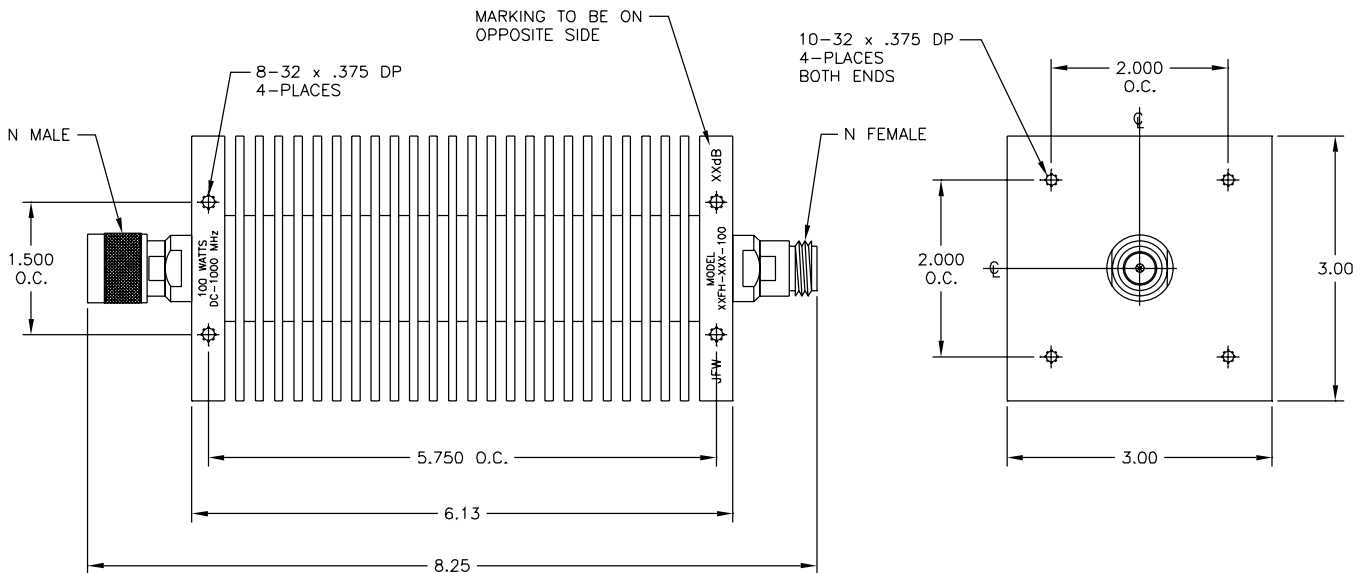
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100 Watt Fixed Attenuators FH Series

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connectors |
|----------------|-----------------|------------------------------------|----------------------|------------------------------------------|--------------------------|
| 50FH-XXX-100 | DC-1000 MHz | 1 thru 50 dB in any 1 dB increment | +/- 0.3 dB | 1.2:1 | SMA, BNC, N, TNC or 7/16 |
| 50FH-XXX-100-2 | DC-2000 MHz | 1 thru 50 dB in any 1 dB increment | +/- 0.5 dB | 1.3:1 DC-1000 MHz 1.4:1 1000-2000 MHz | SMA, BNC, N, TNC or 7/16 |
| 50FH-XXX-100-3 | DC-3000 MHz | 1 thru 50 dB in any 1 dB increment | +/- 0.5 dB | 1.4:1 | SMA, BNC, N, TNC or 7/16 |

* (XXX) insert attenuation value

| Common Specifications | | | |
|-----------------------|--------------------------------------------------|------------|-----------------------|
| Impedance | Input Power (average) | Peak Power | Operating Temperature |
| 50 Ohms | 100 Watts @ +25° C (derate to 50 Watts @ +85° C) | 1000 Watts | -55° C to +100° C |



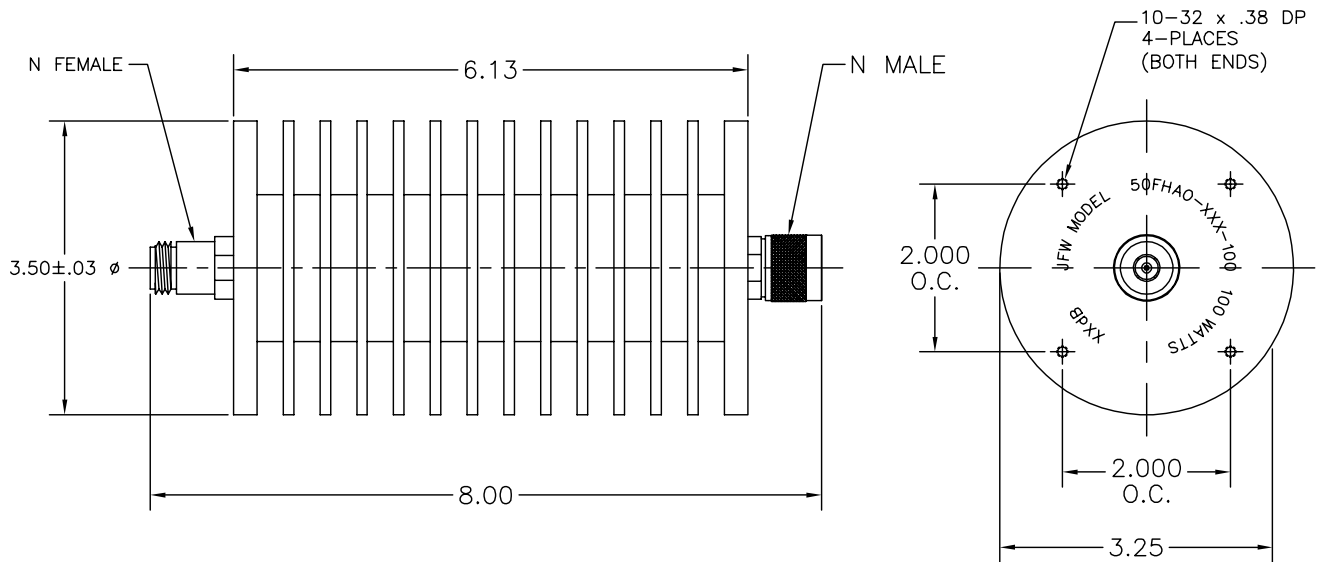
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100 Watt Fixed Attenuator FHAO Series

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connector |
|----------------|-----------------|------------------------------------|----------------------------------------------------|------------------------------------------|--------------|
| 50FHAO-XXX-100 | DC-3000 MHz | 1 dB or 2 dB | +/- 0.5 dB | 1.4:1 | N or 7/16 |
| 50FHAO-XXX-100 | DC-3000 MHz | 3 thru 5 dB in any 1 dB increment | +/- 0.3 dB DC-2000 MHz +/- 0.5 dB 2000-3000 MHz | 1.3:1 DC-2000 MHz 1.4:1 2000-3000 MHz | N or 7/16 |
| 50FHAO-XXX-100 | DC-3000 MHz | 6 thru 50 dB in any 1 dB increment | +/- 0.3 dB DC-2000 MHz +/- 0.5 dB 2000-3000 MHz | 1.2:1 DC-2000 MHz 1.3:1 2000-3000 MHz | N or 7/16 |

* (XXX) insert attenuation value

| Impedance | RF Input Power (average) | Peak Power | Operating Temperature |
|-----------|--------------------------------------------------|------------|-----------------------|
| 50 Ohms | 100 Watts @ +25° C (derate to 50 Watts @ +85° C) | 1000 Watts | -55° C to +100° C |



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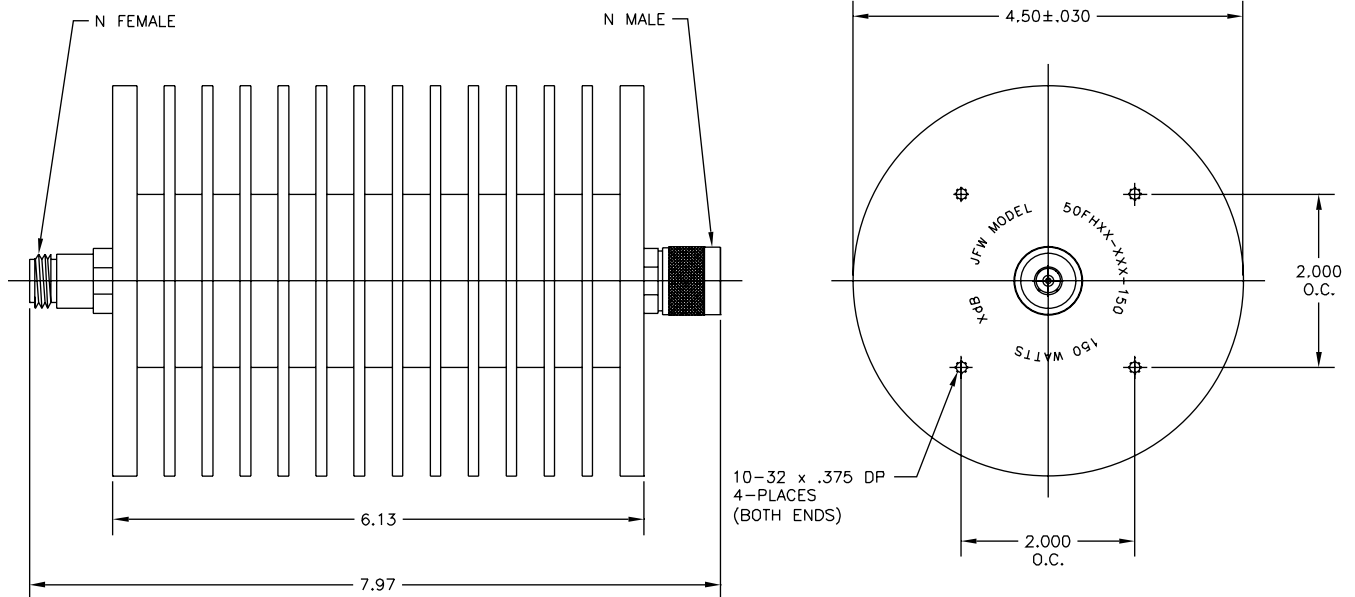
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150 Watt Fixed Attenuator FHAO Series

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connector |
|----------------|-----------------|------------------------------------|----------------------------------------------------|------------------------------------------|--------------|
| 50FHAO-XXX-150 | DC-3000 MHz | 1 dB or 2 dB | +/- 0.5 dB | 1.4:1 | N or 7/16 |
| 50FHAO-XXX-150 | DC-3000 MHz | 3 thru 5 dB in any 1 dB increment | +/- 0.3 dB DC-2000 MHz +/- 0.5 dB 2000-3000 MHz | 1.3:1 DC-2000 MHz 1.4:1 2000-3000 MHz | N or 7/16 |
| 50FHAO-XXX-150 | DC-3000 MHz | 6 thru 50 dB in any 1 dB increment | +/- 0.3 dB DC-2000 MHz +/- 0.5 dB 2000-3000 MHz | 1.2:1 DC-2000 MHz 1.3:1 2000-3000 MHz | N or 7/16 |

* (XXX) insert attenuation value

| Impedance | RF Input Power (average) | Peak Power | Operating Temperature |
|-----------|--------------------------------------------------|------------|-----------------------|
| 50 Ohms | 150 Watts @ +25° C (derate to 75 Watts @ +85° C) | 1000 Watts | -55° C to +100° C |



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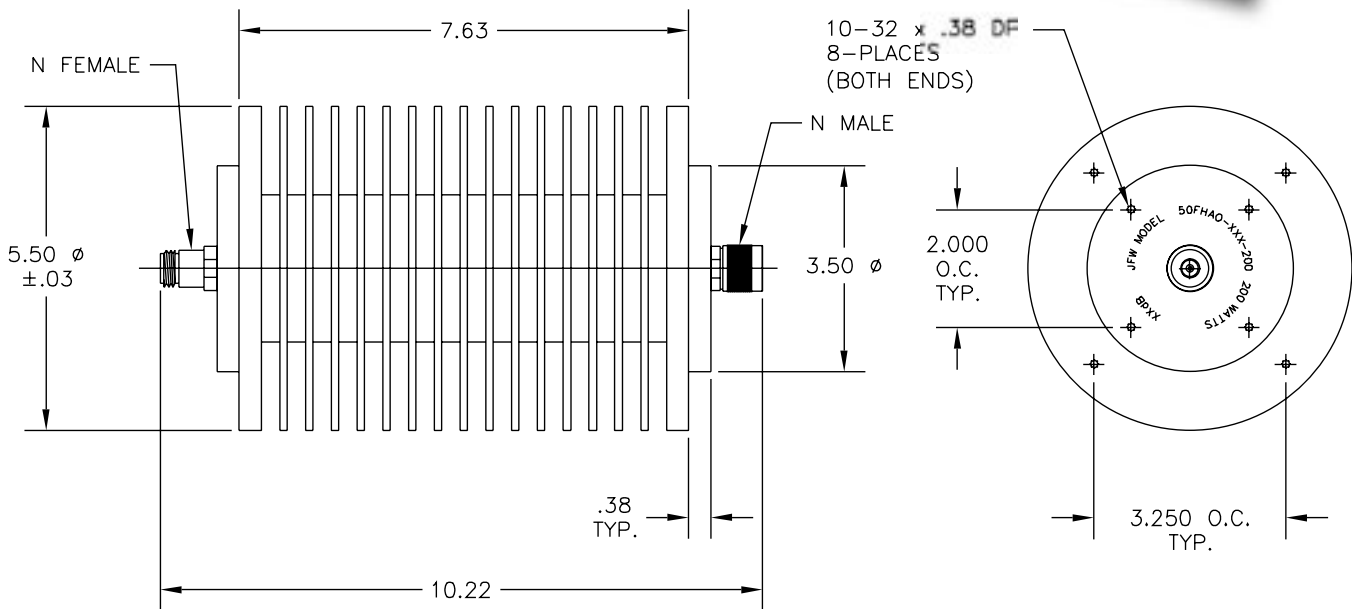
200 Watt Fixed Attenuator FHAO Series

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connector |
|----------------|-----------------|------------------------------------|----------------------------------------------------|------------------------------------------|--------------|
| 50FHAO-XXX-200 | DC-3000 MHz | 1 dB or 2 dB | +/- 0.5 dB | 1.4:1 | N or 7/16 |
| 50FHAO-XXX-200 | DC-3000 MHz | 3 thru 5 dB in any 1 dB increment | +/- 0.3 dB DC-2000 MHz +/- 0.5 dB 2000-3000 MHz | 1.3:1 DC-2000 MHz 1.4:1 2000-3000 MHz | N or 7/16 |
| 50FHAO-XXX-200 | DC-3000 MHz | 6 thru 50 dB in any 1 dB increment | +/- 0.3 dB DC-2000 MHz +/- 0.5 dB 2000-3000 MHz | 1.2:1 DC-2000 MHz 1.3:1 2000-3000 MHz | N or 7/16 |

* (XXX) insert attenuation value

| Impedance | Input Power (average) | Peak Power | Operating Temperature |
|-----------|---------------------------------------------------|------------|-----------------------|
| 50 Ohms | 200 Watts @ +25° C (derate to 100 Watts @ +85° C) | 1000 Watts | -55° C to +100° C |

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300 Watt Fixed Attenuators FH Series

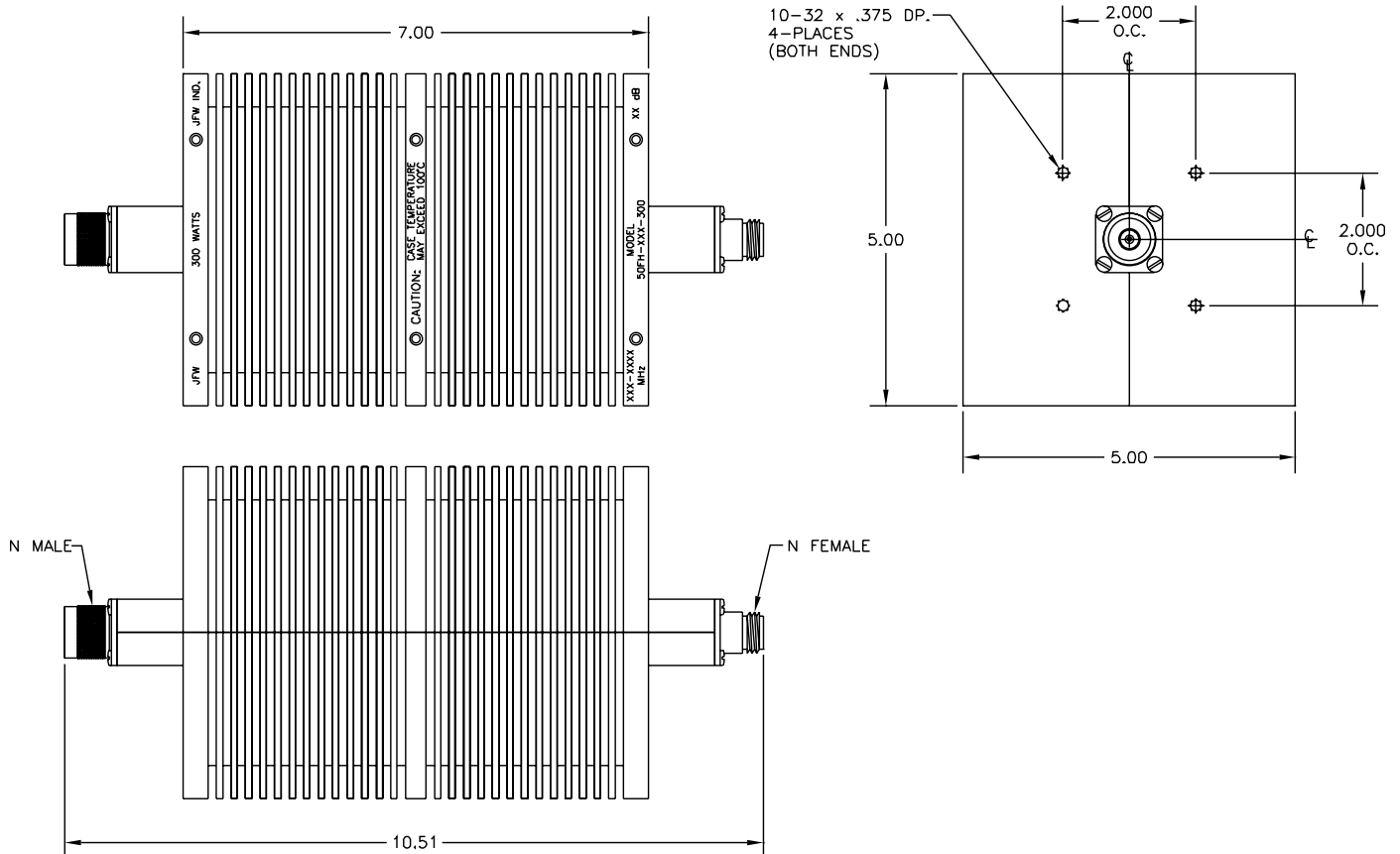
High Peak Power

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connectors |
|----------------|-----------------|-------------------------------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------|---------------------|
| 50FH-XXX-300 | DC-1000 MHz | 1 thru 30 dB in any 1 dB increment | +/- 0.5 dB or 2% | 1.3:1 | BNC, N, TNC or 7/16 |
| 50FH-XXX-300 | DC-1000 MHz | 31 thru 50 dB in any 1 dB increment | +/- 0.2 dB or 1% DC-250 MHz +/- 0.3 dB or 2% 250-500 MHz +/- 0.5 dB or 3% 500-1000 MHz | 1.1:1 DC-250 MHz 1.15:1 250-500 MHz 1.25:1 500-1000 MHz | BNC, N, TNC or 7/16 |
| 50FH-XXX-300-2 | DC-2000 MHz | 3 thru 40 dB in any 1 dB increment | +/- 0.5 dB or 3% | 1.4:1 | N, TNC or 7/16 |

* (XXX) insert attenuation value

Common Specifications

| Impedance | Input Power (average) | Peak Power | Operating Temperature |
|-----------|--------------------------------------------------|------------|-----------------------|
| 50 Ohms | 300 Watts @ +25° C (derate to 75 Watts @ +85° C) | 2000 Watts | -55° C to +100° C |

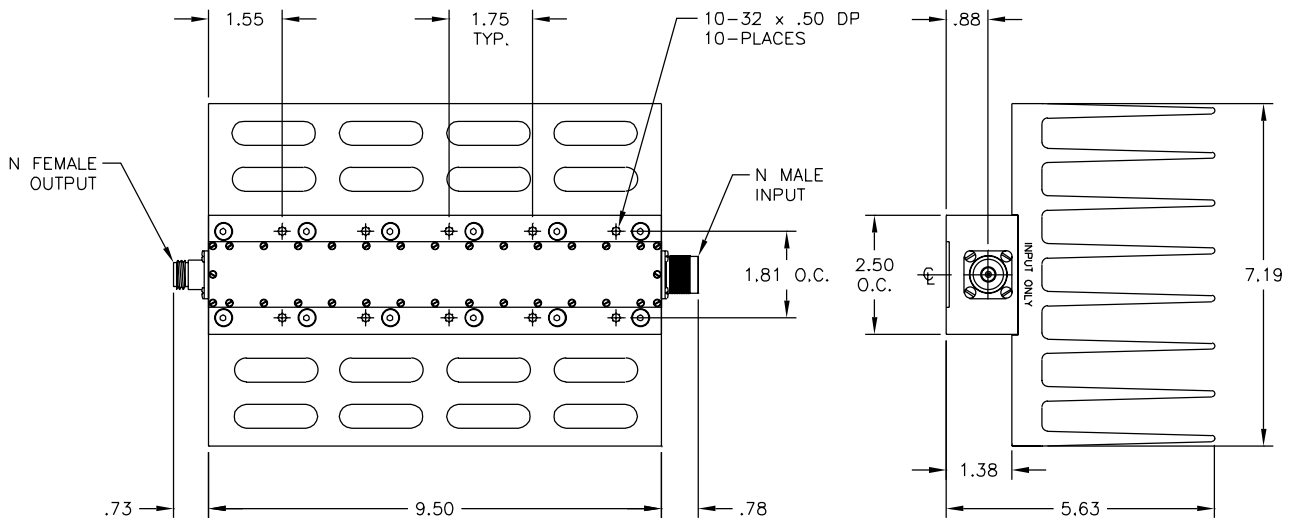


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500 Watt Fixed Attenuators FHDQ Series

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connectors |
|---------------------------------------------------------------------------------------|-----------------|------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------|
| 50FHDQ-XXX-500 | DC-1000 MHz | 3 thru 40 dB in any 1 dB increment | +/- 0.5 dB | 1.2:1 | N, TNC or 7/16 |
| 50FHDQ-XXX-500-3 | DC-3000 MHz | 10, 20, 25, 30 or 40 dB | 10 dB +/- 0.5 dB 20 dB +/- 0.6 dB 25 dB +/- 0.7 dB 30 dB +/- 0.8 dB 40 dB +/- 0.8 dB | 1.2:1 DC-1000 MHz 1.25:1 1000-1500 MHz 1.35:1 1500-3000 MHz | N, TNC or 7/16 |
| * (XXX) insert attenuation value (other attenuation values available upon request) | | | | | |

| Common Specifications | | | | |
|-----------------------|---------------------------------------------------|-------------------------|------------|-----------------------|
| Impedance | Input Power (average) (uni-directional) | Reverse Power (average) | Peak Power | Operating Temperature |
| 50 Ohms | 500 Watts @ +25° C (derate to 50 Watts @ +100° C) | 125 Watts @ +25° C | 2500 Watts | -55° C to +100° C |



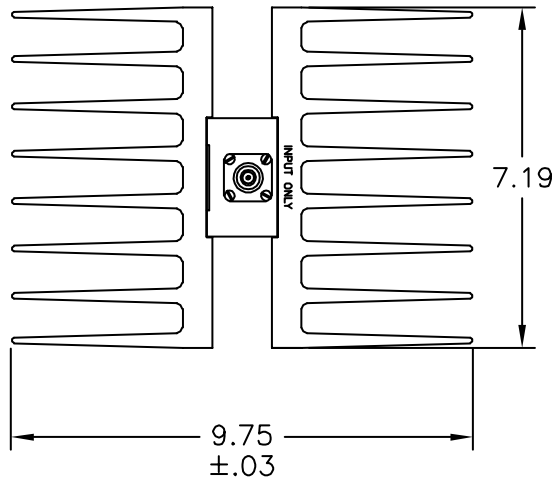
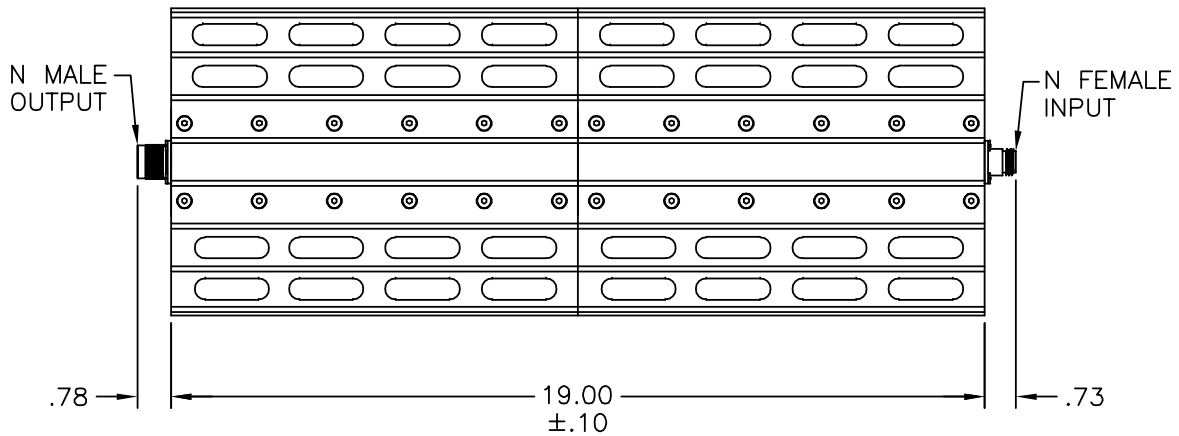
This represents only 10% of our products. For YOUR application, contact JFW at 1-877-887-4JFW or sales@jfwindustries.com

1000 Watt Fixed Attenuators

| Model | Frequency Range | Attenuation Values * | Attenuation Accuracy | VSWR (maximum) | RF Connectors |
|-----------------|-----------------|----------------------|----------------------|----------------|---------------|
| 50FHIE-XXX-1000 | DC-3000 MHz | 20, 30 and 40 dB | +/- 1.5 dB | 1.4:1 | N or 7/16 |
| 50FHIQ-XXX-1000 | DC-1000 MHz | 10, 20 and 30 dB | +/- 1.0 dB | 1.3:1 | N or 7/16 |

* (XXX) insert attenuation value
(other attenuation values available upon request)

| Common Specifications | | | | |
|-----------------------|------------------------------------------------------------------------|-------------------------|------------|-----------------------|
| Impedance | Input Power (average) (uni-directional) | Reverse Power (average) | Peak Power | Operating Temperature |
| 50 Ohms | 1000 Watts average @ +25° C Derated linearly to 100 Watts @ +100° C | 125 Watts @ +25° C | 4000 Watts | -55° C to +100° C |



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