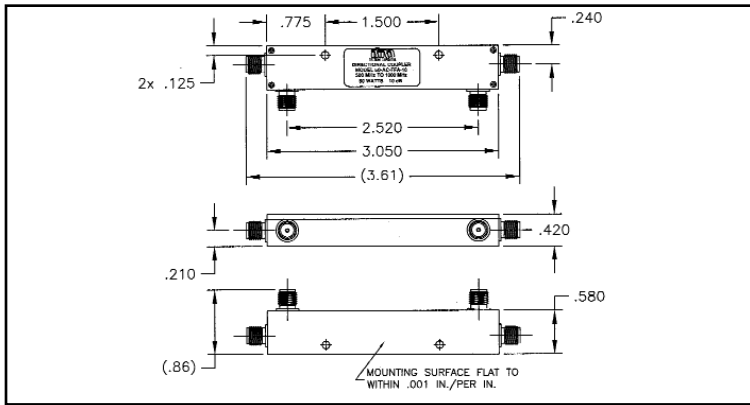
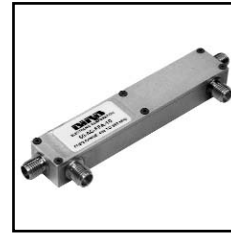


# DIRECTIONAL COUPLERS

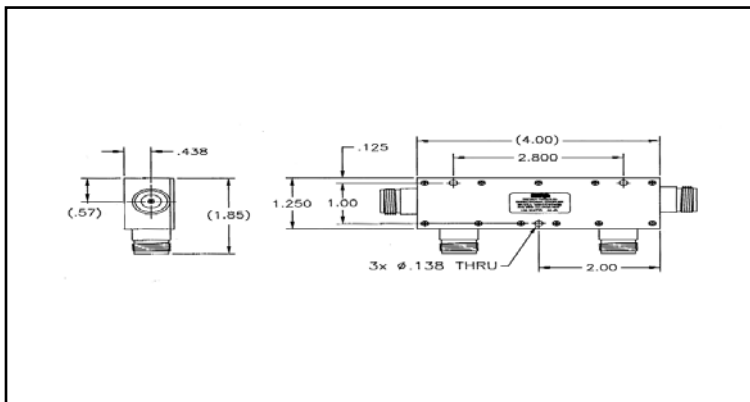


## 50-AC Series Directional Coupler 50 Watt, Miniature UHF Coupler

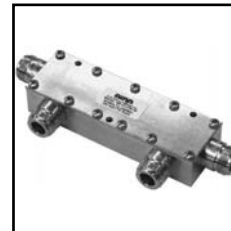
Navair Inc.  
6375 Dixie Road Unit 7  
Mississauga, Ontario  
Canada L5T 2E7  
Email: sales@navair.com  
Tel: 905-565-1583  
Toll Free: 1-800-668-7440  
<http://www.navair.com/>  
<http://www.navair.com/catalog>  
[http://www.navair.com/solutions\\_group](http://www.navair.com/solutions_group)



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)



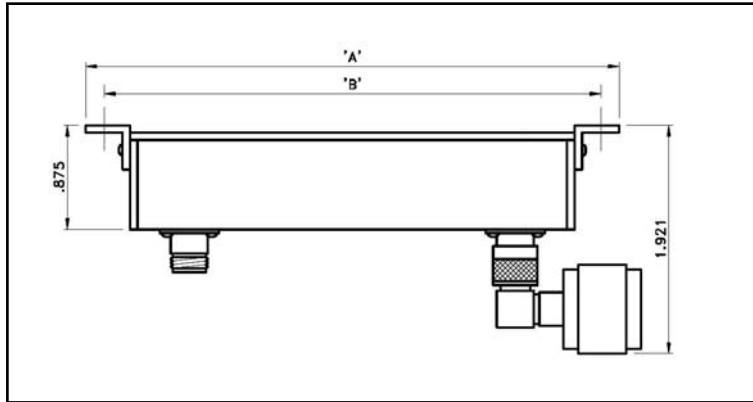
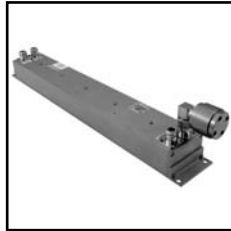
## 100-CC Series Directional Coupler 100 Watt, Broadband Coaxial Coupler



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

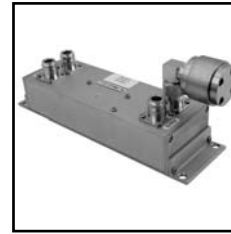
## 85-67 Series

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

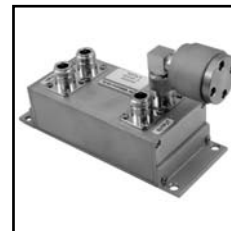
## 85-67 Series Continued



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).