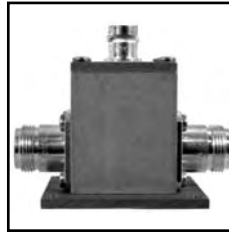
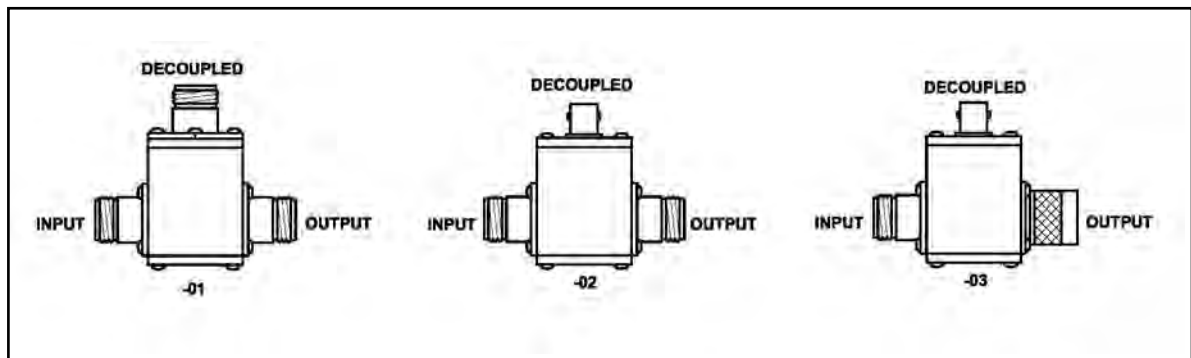


SIGNAL SAMPLERS



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

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

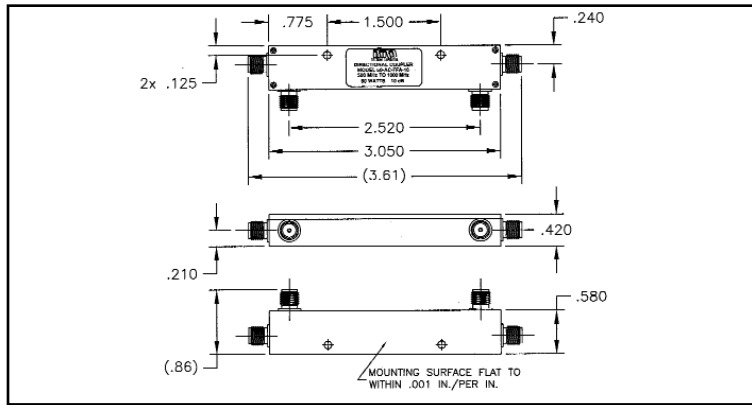
22 Series Harmonic Filters

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)

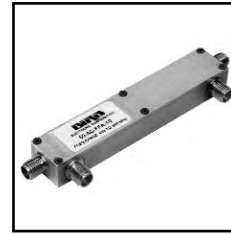
28 Series Duplexers

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.

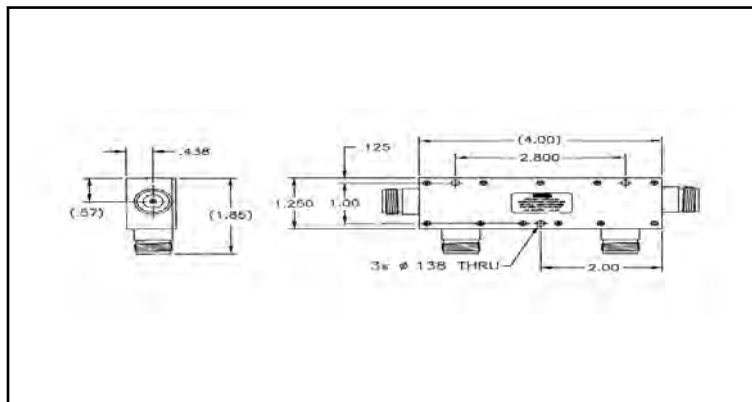
DIRECTIONAL COUPLERS



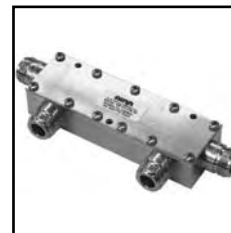
50-AC Series Directional Coupler
50 Watt, Miniature UHF Coupler



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	1.15:1, max (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)



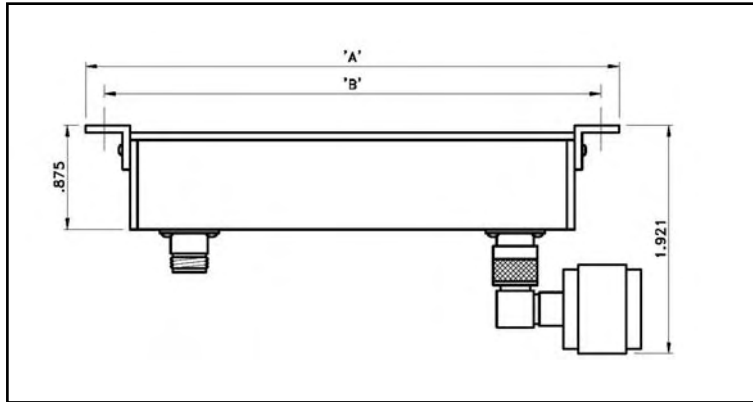
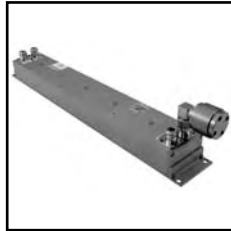
100-CC Series Directional Coupler
100 Watt, Broadband Coaxial Coupler



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, max (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
ThruLine 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 ThruLine 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
ThruLine VSWR (max.)	1.33:1	1.33:1	1.33:1	1.33:1	1.33:1
ThruLine 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
ThruLine 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 ThruLine 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
ThruLine VSWR (max.)	1.33:1	1.33:1	1.33:1	1.33:1	1.33:1
ThruLine Power (watts max.)	350	350	350	350	350

*85-38-XX01 available in 25W
 Note: A= 18.5, B=17.875

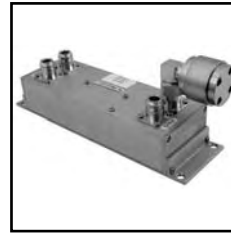
85-67 Series

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
ThruLine 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 ThruLine 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
ThruLine VSWR (max.)	1.33:1	1.33:1	1.33:1	1.33:1	1.33:1
ThruLine Power (watts max.)	350	350	350	350	350

*85-67-XX01 available in 25W
 Note: A= 9.0 , B=8.375

DIRECTIONAL COUPLERS

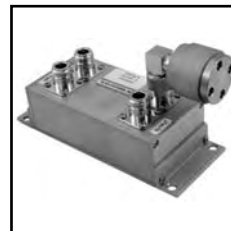
85-67 Series Continued



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



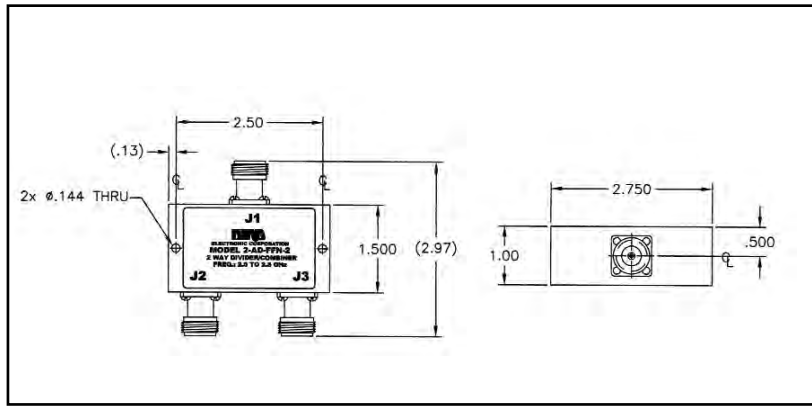
Model Number	85-85-01xx	85-85-02xx	85-85-03xx	85-85-04xx
Frequency Range (MHz)	800-1000	800-1000	800-1000	800-1000
Coupling Loss				
[Thru-line/Decoupled]	-3/-3 dB	-1.8/-4.8 dB	-1.2/-6.0 dB	-1.0/-7.0 dB
Power Split Ratio				
[Thru-line/Decoupled]	50/50 %	66/33 %	75/25 %	80/20 %

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).

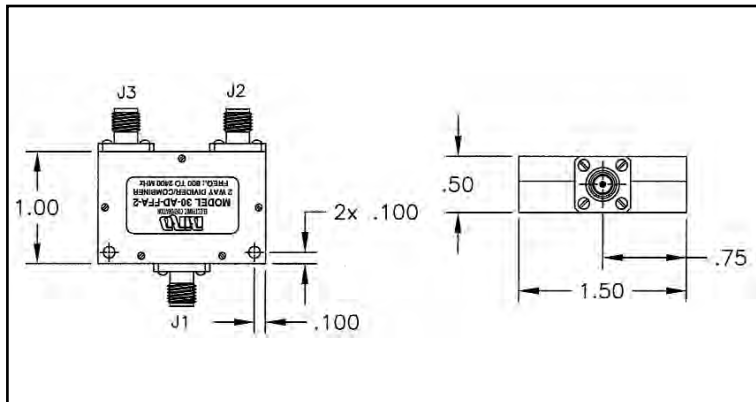
COMBINER/DIVIDER

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



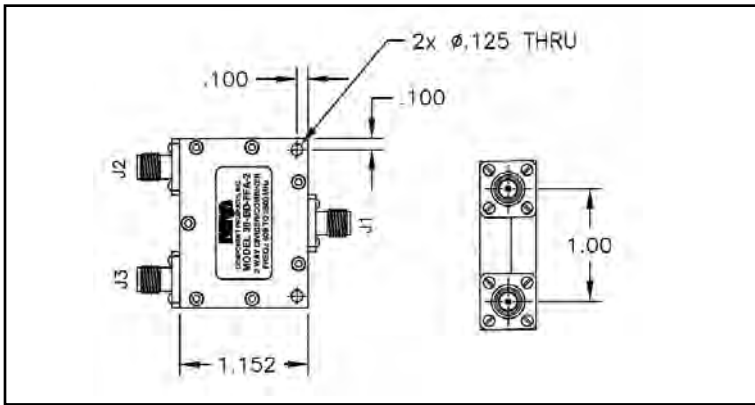
Model Number	2-AD-FFN-2 PCS Band Combiner/Divider
Power Rating	2 watts
Frequency Range	2.0 to 2.5 GHz
VSWR	1.17:1 max.
Housing	Aluminum
Finish	Tri-alloy
Nominal Size	2.75" L x 2.75" W x 1.062" H (69.85 mm x 69.85 mm x 26.92 mm)
Insertion Loss	0.6 dB (above 3 dB split)
Connector	N Female
Matching	1.5 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	25 dB min. (J2 to J3)
VSWR	1.2:1 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 Female

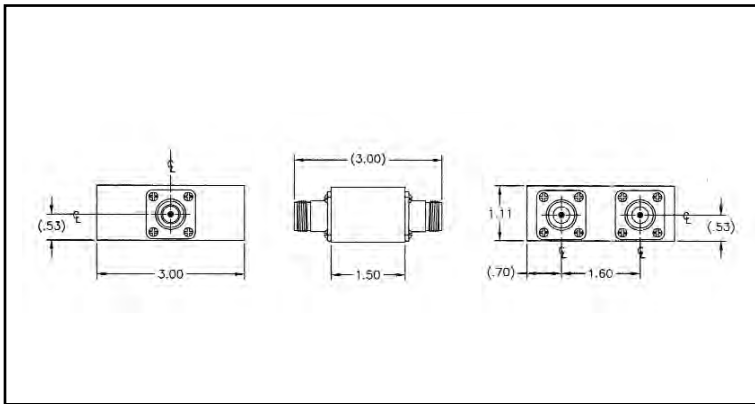
COMBINERS/DIVIDERS



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	1.2:1 max
Isolation	25 dB min. (J2 to J3)
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

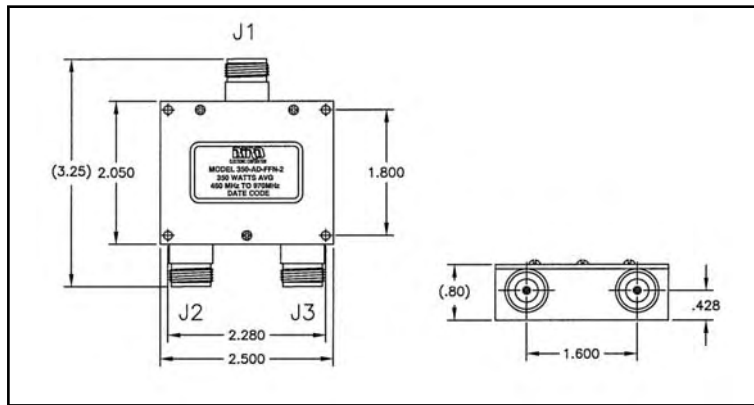


Model Number	100-AD-FFN-02 Cellular Band Combiner/Divider
Connector	N Female
Nominal Size	1.15" H x 3.00" W x 3.00" D (29.21 mm x 76.2 mm x 76.2 mm)
Finish	Tri-Alloy Plated
Housing	Aluminum
Matching	1 degree phase (typically 0.2) (0.1 dB amplitude) (typically 0.05 dB)
VSWR	1.2:1 max (all ports)
Isolation	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	Aluminum
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

84-37 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