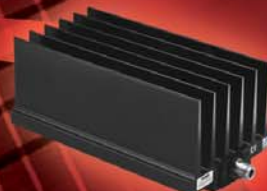


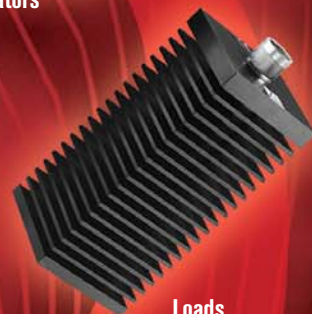


RF & Microwave Components

DC-18 GHz
0.5-2000 Watts



Attenuators



Loads



Signal Samplers



Filters



Directional Couplers



Dividers/Combiners



Design to Order



RF Measurement and Management in Your World

RF Measurement and Management in Your World

Our Bird Components product line consists of standard and custom components for RF and Microwave Applications. Bird manufactures a broad spectrum of load devices from one half watt to over one hundred kilowatts. Our resistive product portfolio includes air, water-cooled, oil dielectric, convection-cooled, and conduction-cooled loads. We also provide rugged, reliable and quality solutions for high power attenuation, programmable attenuation, termination, coupler, and power-divider applications.

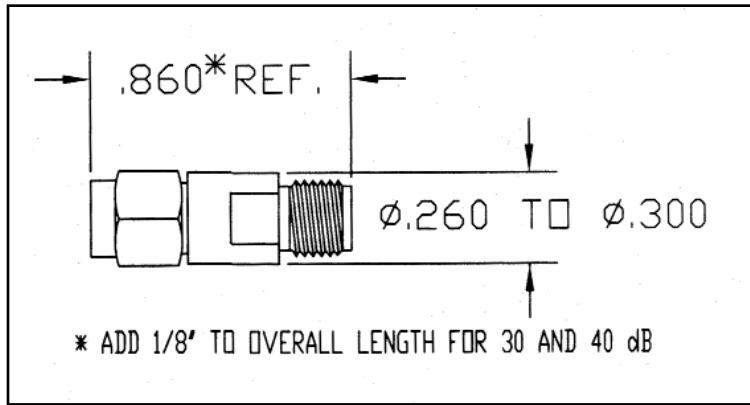
SERVICE

Bird Service Center (BSC) provides a full range of service and support. BSC is an A2LA Accredited Laboratory which provides a full range of service and support for your Bird Products and non-Bird products.

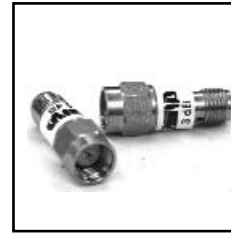


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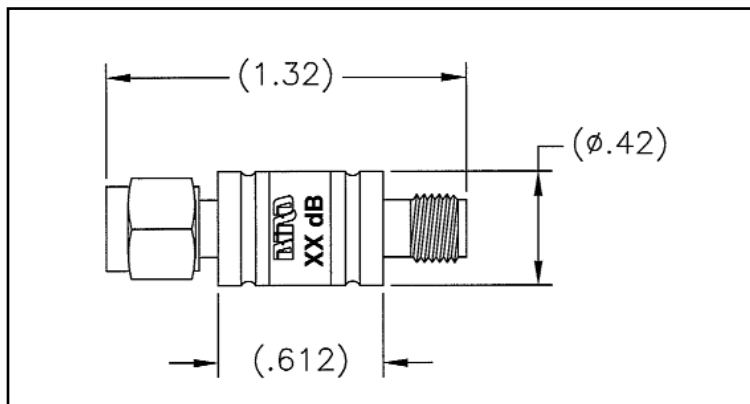
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**0.5-A-MFA Tenuline®
RF Coaxial Attenuator**
0.5 Watt, Bi-Directional, Convection-Cooled,
High Frequency - SMA Male/Female



Model Number	0.5-A-MFA Tenuline® RF Coaxial Attenuator
Power Rating	0.5 Watt Max. @ 25 °C
Attenuator Operation	Bi-directional, 1, 2, 3, 6, 10, 20 & 30 dB Standard Values
Connector	SMA (Male and Female)
Frequency Range and VSWR	DC to 2 GHz at 1.10:1 max, 2 GHz to 4 GHz at 1.15:1 max, 4 GHz to 8 GHz at 1.20:1 max, 8 GHz to 12.4 GHz at 1.25:1 max, 12.4 GHz to 18 GHz at 1.35:1
Operating Temp.	-55 °C to +125 °C
Coolant	Dry (Convection cooled)
Finish	Stainless Steel
Nominal Size	0.860" L x 0.30" Dia., (21.9 mm x 7.7 mm) except 0.985" L (25.1 mm) for 30 dB model
Weight	0.2 oz. (5.2 g)
Impedance	50 Ohms Nominal



**2-A Series Tenuline®
RF Coaxial Attenuator**
2 Watt, Bi-Directional,
Convection-Cooled - N, BNC,
TNC. SMA Male/Female

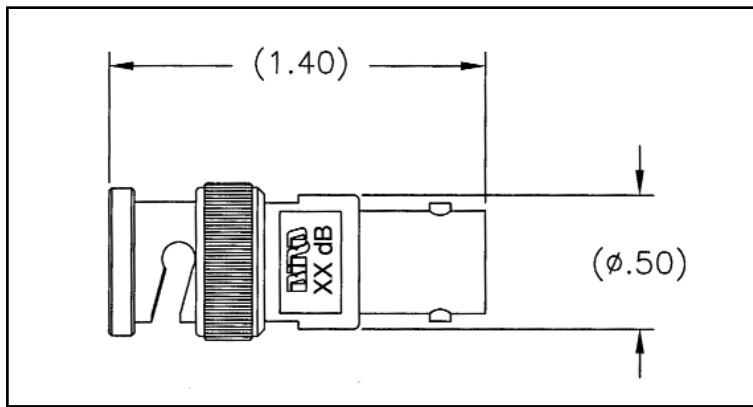


Model Number	2-A Series Tenuline® RF Coaxial Attenuator
Finish	Silver or Tri-alloy plated, except Nickel plate for BNC
Weight	3.1 oz. (88 g)
Nominal Size	(with N-type connectors): 2.2" L x 0.8" Dia., (55.9 mm x 20.4 mm)
Ambient Temperature Range	-40 °C to +40 °C
Connector	N, BNC, TNC. SMA Male/Female
Power Rating	2 W max. @ 40 °C, 2.4 W max @ 25 °C
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 4 GHz at 1.25:1 max.
Attenuator Operation	Bi-directional, 1 thru 6, 10, 20 & 30 dB Standard Values
Operating Position	Any

POWER ATTENUATION

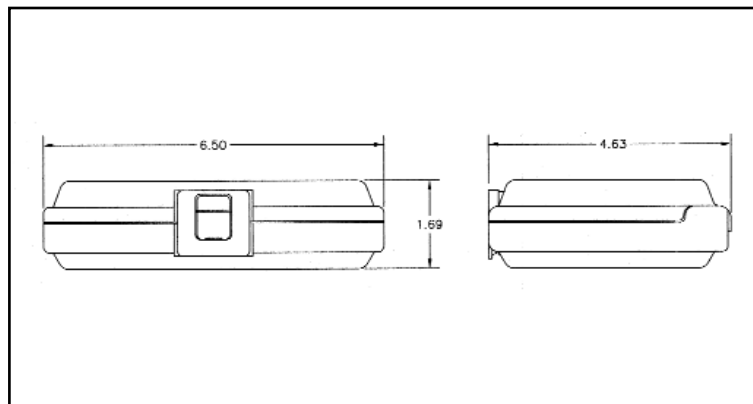
3-A-MFB-XX Series Tenuline® RF Coaxial Attenuators

3 Watt, Bi-Directional, Convection-Cooled -
BNC, TNC Male/Female

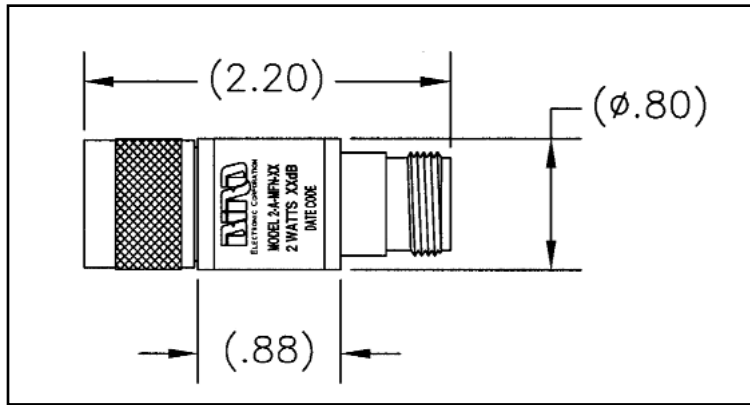


Model Number	3-A-MFB-XX Series Tenuline® RF Coaxial Attenuators
Coolant	Dry (Convection Cooled)
Operating Position	Any
Power Rating	3 Watts
Attenuator Operation	Bi-directional, 1 thru 6, 10, 20 & 30 dB Standard Values
Ambient Temperature Range	-40 °C to +40 °C
Nominal Size	1.4" L x .50" Dia. (35.56 mm x 12.7 mm)
Finish	Silver or Tri-alloy plated
Impedance	50 ohms, nominal
Connector	BNC, TNC Male/Female
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 4 GHz at 1.25:1 max.

3-A-MFB-K1 Attenuator Kit BNC Attenuator Kit



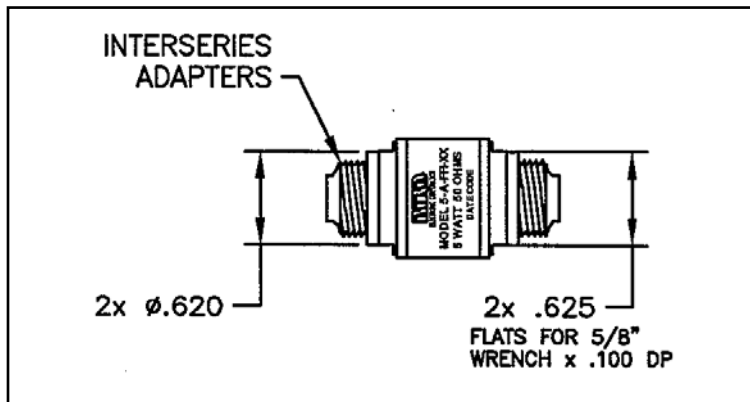
Model Number	3-A-MFB-K1 Attenuator Kit
Attenuator Operation	Bi-directional, Kit includes 1 each 3, 6, 10 & 20dB 3-A-MFB Series Attenuators
Frequency Range	DC to 4 GHz
Dimensions	6.50"W x 1.69"H x 4.63"D (165.1 mm x 42.93 mm x 117.6 mm)
Weight	8 oz. (227 g)
Case Material	Blow-Molded Plastic with Latch and Die-Cut Foam Insert



**5-A Series Teneline®
RF Coaxial Attenuator**
5 Watt, Bi-Directional,
Convection-Cooled - N, BNC, TNC
Male/Female



Model Number	5-A Series Teneline® RF Coaxial Attenuator
Operating Position	Any
Power Rating	5 Watts Continuous
Frequency Range and VSWR	DC to 1GHz@1.10:1 Max., 1GHz to 4 GHz @ 1.25:1 Max.
Attenuator Operation	Bi-directional, 1 thru 6, 10, 20 & 30 dB Standard Values
Ambient Temperature Range	-40 °C to +40 °C
Nominal Size	(with N-type connectors): 2.2" L x 0.8" Dia., (55.9 mm x 20.4 mm)
Weight	3.1 oz. (88 g)
Finish	Silver or Tri-alloy plated
Impedance	50 ohms, nominal
Connector	N, BNC, TNC (Male or Female)



**5-A-FFI-XX Series Teneline®
RF Coaxial Attenuators**
5 Watt, Bi-Directional,
with Interseries Connectors



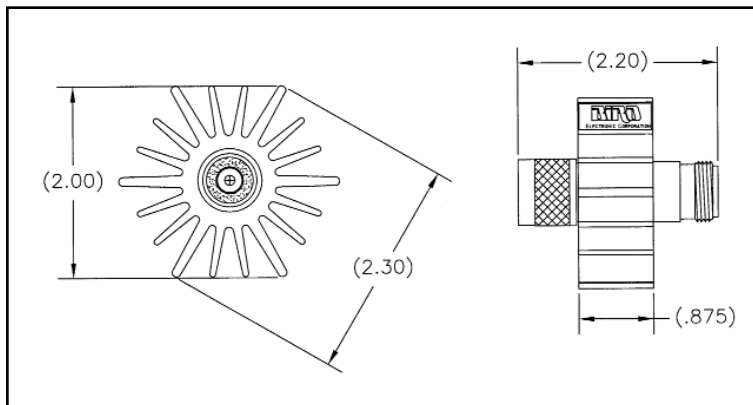
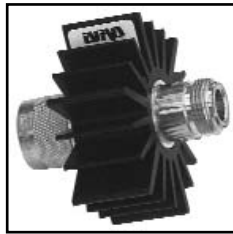
Model Number	5-A-FFI-XX Series Teneline® RF Coaxial Attenuators
Connector	Interchangeable. Use 4240 Interseries Connector Adapter Kits.
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 4 GHz at 1.25:1 max.
Finish	Silver or Tri-alloy plated
Nominal Size	1.60" L x 0.79 Dia. (40.64 mm x 20.07 mm)
Attenuator Operation	Bi-directional, 1 thru 6, 10, 20 & 30 dB Standard Values
Ambient Temperature Range	-40 °C to +40 °C
Weight	6.2 oz. (177 g)
Coolant	Dry (Convection Cooled)
Operating Position	Any
Power Rating	5 Watts

POWER ATTENUATION

10-A Series Tenuline®

RF Coaxial Attenuators

10 Watt, Bi-Directional, Convection-Cooled - SMA, N, BNC, TNC Male/Female

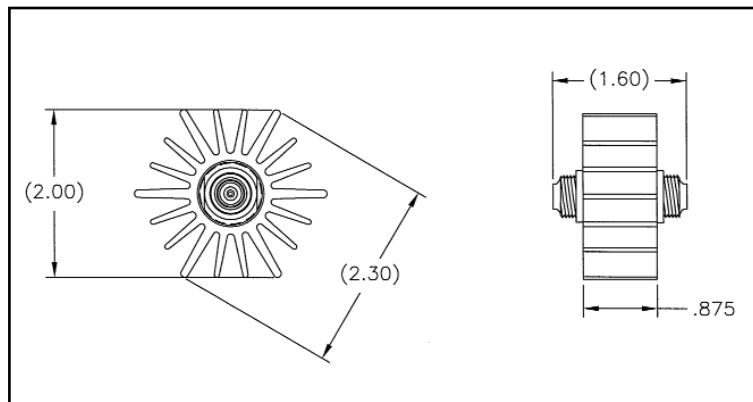


Model Number	10-A Series Tenuline® RF Coaxial Attenuators
Weight	6.2 oz. (177 g)
Frequency Range and VSWR	DC to 1GHz, 1 to 4 GHz 1 GHz to 4 GHz at 1.25:1 max.
Operating Position	Any
Coolant	Dry (Convection-cooled)
Power Rating	10 Watts
Attenuator Operation	Bi-directional, 1 thru 6, 10, 20 & 30 dB Standard Values
Ambient Temperature Range	-40 °C to +40 °C
Connector	SMA, N, BNC, TNC (Male or Female)
Impedance	50 ohms, nominal
Finish	Black anodized. Silver or Tri-alloy plated connectors
Nominal Size	(with N-type connectors): 2.2" L x 2.3" Dia., (66.1 mm x 58.5 mm)

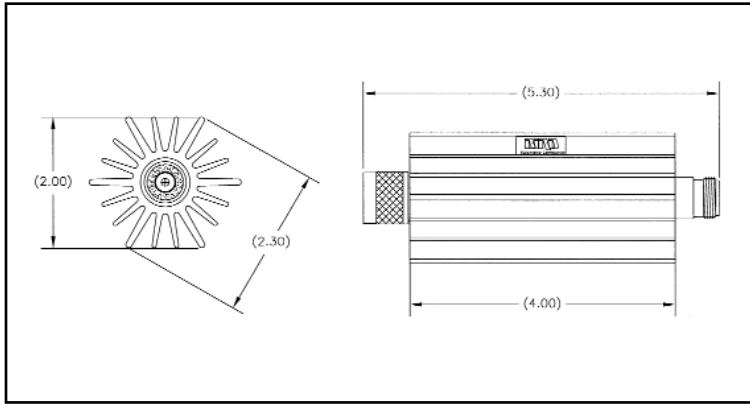
10-A-FFI-XX Series Tenuline®

RF Coaxial Attenuators

10 Watt, Convection Cooled - with Interseries Connector Adapters

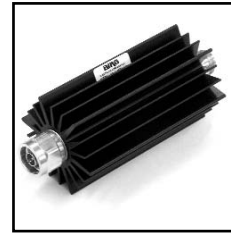


Model Number	10-A-FFI-XX Series Tenuline® RF Coaxial Attenuators
Ambient Temperature Range	-40 °C to +40 °C
Connector	Interchangeable. Use 4240 Interseries Connector Adapter Kits.
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max, 1 GHz to 4 GHz at 1.25:1 max.
Finish	Black anodized. Silver or Tri-alloy plated connectors
Nominal Size	1.600" L x 2.3" Dia.
Weight	6.2 oz. (177 g)
Attenuator Operation	Bi-directional, 1 thru 6, 10, 20 & 30 dB Standard Values
Operating Position	Any
Coolant	Dry (Convection Cooled)
Dimensions	1.60"L x 2.30" Dia. (40.64 mm x 58.42 mm)
Power Rating	10 Watts @ 40 °C (12 Watts @ 25 °C)

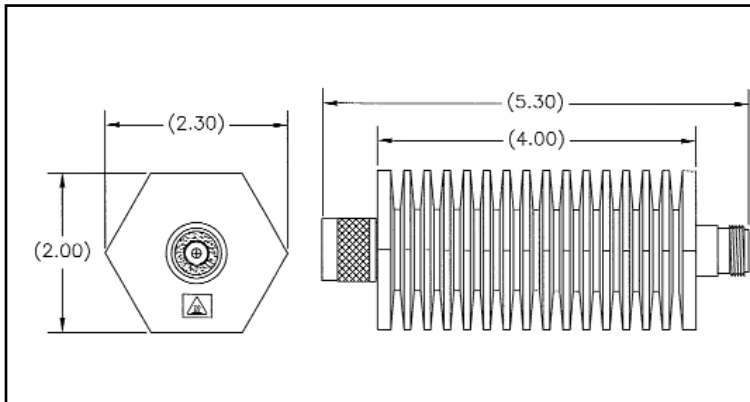


**25-A Series Tenuline®
RF Coaxial Attenuators**

25 Watt, Bi-Directional, Convection-Cooled - N, BNC, TNC, SMA, 7/16 DIN Male/Female

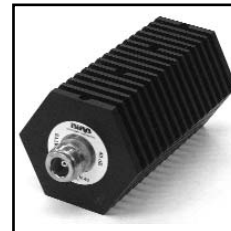


Model Number	25-A Series Tenuline® RF Coaxial Attenuators
Coolant	Dry (Convection-cooled)
Operating Position	Any
Power Rating	25 Watts
Attenuator Operation	Bi-directional, 3, 6, 10, 20 & 30 dB Standard Values
Ambient Temperature Range	-40 °C to +40 °C
Nominal Size	(with N-type connectors): 5.3" L x 2.3" Dia., (134.7 mm x 58.5 mm)
Weight	9 oz. (373.4 g)
Finish	Black anodized. Silver or Tri-alloy plated connectors
Impedance	50 ohms, nominal
Connector	N, BNC, TNC, SMA, 7/16 DIN Male/Female
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 4 GHz at 1.25:1 max.



**50-A Series Tenuline®
RF Coaxial Attenuator**

50 Watt, Bi-Directional, Convection-Cooled - N, BNC, TNC, SMA, 7/16 DIN Male/Female



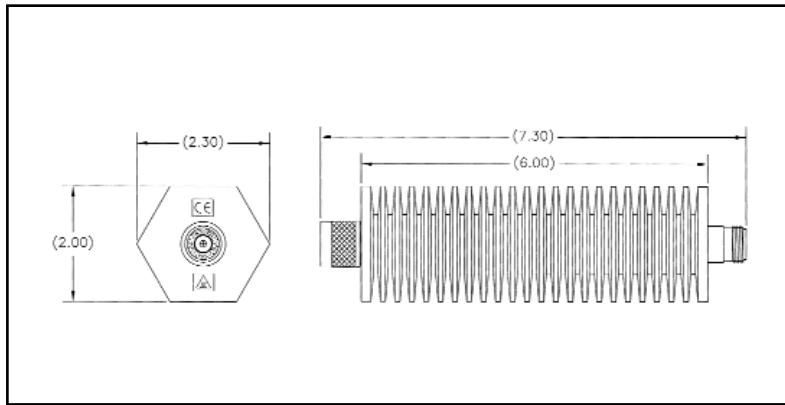
Model Number	50-A Series Tenuline® RF Coaxial Attenuator
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.
Connector	N, BNC, TNC, SMA, 7/16 DIN Male/Female
Impedance	50 ohms, nominal
Finish	Black anodized. Silver or Tri-alloy plated connectors
Weight	1.25 lbs. (0.57 kg)
Nominal Size	5.3" L x 2.3" Dia., (134.7 mm x 58.5 mm)
Ambient Temperature Range	-40 °C to +40 °C
Attenuator Operation	Bi-directional, 3, 6, 10, 20 & 30 dB Standard Values
Power Rating	50 Watts
Operating Position	Any

POWER ATTENUATION

75-A Series Tenuline®

RF Coaxial Attenuators

75 Watt, Bi-Directional, Convection-Cooled -
N, BNC, SMA, 7/16 DIN Male/Female

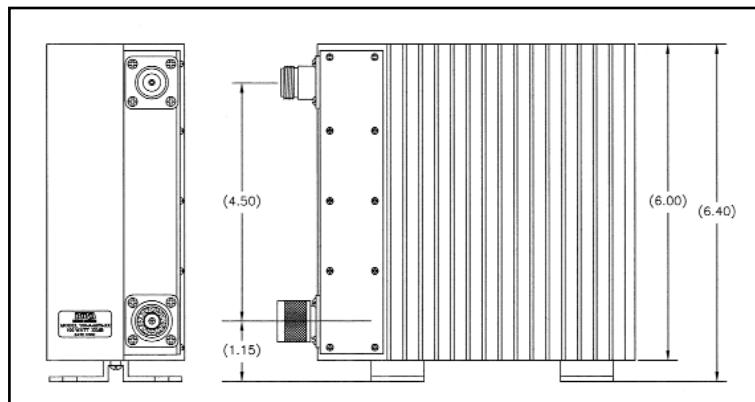


Model Number	75-A Series Tenuline® RF Coaxial Attenuators
Operating Position	Any
Power Rating	75 Watts
Attenuator Operation	Bi-directional, 3, 6, 10, 20 & 30 dB Standard Values
Ambient Temperature Range	-40 °C to +40 °C
Nominal Size	7.3" L x 2.3" D (186 x 59mm)
Weight	1.6 lbs. (0.73 kg)
Finish	Black anodized. Silver or Tri-alloy plated connectors
Impedance	50 ohms, nominal
Connector	N, BNC, SMA, 7/16 DIN Male/Female
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.

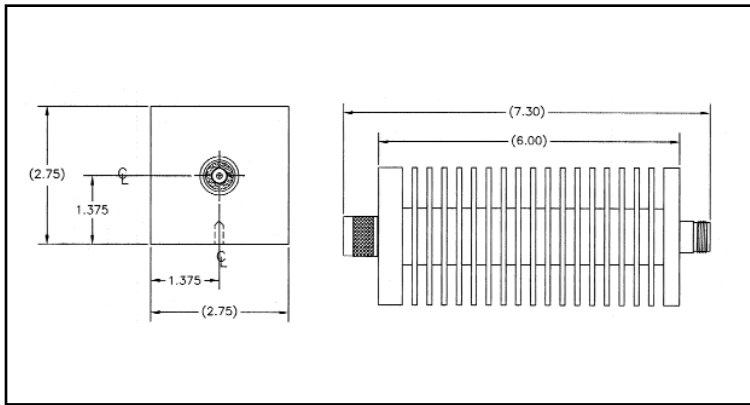
100-A Series Tenuline®

RF Coaxial Attenuators

100 Watt, Bi-Directional, Convection-Cooled -
N, BNC, TNC, 7/16 DIN Male/Female



Model Number	100-A Series Tenuline® RF Coaxial Attenuators
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.
Connector	N, BNC, TNC, 7/16 DIN Male/Female
Impedance	50 ohms, nominal
Finish	Black anodized. Silver or Tri-alloy plated connectors
Weight	4.3 lbs. (1.95 kg)
Nominal Size	6.4" H x 2.6" W x 6.8" D (163 x 66 x 173mm)
Ambient Temperature Range	-40 °C to +40 °C
Attenuator Operation	Bi-directional, 3, 6, 10, 20 & 30 dB Standard Values
Power Rating	100 Watts
Operating Position	Vertical

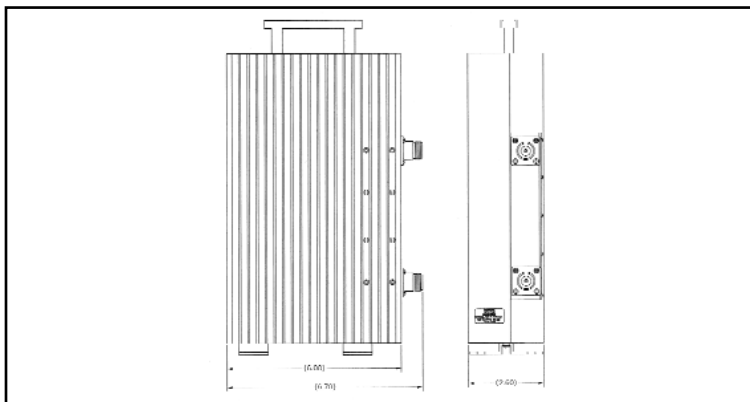


100-SA Series Tenuline® RF Coaxial Attenuators

100 Watt, Bi-Directional, Convection-Cooled -
N, BNC, TNC , 7/16 DIN Male/Female



Model Number	100-SA Series Tenuline® RF Coaxial Attenuators	
Operating Position	Fin Vertical	
Power Rating	100 Watts	
Attenuator Operation	Bi-directional, 3, 6, 10, 20 & 30 dB Standard Values	
Ambient Temperature Range	-40 °C to +40 °C	
Nominal Size	7.3" H x 2.75" W x 2.75" D (193 x 70 x 70mm)	
Weight	2.82 lbs. (1.29 kg)	
Finish	Black anodized. Silver or Tri-alloy plated connectors	
Impedance	50 ohms, nominal	
Connector	N, BNC, TNC , 7/16 DIN Male/Female	
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.	



150-A Series Tenuline® RF Coaxial Attenuators

150 Watt, Bi-Directional, Convection-Cooled -
N, BNC, TNC, 7/16 Male/Female

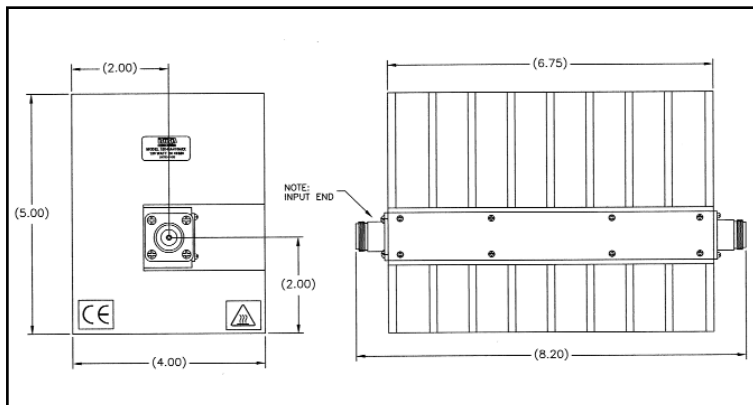
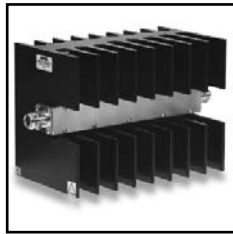


Model Number	150-A Series Tenuline® RF Coaxial Attenuators	
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.	
Connector	N, BNC, TNC, 7/16 Male/Female	
Impedance	50 ohms, nominal	
Finish	Black anodized. Silver or Tri-alloy plated connectors	
Weight	6.5 lbs. (2.95 kg)	
Nominal Size	11.9" H x 2.6" W x 6.8" D (302 x 66 x 173mm)	
Ambient Temperature Range	-40 °C to +40 °C	
Attenuator Operation	Bi-directional, 3, 6, 10, 20 & 30 dB Standard Values	
Power Rating	150 Watts	
Operating Position	Vertical	

POWER ATTENUATION

150-SA Series Tenuline® RF Coaxial Attenuators

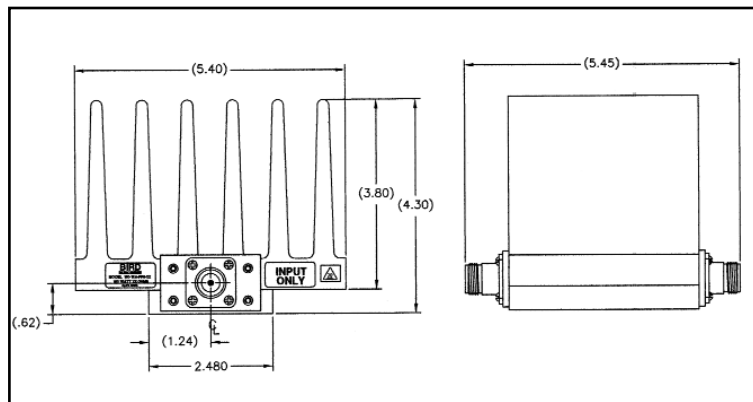
150 Watt, Bi-Directional, Convection-Cooled -
N, BNC, TNC, 7/16 Male/Female



Model Number	150-SA Series Tenuline® RF Coaxial Attenuators
Ambient Temperature Range	-40 °C to +40 °C
Connector	N, BNC, TNC, 7/16 Male/Female
Finish	Black anodized. Silver or Tri-alloy plated connectors
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.
Impedance	50 ohms, nominal
Nominal Size	11.9" H x 2.6" W x 6.8" D (302 x 66 x 173mm)
Operating Position	Vertical
Weight	6.5 lbs. (2.95 kg)
Power Rating	150 Watts
Attenuator Operation	Bi-directional, 3, 6, 10, 20 & 30 dB Standard Values

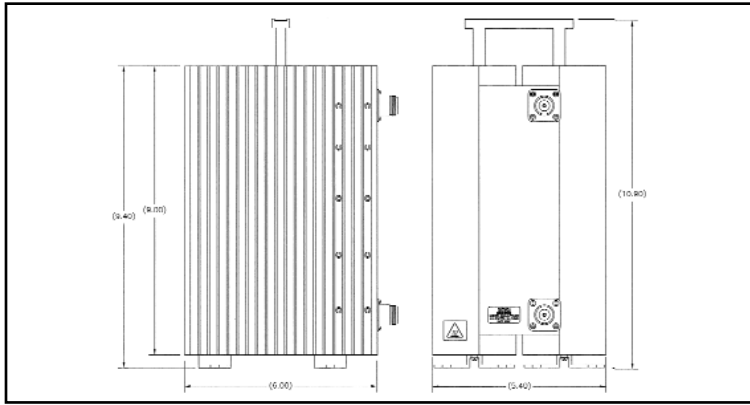
150-WA Series Tenuline® RF Coaxial Attenuators

150 Watt, Uni-Directional, Convection-Cooled -
N, BNC, TNC Male/Female

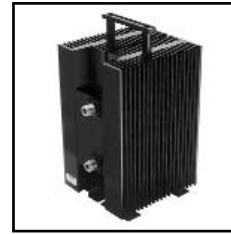


Model Number	150-WA Series Tenuline® RF Coaxial Attenuators
Attenuator Operation	Uni-directional, 3, 6, 10, 20 & 30 dB Standard Values
Power Rating	150 Watts
Operating Position	Vertical
Ambient Temperature Range	-40 °C to +40 °C
Nominal Size	11.9" H x 2.6" W x 6.8" D (302 x 66 x 173mm)
Weight	6.5 lbs. (2.95 kg)
Finish	Black anodized. Silver or Tri-alloy plated connectors
Impedance	50 ohms, nominal
Connector	N, BNC, TNC Male/Female, QC Option
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.

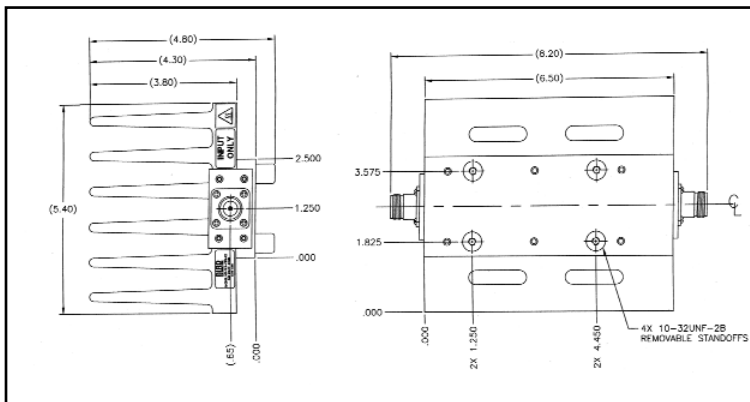
POWER ATTENUATION



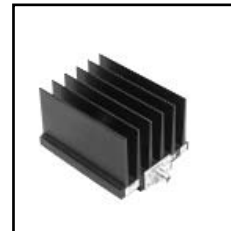
**300-A Series Tenuline®
RF Coaxial Attenuators**
300 Watt, Dual Power, Uni-Directional,
Convection-Cooled - N, TNC, BNC, 7/16
Male/Female



Model Number	300-A Series Tenuline® RF Coaxial Attenuators
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.
Connector	N, TNC, BNC, 7/16 Male/Female
Impedance	50 ohms, nominal
Finish	Black anodized. Silver or Tri-alloy plated connectors
Weight	12 lbs. (5.45 kg)
Nominal Size	10.9" H x 5.3" W x 6.8" D (277 x 137 x 173mm)
Ambient Temperature Range	-40 °C to +40 °C
Operating Position	Vertical
Power Rating	300 Watts
Attenuator Operation	Uni-directional, 3, 6, 10, 20 & 30 dB Standard Values



**300-WA Series Tenuline®
RF Coaxial Attenuators**
300 Watt, Uni-Directional, Convection-Cooled
- N, BNC, TNC, 7/16 DIN Male/Female

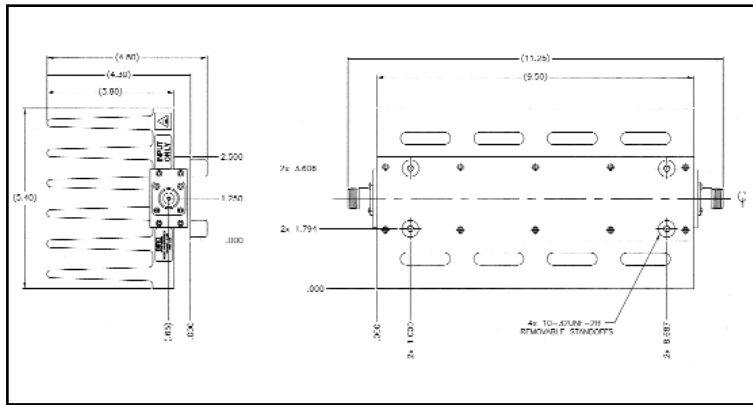
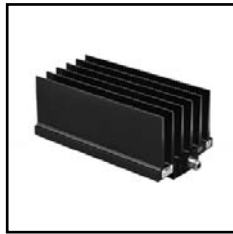


Model Number	300-WA Series Tenuline® RF Coaxial Attenuators
Attenuator Operation	Uni-directional, 3, 6, 10, 20 & 30 dB Standard Values
Power Rating	300 Watts
Operating Position	Any
Ambient Temperature Range	-40 °C to +40 °C
Nominal Size	10.9" H x 5.3" W x 6.8" D (277 x 137 x 173mm)
Weight	12 lbs. (5.45 kg)
Finish	Black anodized. Silver or Tri-alloy plated connectors
Impedance	50 ohms, nominal
Connector	N, BNC, TNC, 7/16 DIN Male/Female, QC Option
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.

POWER ATTENUATION

500-WA Series Tenuline® RF Coaxial Attenuators

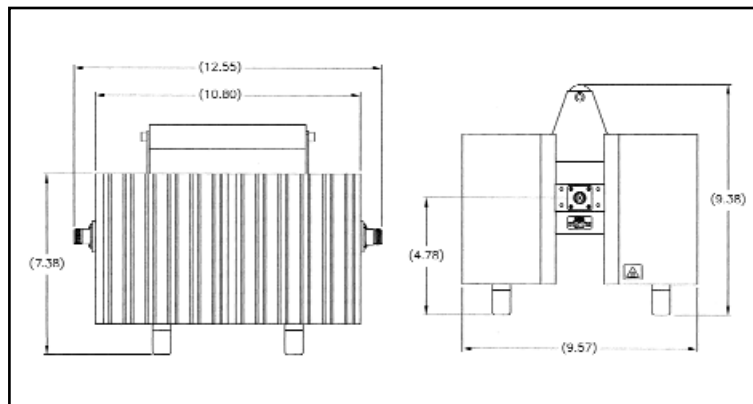
500 Watt, Uni-Directional, Convection-Cooled
- N, BNC, TNC, 7/16 DIN Male/Female



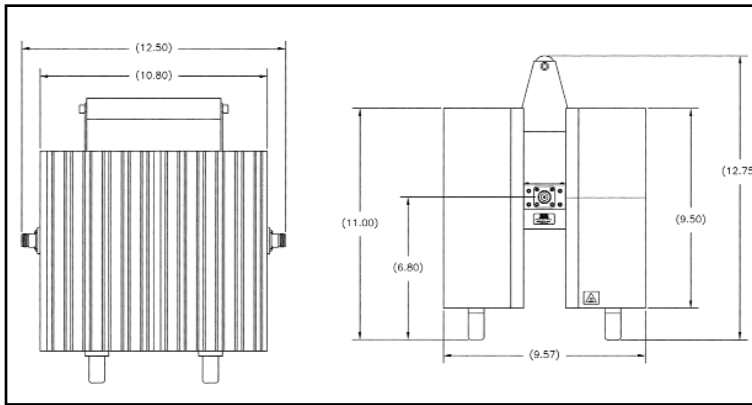
Model Number	500-WA Series Tenuline® RF Coaxial Attenuators
Weight	7.9 lbs. (3.6 kg)
Connector	N, BNC, TNC, 7/16 DIN Male/Female, QC Option
Impedance	50 ohms, nominal
Ambient Temperature	-40 °C to +40 °C
Finish	Black anodized. Silver or Tri-alloy plated connectors
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.5 GHz at 1.25:1 max.
Power Rating	500 Watts
Operating Position	Any, except mounting surface up
Nominal Size	11.25"L x 4.8" H x 5.4" W (285.75 mm x 121.92 mm x 137.16 mm)
Attenuator Operation	Uni-directional, 3, 6, 10, 20 & 30 dB Standard Values

600-A Series Tenuline® RF Coaxial Attenuators

600 Watt, Uni-Directional, Convection-Cooled
- N, BNC, TNC, 7/16 Male/Female



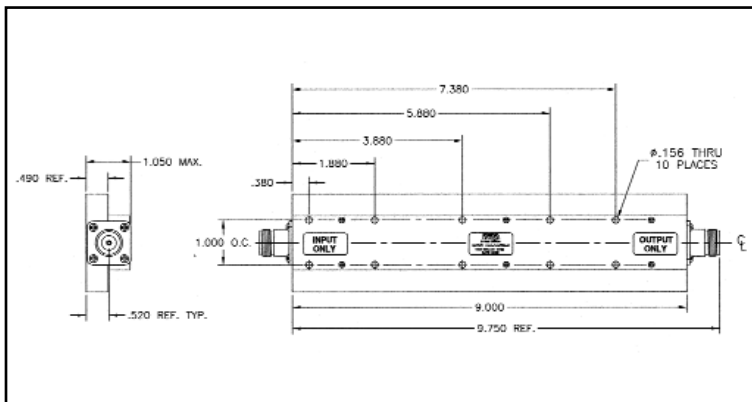
Model Number	600-A Series Tenuline® RF Coaxial Attenuators
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.
Connector	N, BNC, TNC, 7/16 Male/Female, QC Option
Ambient Temperature Range	-40 °C to +40 °C
Finish	Black anodized. Silver or Tri-alloy plated connectors
Power Rating	600 Watts
Nominal Size	12.55"L x 9.38" H x 9.57" W (318.77 mm x 238.25 mm x 243.08 mm)
Impedance	50 ohms, nominal
Attenuator Operation	Uni-directional, 3, 6, 10, 20 & 30 dB Standard Values
Weight	21.5 lbs. (9.75 kg)



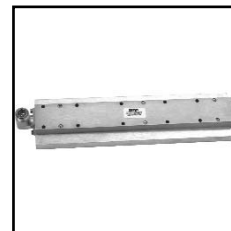
**1000-A Series Tenuline®
RF Coaxial Attenuators**
1000 Watt, Uni-Directional, Convection-Cooled - N, BNC, TNC, 7/16 Male/Female



Model Number	1000-A Series Tenuline® RF Coaxial Attenuators
Attenuator Operation	Uni-directional, 3, 6, 10, 20 & 30 dB Standard Values
Weight	26.5 lbs. (12.02 kg)
Impedance	50 ohms, nominal
Nominal Size	12.50"L x 12.75" H x 9.57" W (317.5 mm x 323.85 mm x 243.08 mm)
Power Rating	1000 Watts
Connector	N, BNC, TNC, 7/16 Male/Female, QC Option
Finish	Black anodized. Silver or Tri-alloy plated connectors
Ambient Temperature Range	-40 °C to +40 °C
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.



**1000-CA Series Tenuline®
RF Coaxial Attenuators**
1000 Watt, Convection-Cooled Dry - N, SMA & 7/16 DIN Male/Female

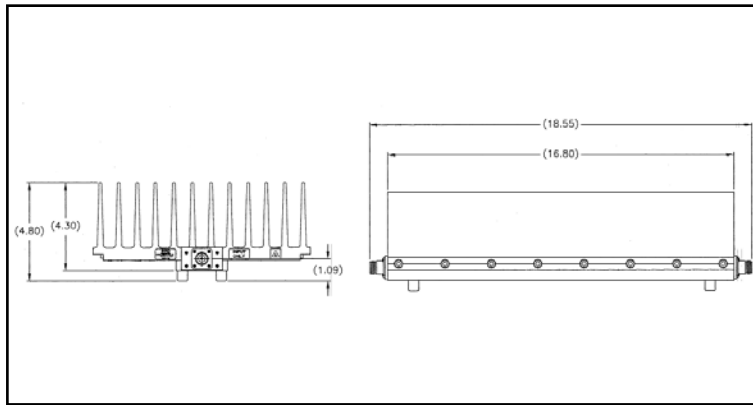
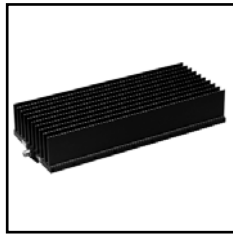


Model Number	1000-CA Series Tenuline® RF Coaxial Attenuators
Power Rating	1000 Watts
Attenuator Operation	Uni-directional, 20, 30 & 40dB Standard Values
Connector	N, SMA & 7/16 DIN Male/Female
Coolant	Dry (Convection cooled), must be mounted to heat sink capable of maintaining 100 °C case temperature at 1 kW average input power
Finish	Silver plated base, irradiated cover
Frequency Range and VSWR	470 - 860 MHz, DC to 1.2 GHz at 1.20:1 max
Nominal Size	10.5"L x 1.05" H x 2.25" W (266.7 mm x 26.67 mm x 57.15 mm)
Operating Position	Any

POWER ATTENUATION

1000-WA Series Tenuline® RF Coaxial Attenuators

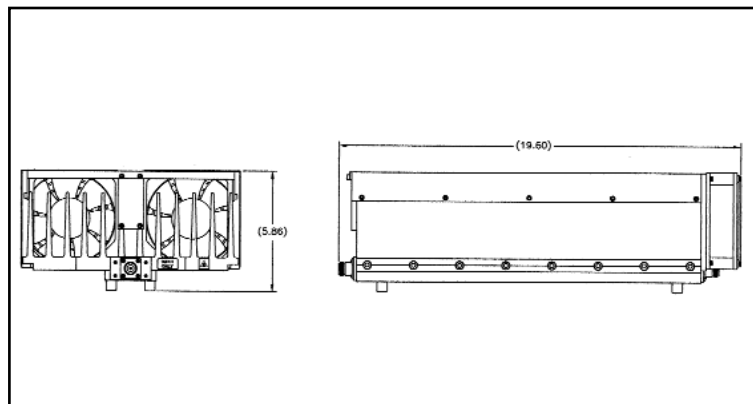
1000 Watt, Uni-Directional, Convection-Cooled - N, TNC, 7/16 DIN Male/Female



Model Number	1000-WA Series Tenuline® RF Coaxial Attenuators
Power Rating	1000 Watts
Connector	N, TNC, 7/16 DIN Male/Female
Coolant	Dry (Convection cooled)
Operating Position	Any, except mounting surface up
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max, 1 GHz to 2.4 GHz at 1.25:1 max
Attenuator Operation	Uni-directional, 3, 6, 10, 20 & 30dB Standard Values
Finish	Black anodized. Silver or Tri-alloy plated connectors
Nominal Size	(with femal N connector; excludes removable feet), 18.65" L x 10.53" W x 4.9" H (587.6 x 229.4 x 137.2 mm)
4 Mounting Holes, Centers and Size	1.885" x 14.40", typical 1/4-20 thread x 0.5"D
Weight	Approximately 26.5 lbs. (12.1 kg)

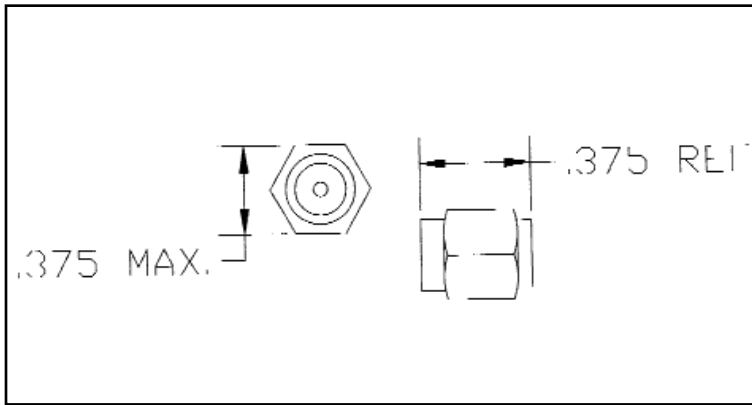
1500-WA Series Tenuline® RF Coaxial Attenuators

1500 Watt, Uni-Directional, Convection-Cooled - N, 7/16 DIN Male/Female



Model Number	1500-WA Series Tenuline® RF Coaxial Attenuators
Finish	Aluminum, Black Anodized
Note:	AC Power adapter included
Cooling Method	Convective, Forced Air
Frequency Range	DC to 2.4 GHz
Impedance	50 Ohms Nominal
Nominal Size	19.65" x 5.97" x 10.63" (499.11 mm x 151.64 mm x 270.00 mm)
Operating Position	Vertically
VSWR	DC to 1 GHz 2 1.10:1 max. (1 -2.4 GHz @ 1.25:1 max.)
Weight	30 lbs. (13.61 kg)
Power Rating	1500 Watts ave. 4 kW Peak
Connector	N, 7/16 DIN Male/Female
Attenuator Operation	Uni-directional, 3, 6, 10, 20 & 30dB Standard Values

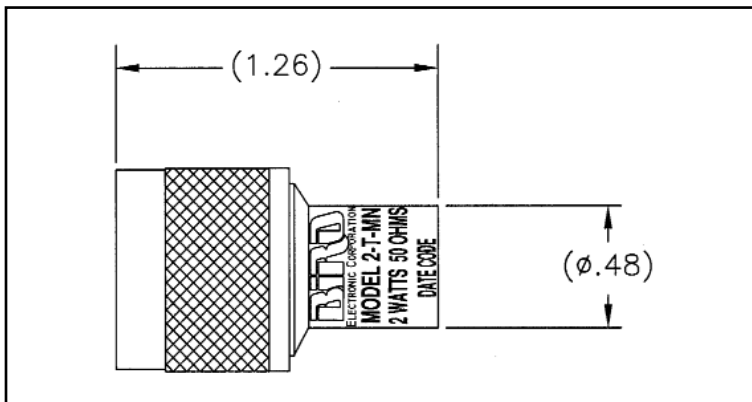
POWER TERMINATIONS AND LOADS



**0.5-T Series Termline®
RF Coaxial Terminations**
0.5 Watt, Convection-Cooled,
High Frequency - SMA



Model Number	0.5-T Series Termline® RF Coaxial Terminations
Impedance	50 Ohms
Power Rating	0.5 Watts Max. @ 25 ° C
Operating Temperature	-55 ° C to +100 ° C
Frequency Range and VSWR	DC-12 GHz on -A version, DC-18 GHz on -A version, both at 1.25:1 VSWR Max
Finish	Stainless Steel
Connector	SMA
Nominal Size	0.375"L x 0.375" Dia (9.53 mm x 9.53 mm)



**2-T Series Termline®
RF Coaxial Terminations**
2 Watt, Convection-Cooled - N,
BNC, TNC, 7/16



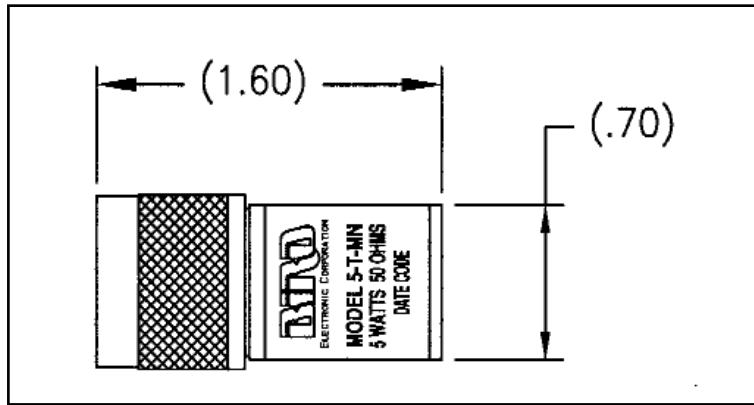
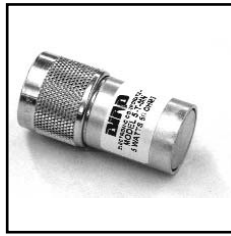
Model Number	2-T Series Termline® RF Coaxial Terminations
Power Rating	2 Watts
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max, 1 GHz to 6 GHz at 1.25:1 max. (N type), 1 GHz at 4 GHz at 1.25:1 max. (BNC and TNC)
Connector	N, BNC, TNC, 7/16
Ambient Temperature	-40 ° to +40 ° C
Operating Position	Any
Coolant	Dry (Convection cooled)
Finish	Silver or Tri-alloy plated
Nominal Size	(with Male N-type connector): 1.6" L x 0.8" Dia., (40.7 mm x 20.4 mm)
Weight	1.9 oz. (55 g)

POWER TERMINATIONS AND LOADS

5-T Series Termaline®

RF Coaxial Terminations

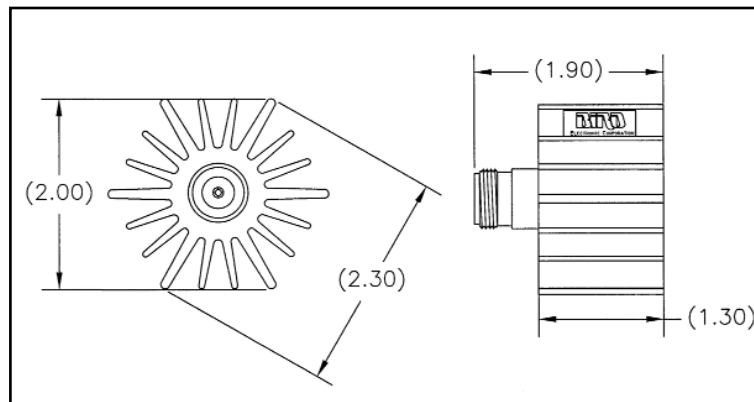
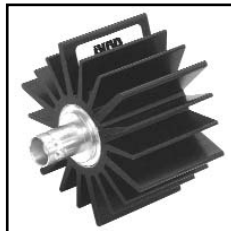
5 Watt, Convection-Cooled - N, BNC, TNC



Model Number	5-T Series Termaline® RF Coaxial Terminations
Power Rating	5 Watts
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max, 1 GHz to 6 GHz at 1.25:1 max. (N type), 1 GHz to 4 GHz at 1.25:1 max. (BNC and TNC)
Connector	N, BNC, TNC
Ambient Temperature	-40 °C to +40 °C
Operating Position	Any
Coolant	Dry (Convection cooled)
Finish	Silver or Tri-alloy plated
Nominal Size	(with Male N-type connector): 1.6" L x 0.8" Dia., (40.7 mm x 20.4 mm)
Weight	1.9 oz. (55 g)

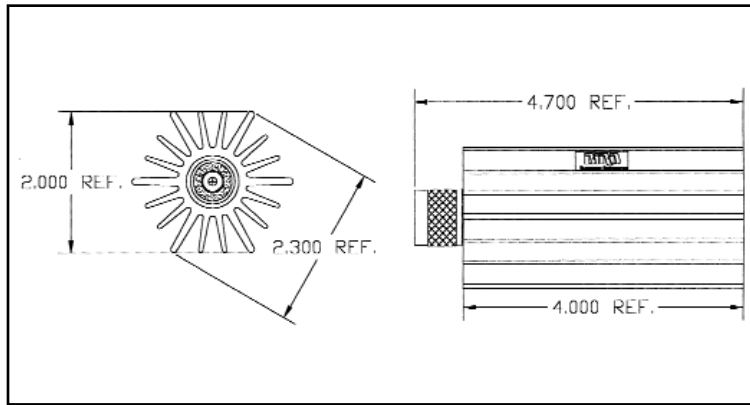
10-T Series Termaline® RF Coaxial Terminations

10 Watt, Convection-Cooled Dry - N, BNC, TNC, SMA, 7/16 DIN

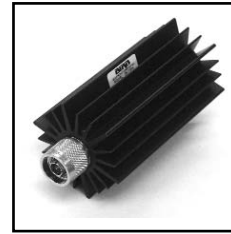


Model Number	10-T Series Termaline® RF Coaxial Terminations
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max, 1 GHz to 4 GHz at 1.25:1 max.
Connector	N, BNC, TNC, SMA, 7/16 DIN
Ambient Temperature	-40 °C to +40 °C
Operating Position	Any
Coolant	Dry (Convection cooled)
Finish	Black anodized. Silver or Tri-alloy plated connector
Nominal Size	(with N-type connector): 2" L x 2.3" Dia., (50.8 mm x 58.5 mm)
Weight	5.1 oz. (146 g)
Power Rating	10 Watts

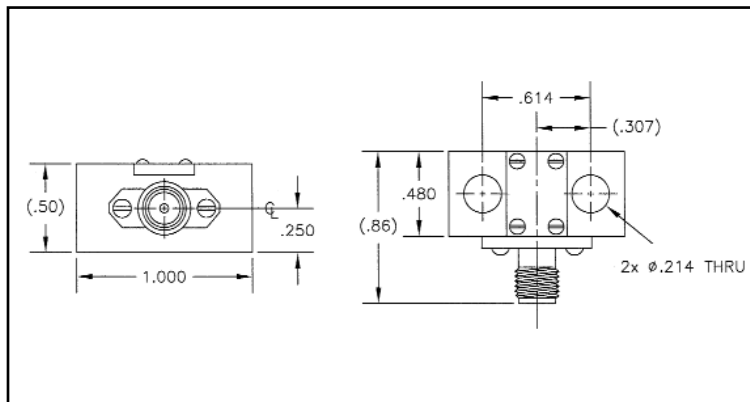
POWER TERMINATIONS AND LOADS



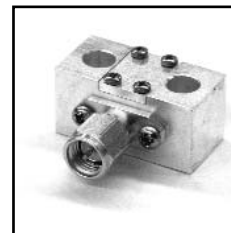
**25-T Series Termline®
RF Coaxial Terminations**
25 Watt, Convection-Cooled Dry - N, BNC,
TNC, SMA, 7/16 DIN



Model Number	25-T Series Termline® RF Coaxial Terminations
Connector	N, BNC, TNC, SMA, 7/16 DIN
Ambient Temperature	-40 °C to +40 °C
Operating Position	Any
Coolant	Dry (Convection cooled)
Finish	Black anodized. Silver or Tri-alloy plated connector
Nominal Size	(with N-type connector): 4.7" L x 2.3: Dia., (119.4mm x 58.5 mm)
Weight	10.07 oz. (305 g)
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 4 GHz at 1.25:1 max
Power Rating	25 Watts



**25-CT Series Termline®
RF Coaxial Terminations**
25 Watt, Conduction-Cooled - SMA, BNC



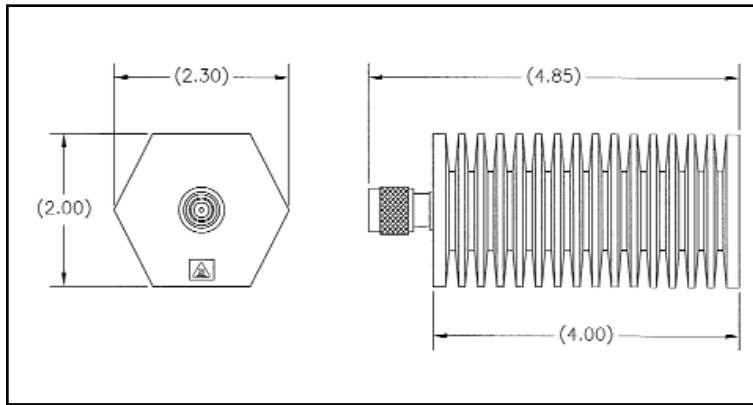
Model Number	25-CT Series Termline® RF Coaxial Terminations
Frequency Range and VSWR	DC to 1 GHz at 1.15:1 max, 1 GHz to 3 GHz at 1.25:1 max.
Power Range	25 W max. @ 100 °C flange temperature, derated to 0 W @ 150 °C
Connector	SMA, BNC
Operating Position	Any
Coolant	Dry (Conduction cooled)
Finish	Silver or Tri-alloy plated
Nominal Size	0.9" L x 1.0" W x 0.5" H, (22.9 mm x 25.4 mm x 12.7 mm)
Base to Connector Center	0.25" (6.4 mm)
Mounting Centers	0.614" (15.6 mm)
Weight	0.4 oz. (11.4 g)

POWER TERMINATIONS AND LOADS

50-T Series Termaline®

RF Coaxial Terminations

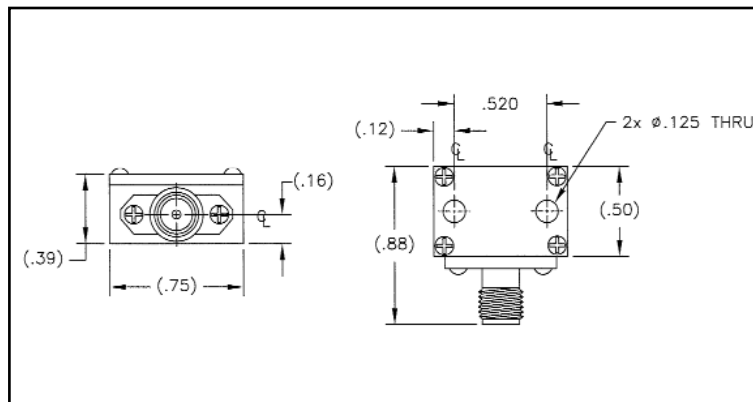
50 Watt, Convection-Cooled Dry - N, BNC, TNC, SMA, 7/16 DIN



Model Number	50-T Series Termaline® RF Coaxial Terminations
Connector	N, BNC, TNC, SMA, 7/16 DIN
Ambient Temperature	-40 °C to +40 °C
Operating Position	Any
Coolant	Dry (convection cooled)
Finish	Black anodized. Silver or Tri-alloy plated connector
Nominal Size	(with N-type connector): 4.7" L x 2.3" Dia., (119.4 mm x 58.50 mm)
Weight	1.13 lbs. (0.52 kg)
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max, 1 GHz to 4 GHz at 1.25:1 max.
Power Range	50 Watts

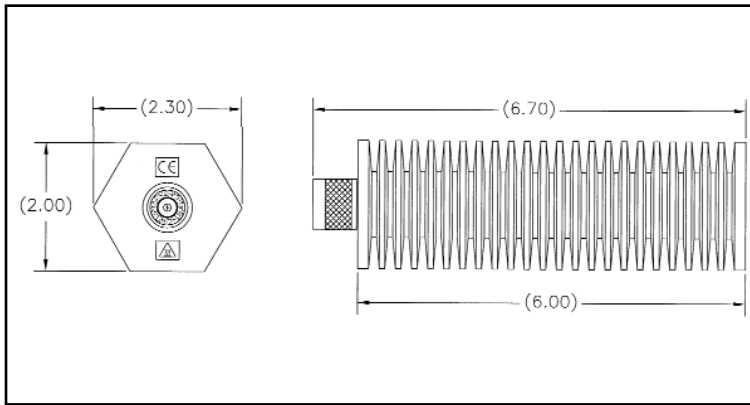
50-CT Series Termaline® RF Coaxial Terminations

50 Watt, Conduction-Cooled - SMA



Model Number	50-CT Series Termaline® RF Coaxial Terminations
Power Rating	50 W max. @ 100 °C flange temperature, derated to 0 W @ 150 °C
Connector	SMA
Operating Position	Any
Coolant	Dry (Conduction cooled)
Finish	Silver or Tri-alloy plated
Nominal Size	0.86" L x 0.75" W 0.39" H, (21.9 mm x 19.2 mm x 10.0 mm)
Base to Connector Center	0.162" (4.12 mm)
Mounting Centers	0.52" (13.3 mm)
Weight	1.1 oz. (31.2 g)
Frequency Range and VSWR	DC to 3 GHz at 1.15:1 max, 3 GHz to 6 GHz at 1.25:1 max.

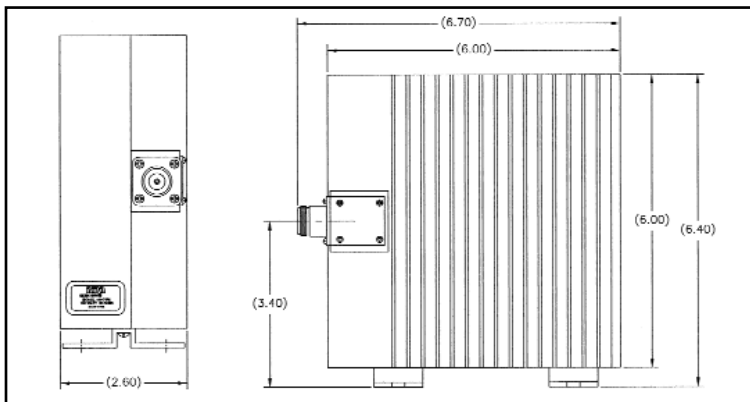
POWER TERMINATIONS AND LOADS



**75-T Series Termaline®
RF Coaxial Terminations**
75 Watt, Convection-Cooled Dry - N,
BNC, TNC, SMA, 7/16 DIN



Model Number	75-T Series Termaline® RF Coaxial Terminations
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max, 1 GHz to 4 GHz at 1.25:1 max.
Connector	N, BNC, TNC, SMA, 7/16 DIN
Ambient Temperature	-40 °C to +40 °C
Operating Position	Any
Coolant	Dry (Convection cooled)
Finish	Black anodized. Silver or Tri-alloy plated connector
Nominal Size	(with N-type connector): 6.7" L x 2.3 Dia., (170.2 mm x 58.5 mm)
Weight	1.32 lbs. (0.6 kg)
Power Rating	75 Watts



**100-T Series Termaline®
RF Coaxial Terminations**
100 Watt, Convection-Cooled Dry - N,
BNC, 7/16 DIN

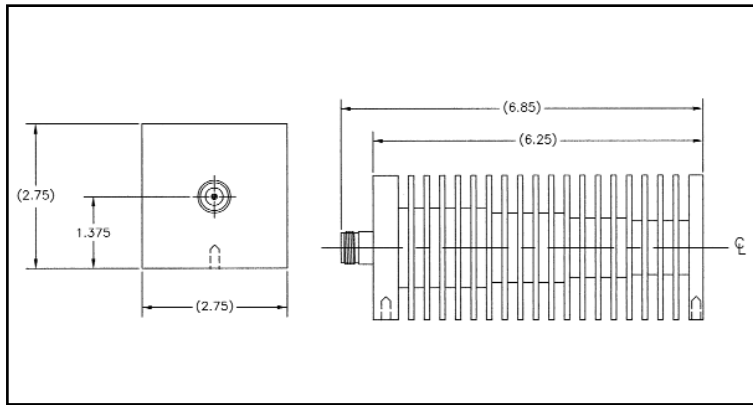


Model Number	100-T Series Termaline® RF Coaxial Terminations
Power Rating	100 Watts
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max, 1 GHz to 2.4 GHz at 1.25:1 max.
Connector	N, BNC, 7/16 DIN
Ambient Temperature	-40 °C to +40 °C
Operating Position	Vertical
Coolant	Dry (Convection cooled)
Finish	Black anodized fins. Silver or Tri-alloy plated connector
Nominal Size	(with N-type connector): 6.4" L x 2.6" W x 7.0" H, (162.6 mm x 66.1 mm x 172.8 mm)
Weight	3.6 lbs. (1.64 kg)

POWER TERMINATIONS AND LOADS

100-ST Series Termaline® RF Coaxial Terminations

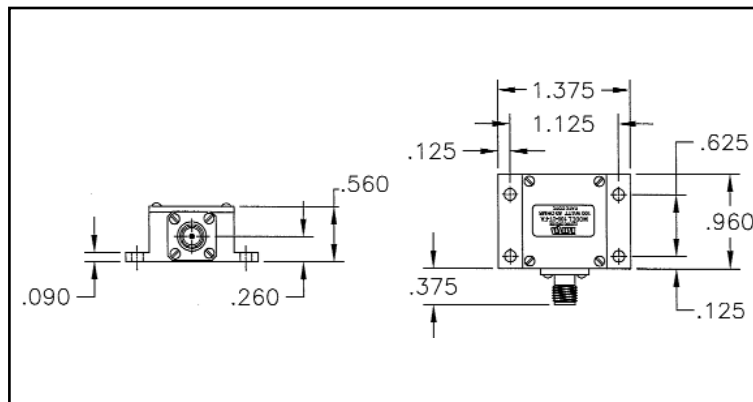
100 Watt, Convection-Cooled Dry - N, TNC,
BNC, 7/16 DIN



Model Number	100-ST Series Termaline® RF Coaxial Terminations
Connector	N, TNC, BNC, 7/16 DIN
Ambient Temperature	-40 °C to +40 °C
Operating Position	Any
Coolant	Dry (Convection cooled)
Finish	Black anodized fins.
Nominal Size	(with N-type connector): 6.95" L x 2.75" W x 2.75" H (174 mm x 69.9 mm x 69.9 mm)
Weight	2.62 lbs. (1.20 kg)
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max, 1 GHz to 4 GHz at 1.25:1 max.
Power Rating	100 Watts

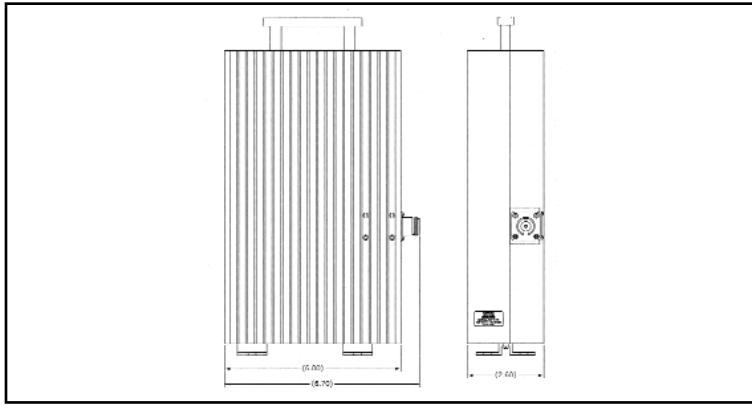
100-CT Series Termaline® RF Coaxial Terminations

100 Watt, Conduction-Cooled - SMA



Model Number	100-CT Series Termaline® RF Coaxial Terminations
Frequency Range and VSWR	DC to 2 GHz at 1.15:1 max, 2 GHz to 3 GHz at 1.25:1 max
Power Rating	100 W max. @ 100 °C flange temperature derated to 0 W at 150 °C
Connector	SMA
Operating Position	Any
Coolant	Dry (Conduction cooled)
Finish	Silver or Tri-alloy plated
Nominal Size	1.34: L x 1.375" W x 0.56" H, (34.1 mm x 35 mm x 14.3 mm)
Mounting Centers	0.625" x 1.125" (15.9 mm x 28.6 mm)
Weight	1.0 oz. (28.4g)

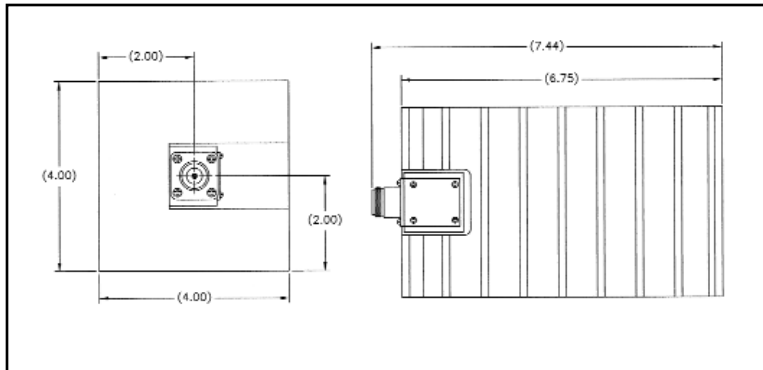
POWER TERMINATIONS AND LOADS



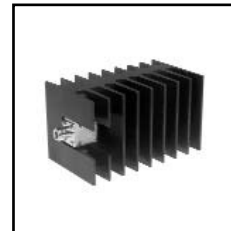
**150-T Series Termline®
RF Coaxial Terminations**
150 Watt, Convection-Cooled Dry - N,
BNC, TNC 7/16 DIN



Model Number	150-T Series Termline® RF Coaxial Terminations
Connector	N, BNC, TNC 7/16 DIN
Ambient Temperature	-40 °C to +40 °C
Operating Position	Vertical
Coolant	Dry (Convection cooled)
Finish	Black anodize. Silver or Tri-alloy plated connector
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max, 1 GHz to 2.4 GHz at 1.25:1 max
Nominal Size	10.9" H x 2.6" W x 6.8" D (276 x 66 x 173mm)
Weight	6.0 lbs. (2.73 kg)
Power Rating	150 Watts



**150-ST Series Termline®
RF Coaxial Terminations**
150 Watt, Convection-Cooled Dry - N, BNC,
TNC, 7/16 DIN

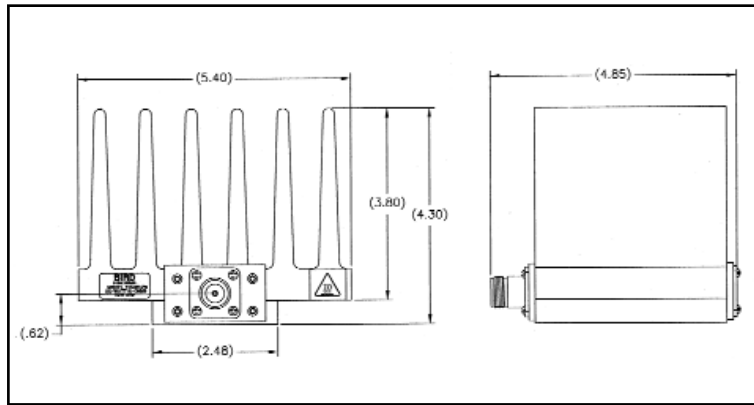


Model Number	150-ST Series Termline® RF Coaxial Terminations
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max, 1 GHz to 2.4 GHz at 1.25:1 max
Connector	N, BNC, TNC, 7/16 DIN
Ambient Temperature	-40 °C to +40 °C
Operating Position	Vertical
Coolant	Dry (Convection cooled)
Finish	Black anodized fins. Silver or Tri-alloy plated connector
Nominal Size	6.75" L x 4.0" W x 4.0" H (171.45 mm x 101.6 mm x 101.6 mm)
Weight	5.0 lbs. (2.30 kg)

POWER TERMINATIONS AND LOADS

150-WT Series Termaline® RF Coaxial Terminations

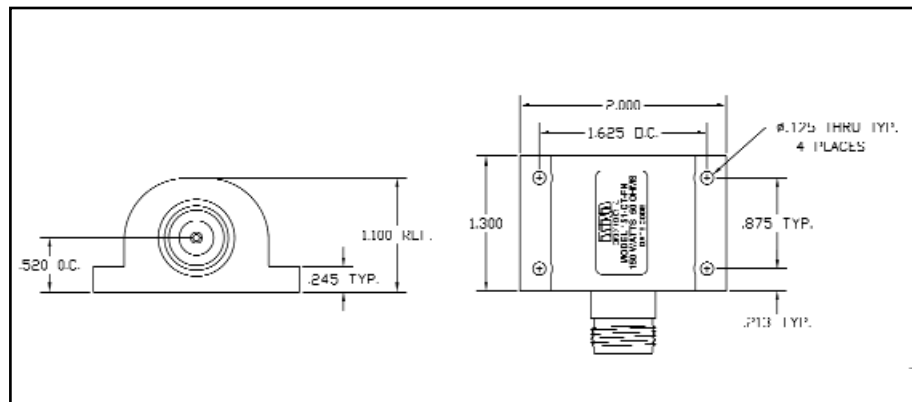
150 Watt, Convection-Cooled Dry - N,
BNC, TNC, 7/16 DIN, QC Option



Model Number	150-WT Series Termaline®RF Coaxial Terminations
Power Rating	150 Watts
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.
Ambient Temperature Range	-40 °C to +40 °C
Finish	Black anodized. Silver or Tri-alloy plated connectors
Connector	N, BNC, TNC, 7/16 DIN, QC Option
Impedance	50 Ohms
Weight	2.5 lbs. (1.13 kg)

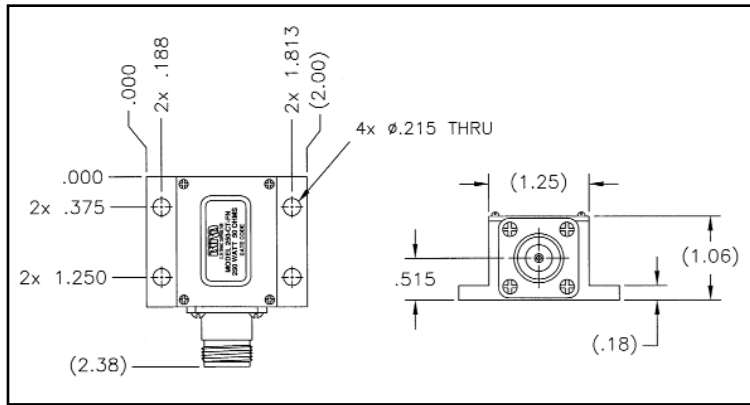
151-CT Series Termaline® RF Coaxial Terminations

150 Watt, Conduction-Cooled -N

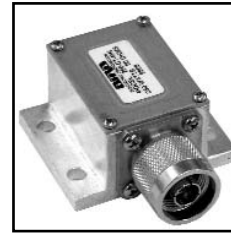


Model Number	151-CT Series Termaline®RF Coaxial Terminations
Base to Connector Center	0.52" (13.21mm)
Connector	N
Coolant	Dry (conduction cooled)
Finish	Aluminum, Yellow Iridite
Frequency Range and VSWR	DC to 1 GHz at 1.1:1 max, 1 GHz to 4 GHz at 1.25:1 max
Mounting Centers	1.625" x 0.875" (41.28mm x 22.23mm)
Nominal Size	(with N connector) 1.9" L x 2.0" W x 1.1" H (48.26mm x 50.8mm x 27.94mm)
Operating Position	Any
Power Rating	150 W max. @ 100 °C flange temperature, derated to 0 W @ 150 °C
Weight	(with N connector) 2.2 oz. (62.5 g)

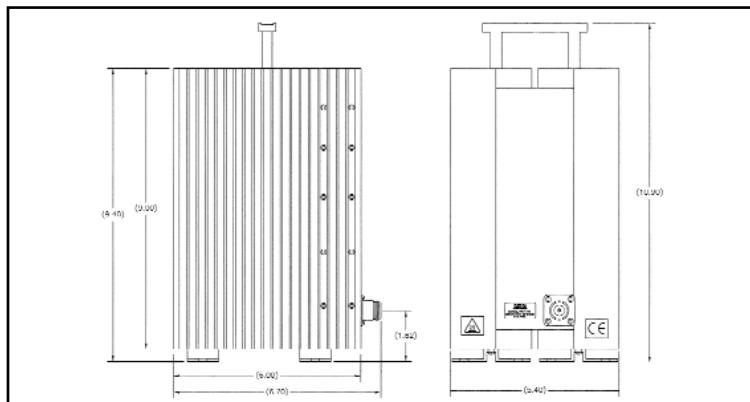
POWER TERMINATIONS AND LOADS



**250-CT Series Termaline®
RF Coaxial Terminations**
250 Watt, Conduction-Cooled - BNC,
N, TNC, SMA



Model Number	250-CT Series Termaline®RF Coaxial Terminations
Frequency Range and VSWR	SMA: DC to 2 GHz at 1.15:1 max, 2 GHz to 3 GHz at 1.25:1 max.; All Others: DC to 1 GHz at 1.15:1 max, 1 GHz to 2.4 GHz at 1.25:1 max
Power Rating	250 W max. @ 100 °C flange temperature, derated to 0 W @ 150 °C
Connector	BNC, N, TNC, SMA
Operating Position	Any
Coolant	Dry (Conduction cooled)
Finish	Silver or Tri-alloy plated
Nominal Size	2.36" L x 2.00" W x 1.062" H, (60.0 mm x 50.8 mm x 27.0 mm)
Mounting Centers	0.875" x 1.625" (22.3 mm x 41.3 mm)
Weight	(with N connector) 5.2 oz. (147.6 g)



**300-T Series Termaline®
RF Coaxial Terminations**
300 Watt, Convection-Cooled Dry - BNC,
N, TNC, 7/16 DIN

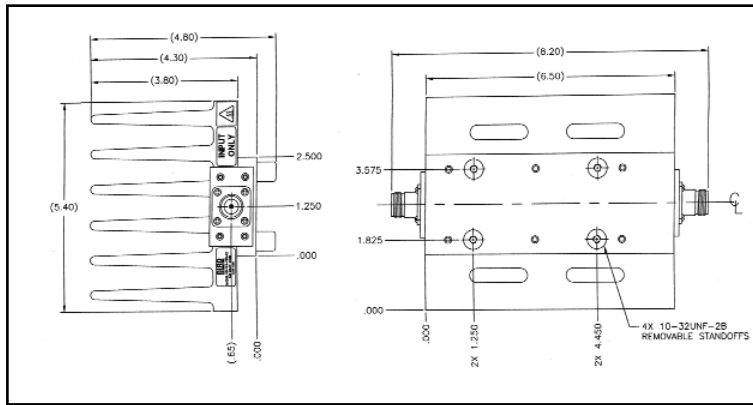
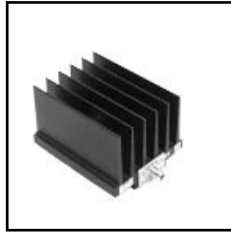


Model Number	300-T Series Termaline®RF Coaxial Terminations
Power Rating	300 Watt
Connector	BNC, N, TNC, IEC 7/16
Ambient Temperature	-40 °C to +40 °C
Operating Position	Vertical
Coolant	Dry (Convection cooled)
Finish	Black anodize. Silver or Tri-alloy plated connector
Nominal Size	(with N-type connector): 10.9" H x 5.4" W x 16.8" D, (276.9 mm x 137.2 mm x 172.8 mm)
Weight	11.5 lbs. (5.23 kg)
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max, 1 GHz to 2.4 GHz at 1.25:1 max.

POWER TERMINATIONS AND LOADS

300-WT Series Termaline® RF Coaxial Terminations

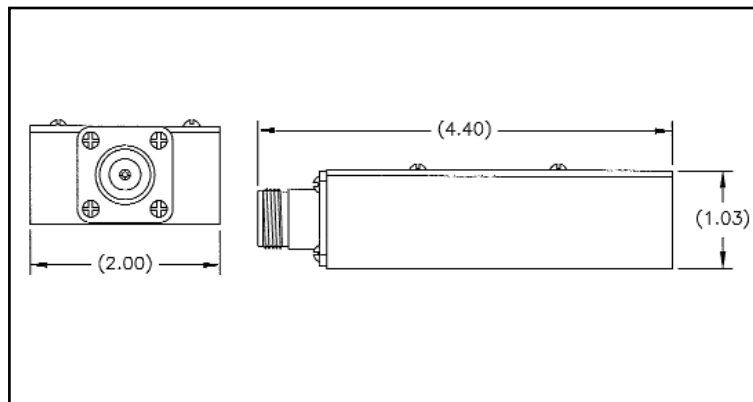
300 Watt, Convection-Cooled Dry - N,
BNC, TNC, 7/16 DIN



Model Number	300-WT Series Termaline® RF Coaxial Terminations
Power Rating	300 Watts
Nominal Size	8.2" L x 5.4" W x 4.8" H (208.28 mm x 137.16 mm x 121.92 mm)
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.
Connector	N, BNC, TNC, 7/16 DIN, QC Option
Finish	Black anodized. Silver or Tri-alloy plated connectors
Ambient Temperature Range	-40 °C to +40 °C
Impedance	50 Ohms
Weight	4.6 lbs. (2.09 kg)

300-CT Series Termaline® RF Coaxial Terminations

300 Watt, Conduction-Cooled - N, TNC,
BNC 7/16 DIN

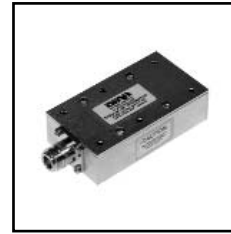
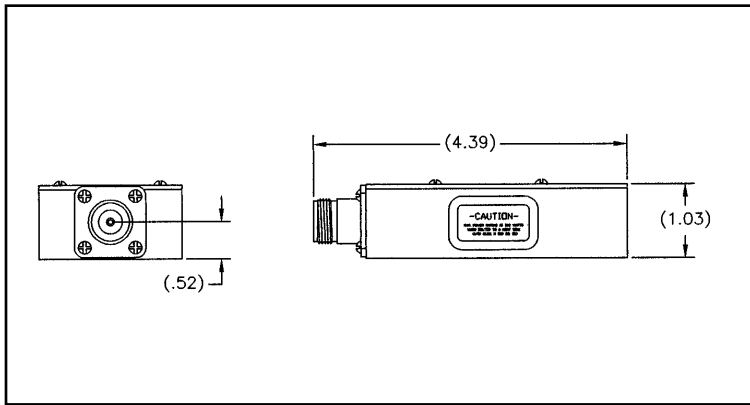


Model Number	300-CT Series Termaline® RF Coaxial Terminations
(includes connectors)	4.4"L x 2.0"W x 1.03"H (111.76 mm x 50.8 mm x 26.16 mm)
Connector	N, TNC, BNC 7/16 DIN
Impedance	50 Ohms
Power Rating	300 Watts avg. - Based on Max. Housing Temp. of 100 °C or less
VSWR	DC to 1GHz @ 1.10:1 max., 1GHz to 2.5 GHz @ 1.25:1 Max.
Finish	Silver Plated
Weight	12 oz. (340 g)

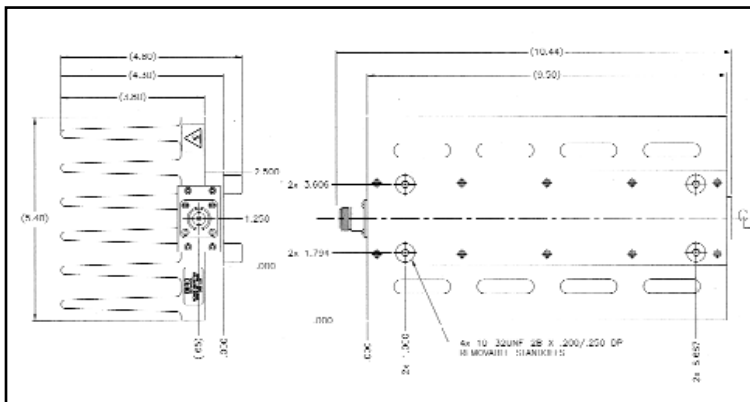
POWER TERMINATIONS AND LOADS

8072A-1 Termaline® RF Coaxial Termination

300 Watt, Conduction-Cooled, N Female

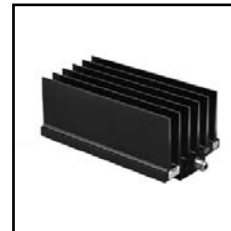


Model Number	8072A-1 Termaline® RF Coaxial Termination
Power Rating	300 W continuous @ 100 °C case temperature 3.6 kW Peak
Connector	N female
Ambient Temperature	-40 °C to +45 °C
Operating Position	Any
Coolant	Dry (Conduction cooled)
Finish	Silver or Tri-alloy, Silver plated or Tri-alloy connectors
Nominal Size	4.4"L x 2.0"W x 1.03"H (111.76 mm x 50.8 mm x 26.16 mm)
Weight	12 oz. (340 g)
Frequency Range and VSWR	DC to 1 Ghz at 1.10:1 max, 1 to 2.5 GHz at 1.20:1 max



500-WT Series Termaline® RF Coaxial Terminations

500 Watt, Convection-Cooled Dry - N,
BNC, TNC, 7/16 DIN

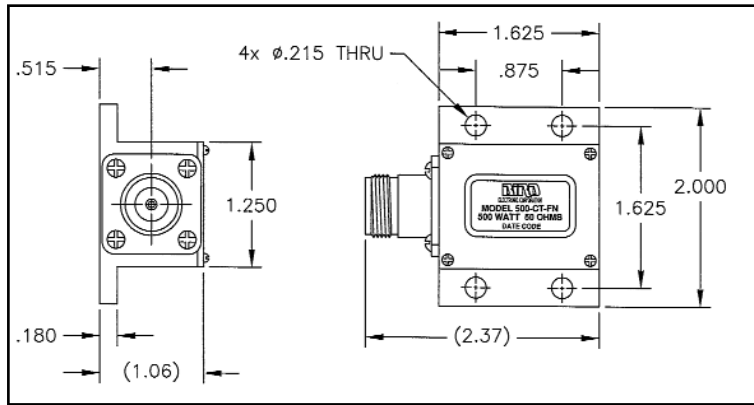
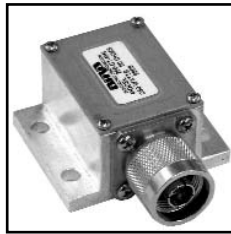


Model Number	500-WT Series Termaline® RF Coaxial Terminations
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max, 2.5 GHz at 1.25:1 max
Connector	N, BNC, TNC, 7/16 DIN, QC Option
Operating Position	Any, except mounting surface up
Coolant	Dry (Convection cooled)
Finish	Black anodized fins, tri-alloy plated connectors
Nominal Size	(with female N-type connector; excludes removable feet): 10.59" L x 5.4" W x 4.3" H, (266.7 mm x 137.2 mm x 109.3 mm)
4 Mounting Holes, Centers and Size	1.812" x 7.687"
Center and Size	typical 10-32 thread x 0.5" D
Weight	7.8 lbs. (3.6 kg)
Power Rating	500 Watts

POWER TERMINATIONS AND LOADS

500-CT Series Termaline® RF Coaxial Terminations

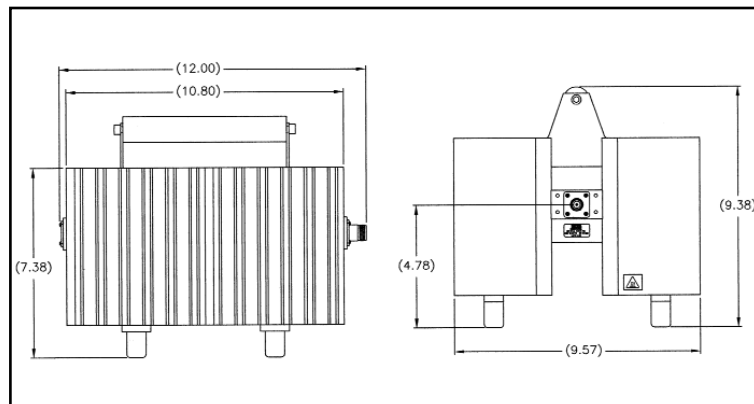
500 Watt, Conduction-Cooled - SMA,
N, TNC, 7/16 DIN



Model Number	500-CT Series Termaline® RF Coaxial Terminations
Frequency Range and VSWR	DC to 1 GHz at 1.15:1 max, 1 - 3 GHz @ 1.30:1 max.
Power Rating	500 W max. @ 100 °C flange temperature, derated to 0 W @ 150 °C
Connector	SMA, N, TNC, 7/16 DIN
Operating Position	Any
Coolant	Dry (Conduction cooled)
Finish	Silver or Tri-alloy plated
Nominal Size	N: 2.36" L x 2.00" W x 1.062" H, (60.0 mm x 50.8 mm x 30.5 mm); IEC 7/16: 2.80" L x 2.00" W x 1.20" H, (71.2 mm x 50.8 mm x 30.5 mm)
Mounting Centers	0.875" x 1.625" (22.3 mm x 41.3 mm)
Weight	N: 8.2 oz. (232.9g), IEC 7/16: 6.0 oz. (170.3 g)

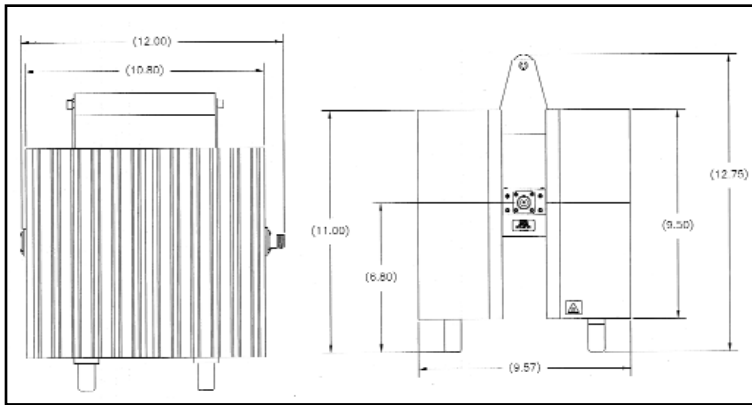
600-T Series Termaline® RF Coaxial Terminations

600 Watt, Convection-Cooled Dry - N,
BNC, TNC, 7/16 DIN, QC Option



Model Number	600-T Series Termaline® RF Coaxial Terminations
Power Rating	600 Watts
Nominal Size	12.0"L x 9.57"W x 9.38"H (304.8 mm x 243.08 mm x 238.25 mm)
Ambient Temperature Range	-40 °C to +40 °C
Finish	Black anodized. Silver or Tri-alloy plated connectors
Connector	N, BNC, TNC, 7/16 DIN, QC Option
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.
Impedance	50 ohms, nominal
Weight	21.5 lbs. (9.75 kg)

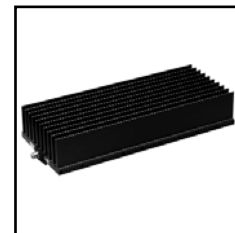
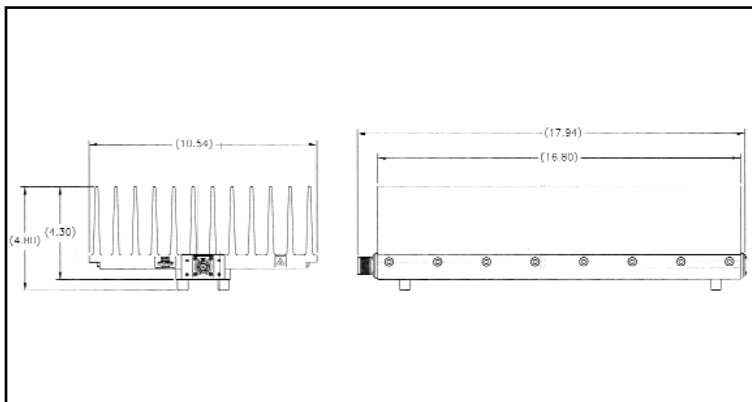
POWER TERMINATIONS AND LOADS



1000-T Series Termaline® RF Coaxial Terminations

1 kW, Convection-Cooled Dry, N, BNC,
TNC, 7/16 DIN, QC Option

Model Number	1000-T Series Termaline® RF Coaxial Terminations
Weight	26.5 lbs. (12.02 kg)
Impedance	50 Ohms, nominal
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max., 1 GHz to 2.4 GHz at 1.25:1 max.
Connector	N, BNC, TNC, 7/16 DIN, QC Option
Finish	Black anodized. Silver or Tri-alloy plated connectors
Ambient Temperature Range	-40 °C to +40 °C
Nominal Size	12.0"L x 9.57"W x 12.75"H (304.8 mm x 243.08 mm x 323.85 mm)
Power Range	1000 Watts



1000-WT Series Termaline® RF Coaxial Termination

1 kW, Convection-Cooled Dry - N, BNC,
TNC, 7/16 DIN, QC Option

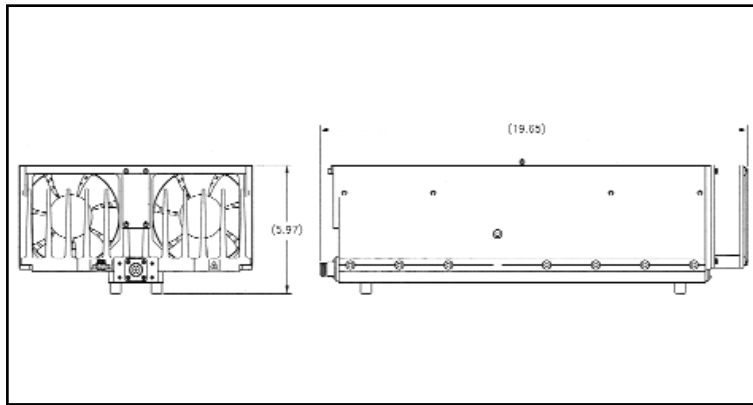
Model Number	1000-WT Series Termaline® RF Coaxial Termination
Power Range	1000 Watts
Frequency Range and VSWR	DC to 1 GHz at 1.10:1 max, 2.4 GHz at 1.25:1 max
Connector	N, BNC, TNC, 7/16 DIN, QC Option
Operating Position	Any, except mounting surface up
Coolant	Dry (Convection cooled)
Finish	Black anodized fins, tri-alloy plated connectors.
Nominal Size	17.98" L x 8.95" W x 4.3" H (456.69 mm x 227.33 mm x 109.22 mm)
4 Mounting Holes, Centers and Size	1.885" x 14.65"
Center and Size	Typical 1/4-20 thread x 0.5" D
Weight	26.5 lbs. (12.2 kg)

POWER TERMINATIONS AND LOADS

1500-WT Series Termaline®

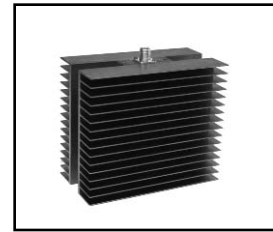
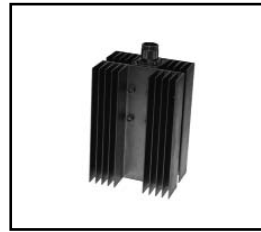
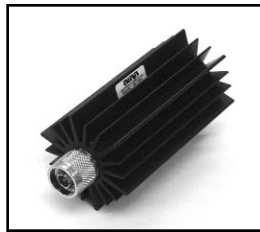
RF Coaxial Terminations

1.5 kW, Convection-Cooled Dry, N Female



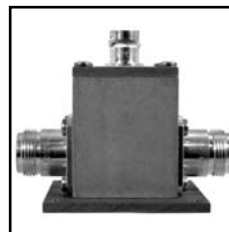
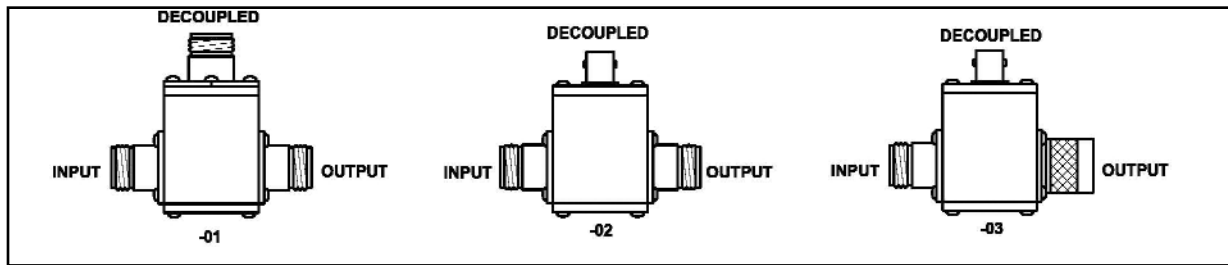
Model Number	1500-WT Series Termaline® RF Coaxial Terminations
Finish	Aluminum, Black Anodized
Accessories	AC power adapter included
Connector	N-Type Female Standard, Other types available
Cooling Method	Convective Heat
Frequency Range	DC to 2.4 GHz
Impedance	50 Ohms Nominal
Nominal Size	19.65" L x 5.97" W x 10.63" H (499.11 mm x 151.64 mm x 270 mm)
Operating Position	Vertically
Power Rating	1500 Watts ave. 4kW Peak
VSWR	DC to 1 GHz 2 1.10:1 max. (1 -2.4 GHz @ 1.25:1 max.)
Weight	Approx: 30 lbs.

82 Series Loads



Technical Specifications	82-01-05	82-01-16	82-01-17	82-01-15	82-01-19
Frequency Range	5-960 MHz	5-960 MHz	5-960 MHz	5-960 MHz	5-520 MHz
Load Type	Dry	Dry	Dry	Dry	Dry
Cooling	Natural air convection	Natural air convection	Natural air convection	Natural air convection	Natural air convection
Ambient Temperature, ° C	-30° to + 60°C	-30° to + 60°C	-30° to + 60°C	-30° to + 60°C	-30° to + 60°C
Duty Cycle	Continuous	Continuous	Continuous	Continuous	Continuous
Nominal Impedance, ohms	50	50	50	50	50
Maximum RF Input Power, Watts	5	25	60	100	250
Resistor Element Rating, Watts	60	60	250	250	250
Heatsink Area, in ² (cm ²)	9.2 (59)	57 (368)	172.7 (1114)	334.7 (2159)	898.2 (5795)
Heatsink Power Density, Watts/in ²	0.54	0.44	0.35	0.4	0.28
Connector Type	N(M)	N(M)	N(M)	N(M)	N(F)
Typical Return Loss, dB (VSWR)	>30 (1.05:1)	>30 (1.05:1)	>30 (1.05:1)	>30 (1.05:1)	>30 (1.05:1)
Dimensions, HxWxD (or DIA), in (mm)	1.31Hx1.50 DIA (33x38)	5.06Lx1.50 DIA (129x38)	6.3x3.9x1.6 (160x99x41)	6.3x3.9x2.9 (160x99x74)	7.4x8.00x4.3 (188x203x109)
Weight, lb (Kg)	0.18 (0.08)	0.64 (0.29)	1.28 (0.58)	2.00 (0.91)	7.52 (3.41)

SIGNAL SAMPLERS



84-38 Series

Model Number	84-38-10-xx	84-38-15-xx	84-38-20-xx	84-38-30-xx	84-38-50-xx
Frequency Range	132-174 MHz	132-174 MHz	132-174 MHz	132-174 MHz	132-174 MHz
Coupling Loss					
[Thru/line/Sampled]	-0.9/-10 dB	-0.3/-15 dB	-0.1/-20 dB	-0.1/-30 dB	-0.1/-50 dB
Power Split Ratio					
[Thru/line/Sampled]	10/90 %	3/97 %	1/99 %	0.1/99.9 %	0.001/99.999 %
VSWR*	<1.5:1	<1.5:1	<1.5:1	<1.5:1	<1.5:1
Power Rating	5W	10W	30W	50W	50W

84-67 Series

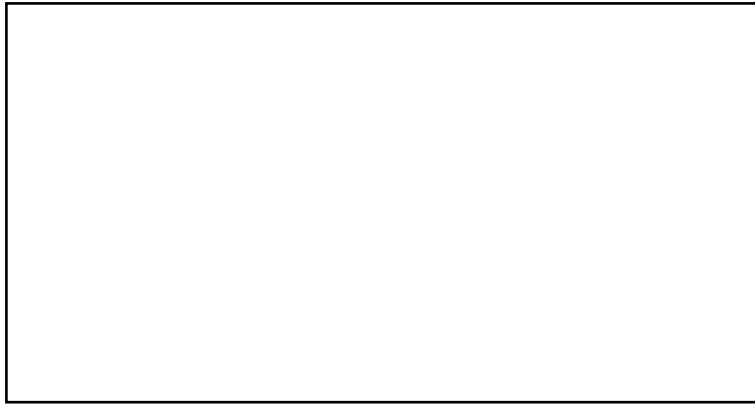
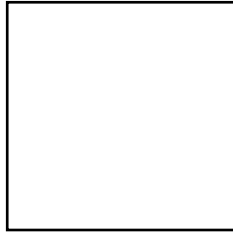
Model Number	84-67-10-xx	84-67-15-xx	84-67-20-xx	84-67-30-xx	84-67-50-xx
Frequency Range	406-512 MHz	406-512 MHz	406-512 MHz	406-512 MHz	406-512 MHz
Coupling Loss					
[Thru/line/Sampled]	-0.9/-10 dB	-0.3/-15 dB	-0.1/-20 dB	-0.1/-30 dB	-0.1/-50 dB
Power Split Ratio					
[Thru/line/Sampled]	10/90 %	3/97 %	1/99 %	0.1/99.9 %	0.001/99.999 %
VSWR*	<1.5:1	<1.5:1	<1.5:1	<1.5:1	<1.5:1
Power Rating	5W	10W	30W	50W	50W

84-67 Series

Model Number	84-85-10-xx	84-85-15-xx	84-85-20-xx	84-85-30-xx	84-85-50-xx
Frequency Range	800-900 MHz	800-900 MHz	800-900 MHz	800-900 MHz	800-900 MHz
Coupling Loss					
[Thru/line/Sampled]	-1/-10 dB	-0.3/-15 dB	-0.2/-20 dB	-0.1/-30 dB	-0.1/-50 dB
Power Split Ratio					
[Thru/line/Sampled]	10/90 %	3/97 %	1/99 %	0.1/99.9 %	0.001/99.999 %
VSWR*	<1.5:1	<1.5:1	<1.5:1	<1.5:1	<1.5:1
Power Rating	5W	10W	30W	50W	50W

FILTERS

22 Series Harmonic Filters

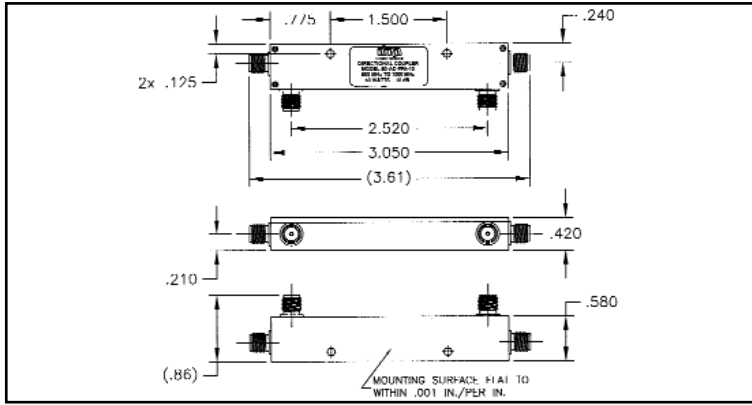


Model	22-38-01	22-67-01	22-90-01
Frequency Range (MHz)	132-174	406-530	806-960
Insertion Loss (passband)	0.02	0.02	0.02
Return Loss	>20 (1.22:1)	>20 (1.22:1)	>20 (1.22:1)
Second Harmonic Attenuation	>60	>60	>60
Maximum Input Power	600	600	600
Connectors (In/Out)	N(M)/N(F)	N(M)/N(F)	N(M)/N(F)

28 Series Duplexers

Model Number	28-65-10H	28-66-04H	28-70-15H
Minimum Freq. Separation	4.5 MHz	5 MHz	5 MHz
Power Rating	100 W	100 W	100 W
Frequency Range (MHz)	406-430	442-450	450-470
Isolation	80 dB	80 dB	80 dB
Insertion Loss	1.2 dB	1.2 dB	1.2 dB
No. of Cavities	4	4	4
Cavity Size	1.25" x 2" RECT.	1.25" x 2" RECT.	1.25" x 2" RECT.
Nominal Size	2.7"H x 5.12" W x 7.4"D	2.7"H x 5.12" W x 7.4"D	2.7"H x 5.12" W x 7.4"D
Tx & Rx Port Connectors	BNC	N	BNC
Antenna Connectors	UHF	UHF	UHF
Shipping Weight	5 lbs.	5 lbs.	5 lbs.

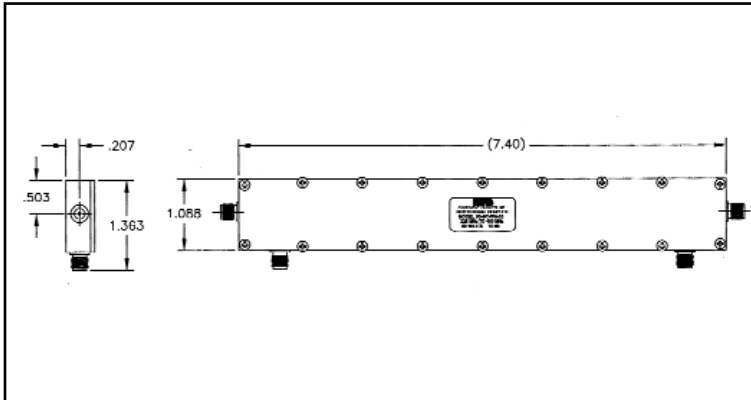
DIRECTIONAL COUPLERS



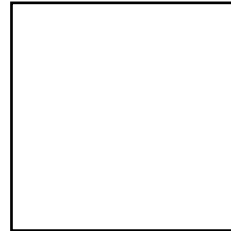
50-AC Series Directional Coupler
50 Watt, Miniature UHF Coupler



Model Number	50-AC Series Directional Coupler
Weight	8 oz.
Operating Temp.	+105 °C (221 °F)
Insertion Loss	0.2 dB (excluding coupled power)
Reflected Power	50 W average
VSWR	1.152:1, maximum (primary and secondary line)
Directivity	25 dB, minimum
Coupling Factor	10, 20, 30 dB
Frequency Range	500 to 1000 MHz
Nominal Size	3.05" L x 0.58" W x 0.42" H (77.47 mm x 14.73 mm x 10.67 mm)



50-BC Series Directional Coupler
50 Watt, UHF Air Band Coupler Directional Coupler

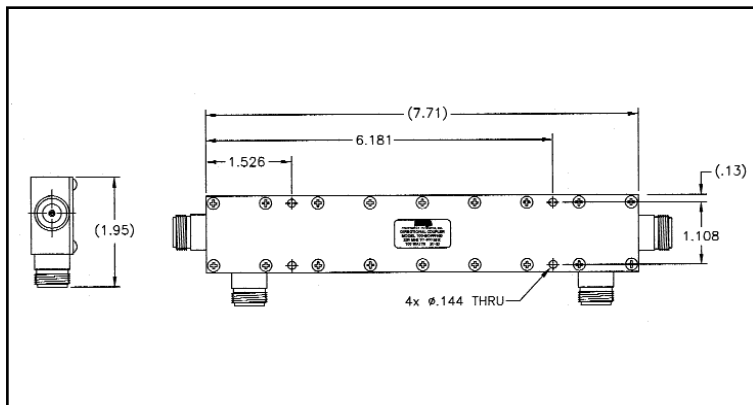
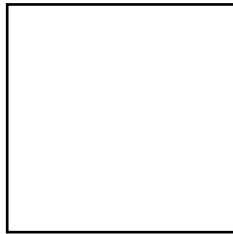


Model Number	50-BC Series Directional Coupler
Nominal Size	7.4" L x 1.088" W x 0.437" H (187.96 mm x 27.67 mm x 11.18 mm)
Coupling Factor	10 dB Standard
Directivity	25 dB minimum
Frequency Range	225 to 400 MHz
Insertion Loss	0.8 dB (excluding coupled power)
Power Rating	50 Watts
VSWR	1.15:1, maximum (primary and secondary line)
Weight	8 oz.

DIRECTIONAL COUPLERS

100-BC Series Directional Coupler

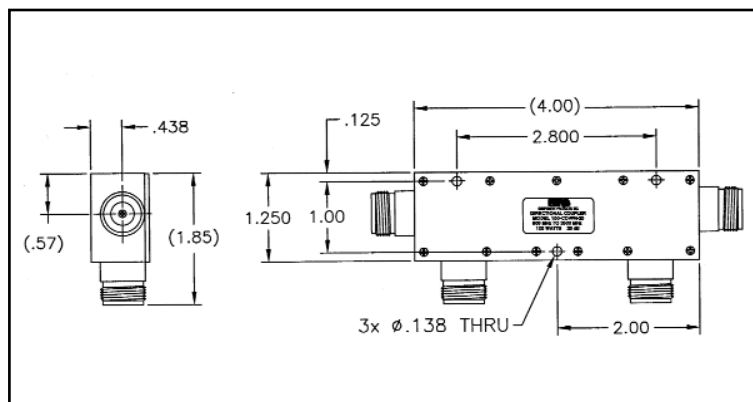
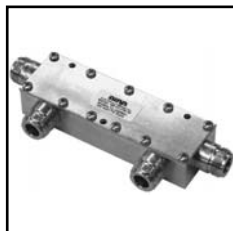
100 Watt, UHF Air Band 100 Watt Couplers



Model Number	100-BC Series Directional Coupler
Coupling Factor	20 dB Standard
Directivity	25 dB minimum
Frequency Range	225 to 400 MHz
Insertion Loss	0.25 dB (excluding coupled power)
Power Rating	100 Watts
VSWR	1.15:1, maximum (primary and secondary line)
Weight	16 oz.
Nominal Size	7.7" L x 1.37" W x 0.75" H (195.58 mm x 34.8 mm x 19.05 mm)

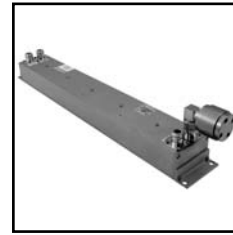
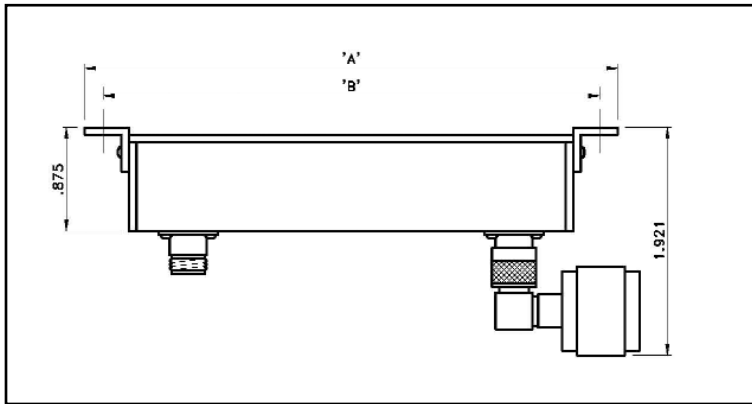
100-CC Series Directional Coupler

100 Watt, Broadband Coaxial Coupler



Model Number	100-CC Series Directional Coupler
Nominal Size	5.2" L x 1.85" W x 0.812" H (132.08 mm x 46.99 mm x 20.57 mm)
Operating Temperature	+105 °C (221 °F)
Insertion Loss	0.25 dB (excluding coupled power)
Reflected Power	100 W average
VSWR	1.2:1, maximum (primary and secondary line)
Weight	8 oz.
Directivity	18 dB minimum
Coupling Factor	20, 30 dB
Frequency Range	800 to 3500 MHz

DIRECTIONAL COUPLERS



85-05 Series

Model Number	85-05-01*	85-05-02*	85-05-03*	85-05-04*	85-05-05*
Frequency Range (MHz)	144-174 450-530 806-890	144-174 450-530 806-890	144-174 450-530 806-890	144-174 450-530 806-890	144-174 450-530 806-890
Decoupled Value (dB)	-3.0 ± 0.7 dB	-4.8 ± 0.7 dB	-6.0 ± 0.7 dB	-7.0 ± 1.0 dB	-10 ± 1.0 dB
Thru-line Loss (dB)	-3.0 ± 0.3 dB	-1.8 ± 0.3 dB	-1.2 ± 0.3 dB	-1.0 ± 0.2 dB	-0.5 ± 0.2 dB
Power Ratio Thru-line vs.					
Decoupled Ports	50%-50%	67%-33%	75%-25%	80%-20%	90%-10%
Termination	5W	5W	5W	5W	5W
Isolation, Port 3-2 (dB min.)	20	20	20	20	20
Thru-line VSWR (max.)	1.33:1	1.33:1	1.33:1	1.33:1	1.33:1
Thru-line Power (watts max.)	350	350	350	350	350

*85-05-XX01 (Tri-Band) available in 25W

Note: A= 18.5, B=17.875

85-38 Series

Model Number	85-38-01*	85-38-02*	85-38-03*	85-38-04*	85-38-05*
Frequency Range	132-174 MHz	132-174 MHz	132-174 MHz	132-174 MHz	132-174 MHz
Decoupled Value (dB)	-3.0 ± 0.7 dB	-4.8 ± 0.7 dB	-6.0 ± 0.7 dB	-7.0 ± 1.0 dB	-10 ± 1.0 dB
Thru-line Loss (dB)	-3.0 ± 0.3 dB	-1.8 ± 0.3 dB	-1.2 ± 0.3 dB	-1.0 ± 0.2 dB	-0.5 ± 0.2 dB
Power Ratio Thru-line vs.					
Decoupled Ports	50%-50%	67%-33%	75%-25%	80%-20%	90%-10%
Termination	5W	5W	5W	5W	5W
Isolation, Port 3-2 (dB min.)	20	20	20	20	20
Thru-line VSWR (max.)	1.33:1	1.33:1	1.33:1	1.33:1	1.33:1
Thru-line Power (watts max.)	350	350	350	350	350

*85-38-XX01 available in 25W

Note: A= 18.5, B=17.875

85-67 Series

Model Number	85-67-01*	85-67-02*	85-67-03*	85-67-04*	85-67-05*
Frequency Range	406-512 MHz	406-512 MHz	406-512 MHz	406-512 MHz	406-512 MHz
Decoupled Value (dB)	-3.0 ± 0.7 dB	-4.8 ± 0.7 dB	-6.0 ± 0.7 dB	-7.0 ± 1.0 dB	-10 ± 1.0 dB
Thru-line Loss (dB)	-3.0 ± 0.3 dB	-1.8 ± 0.3 dB	-1.2 ± 0.3 dB	-1.0 ± 0.2 dB	-0.5 ± 0.2 dB
Power Ratio Thru-line vs.					
Decoupled Ports	50%-50%	67%-33%	75%-25%	80%-20%	90%-10%
Termination	5W	5W	5W	5W	5W
Isolation, Port 3-2 (dB min.)	20	20	20	20	20
Thru-line VSWR (max.)	1.33:1	1.33:1	1.33:1	1.33:1	1.33:1
Thru-line Power (watts max.)	350	350	350	350	350

*85-67-XX01 available in 25W

Note: A= 9.0 , B=8.375

Continued on page 34

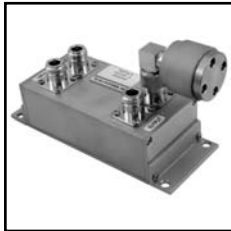
DIRECTIONAL COUPLERS

85-67 Series Continued

Model Number	85-67-06*	85-67-07*	85-67-08*
Frequency Range	406-512 MHz	406-512 MHz	406-512 MHz
Decoupled Value	-15 ± 1.0 dB	-20 ± 1.0 dB	-30 ± 1.0 dB
Thru-line Loss	-0.3 dB max.	-0.3 dB max.	-0.3 dB max.
Power Ratio Thru-line vs.			
Decoupled Ports	97%-3%	99%-1%	99.9%-0.1%
Termination	5W	5W	5W
Isolation, Port 3-2 (dB min.)	20	20	20
Thru-line VSWR (max.)	1.33:1	1.33:1	1.33:1
Thru-line Power (watts max.)	350	350	350

*85-67-XX01 available in 25W

85-85 Series



Model Number	85-85-01xx	85-85-02xx	85-85-03xx	85-85-04xx
Frequency Range (MHz)	800-1000	800-1000	800-1000	800-1000
Coupling Loss [Thru-line/Decoupled]-3/-3 dB		-1.8/-4.8 dB	-1.2/-6.0 dB	-1.0/-7.0 dB
Power Split Ratio [Thru-line/Decoupled]		50/50 %	66/33 %	75/25 %
	80/20 %			

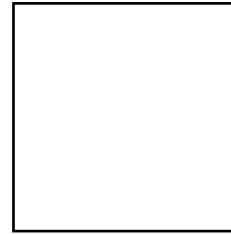
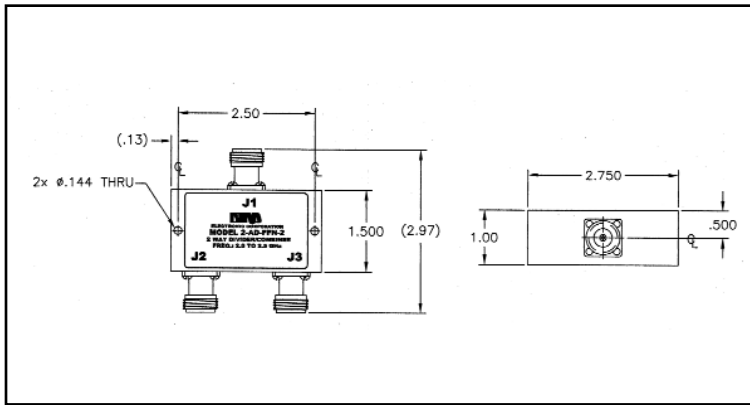
Model Number	85-85-05xx	85-85-06xx	85-85-07xx	85-85-08xx
Frequency Range (MHz)	800-1000	800-1000	800-1000	800-1000
Coupling Loss				
[Thru-line/Decoupled]	-0.5/-10 dB	-0.2/-15 dB	-0.2/-20 dB	-0.2/-30 dB
Power Split Ratio				
[Thru-line/Decoupled]	90/10 %	97/3 %	99/1 %	99.9/0.1 %

xx: Termination Designator. No designator: 5W termination; 01: 25W termination;

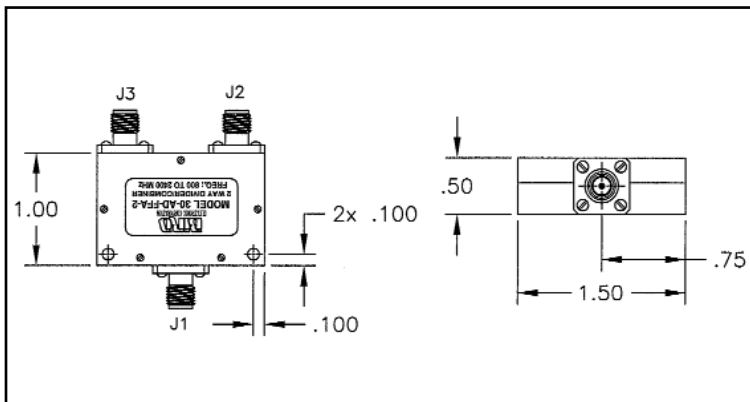
LT: no termination (customer can buy larger loads for higher power applications)

COMBINER/DIVIDER

2-AD-FFN-2 PCS Band Combiner/Divider 2 Watt, Combiner/Divider



Model Number	2-AD-FFN-2 PCS Band Combiner/Divider
Power Rating	2 watts
Frequency Range	2.0 to 2.5 GHz
VSWR	1.17:1 max.
Housing	Aluminum
Finish	Tri-alloy
Nominal Size	2.75" L x 2.75" W x 1.062" H (69.85 mm x 69.85 mm x 26.92 mm)
Insertion Loss	0.6 dB (above 3 dB split)
Connector	Female (N)
Matching	1.5 degree phase dB amplitude
Isolation	20 dB min. (J2 to J3)



30-AD Series Combiner/Dividers 30 Watt, 800-2.4 GHz, SMA (F), N (F), Combiner/Divider

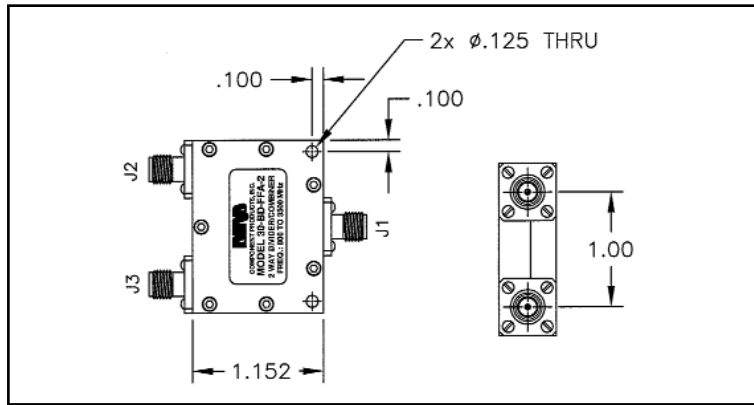
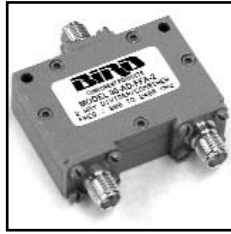


Model Number	30-AD Series Combiner/Dividers
Power Rating	30 watts into 1.15:1; 10 watts into 1.50:1; 1 watt into open
Frequency Range	800 - 2.4 GHz
Insertion Loss	0.5 dB max (above 3 dB split)
Isolation	20 dB
VSWR	1.25:1 max
Matching	2 degrees phase (typically 0.5) 0.5 dB amplitude
Housing	aluminum
Finish	Yellow Iridite
Nominal Size	1.5" L x 1.0" W x 0.5" H (38.1 mm x 25.4 mm x 12.7 mm)
Connector	SMA Female, N-Type Female

COMBINERS/DIVIDERS

30-BD Series Combiner/Divider

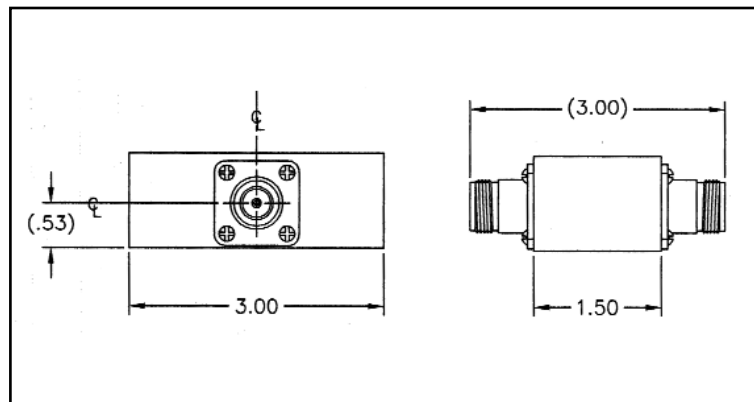
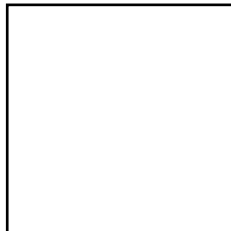
30 Watt, 800-3.5 GHz, SMA (F), N (F),
Combiner/Divider



Model Number	30-BD Series Combiner/Divider
Connector	SMA Female, N Female
Nominal Size	1.5" L x 1.0" W x 0.5" H (38.1 mm x 25.4 mm x 12.7 mm)
Finish	Yellow Iridite
Housing	aluminum
Matching	2 degrees phase (typically 0.5) 0.5 dB amplitude
VSWR	1.25:1 max
Isolation	20 dB
Insertion Loss	0.5 dB max (above 3 dB split)
Frequency Range	800 MHz to 3.5 GHz
Power Rating	30 watts into 1.15:1; 10 watts into 1.50:1; 1 watt into open

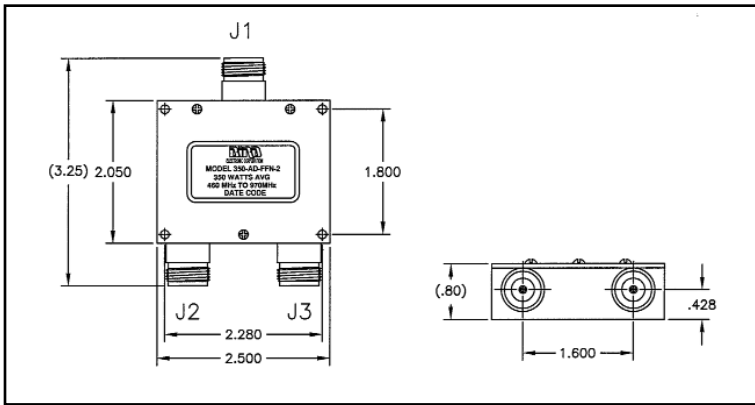
100-AD-FFN-02 Cellular Band Combiner/Divider

100 Watt, N (F), Combiner/Divider



Model Number	100-AD-FFN-02 Cellular Band Combiner/Divider
Connector	Female (N)
Nominal Size	1.15" H x 3.00" W x 3.00" D (29.21 mm x 76.2 mm x 76.2 mm)
Finish	Tri-Alloy Plated
Housing	Aluminum
Matching	1 degree phase (typically 0.2) (0.1 dB amplitude) (typically 0.05 dB)
VSWR	1.2:1 max (all ports)
Isolation	20 dB min (J2 to J3)
Insertion Loss	.25 dB max (above 3 dB split)
Frequency Range	806 to 906 MHz
Power Rating	100 Watts CW

COMBINERS/DIVIDERS

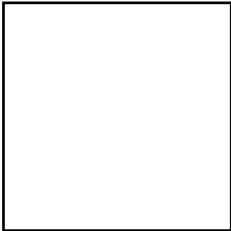


350-BD Series UHF Combiner/Dividers
350 Watt, N, 7/16 DIN (F), Combiner/Dividers



Model Number	350-BD Series UHF Combiner/Dividers
Connector	N, 7/16 Female
Nominal Size	3.27" L x 2.50" W x 0.80" H (83.06 mm x 63.5 mm x 20.32 mm)
Finish	Tri-Alloy
Housing	Alluminum
Matching	2 degree max
VSWR	In: (J1) 1.30:1 max; Out: (J2, J3) 1.20:1 max.
Isolation	20 dB min
Insertion Loss	0.4 dB
Frequency Range	460 to 970 MHz
Power Rating	350 Watts into matched loads; 150 Watts into mismatched loads

84-01 Series



Model Number	84-01-09*	84-01-11	84-01-12
Number of Outputs (X-way splitter)	2	2	4
Power Rating (Input)	125 W	Rx only	Rx only
Frequency Range (MHz)	10-512	25-512	25-512
Insertion Loss	-3.2 dB	-3.2 dB	-6.4 dB
Ratio of Output/Input	50 %	50 %	25 %
Connectors	N male	N female	N female

* Coated version available. Add "C" at the end of the model number, e.g. 84-01-09C

COMBINERS/DIVIDERS

84-37 Series



Model Number	84-37-01*	84-37-02
Number of Outputs (X-way splitter)	2	4
Power Rating (Input)	800 W	1000 W
Frequency Range (MHz)	144-174	144-174
Insertion Loss	-3.2 dB	-6.4 dB
Ratio of Output/Input	50 %	25 %
Connectors	N female	N female

* Coated version available. Add "C" at the end of the model number, e.g. 84-01-09C

84-67 Series

Model Number	84-67-01*	84-67-02
Number of Outputs (X-way splitter)	2	4
Tx capability	Yes	Yes
Frequency Range (MHz)	406-512	406-512
Insertion Loss	-3.2 dB	-6.4 dB
Ratio of Output/Input	50 %	25 %
Connectors	N female	N female

* Coated version available. Add "C" at the end of the model number, e.g. 84-01-09C

84-85 Series

Model Number	84-85-12	84-85-14
Number of Outputs (X-way splitter)	3	2
Tx capability	Yes	Yes
Frequency Range (MHz)	800-1000	800-1000
Insertion Loss	-5.1 dB	-3.2 dB
Ratio of Output/Input	33 %	50 %
Connectors	N female	N female

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29100 Aurora Rd, Ste 400
Solon, OH 44139
Tel: 440.248.1200
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sales@bird-technologies.com
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