

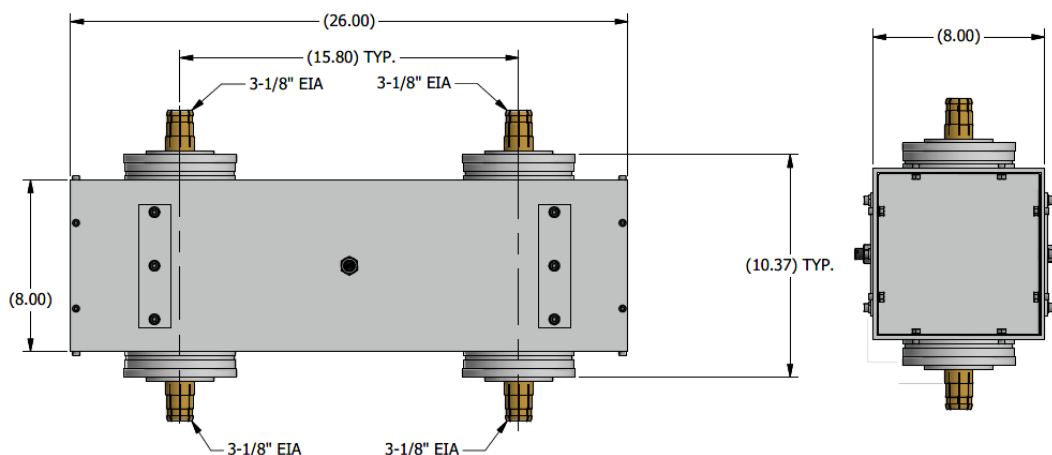
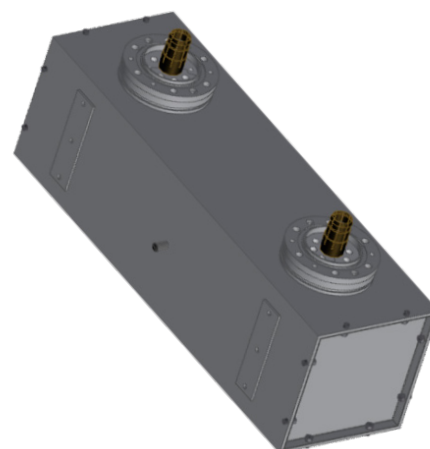
# ERI High Band VHF Hybrid Splitter/Combiners

**HY245 3.0-dB, High Band VHF 174 MHz to 240 MHz**  
**HY246 3.98-dB, High Band VHF 174 MHz to 240 MHz**  
**HY247 4.77-dB, High Band VHF 174 MHz to 240 MHz**

ERI's HY0245, HY246, and HY247 high band VHF hybrid couplers are plate-coupled designs that provide 3.0-dB, 3.98-dB, and 4.77-dB coupling levels, respectively. The hybrids are broadband from 174 to 240 MHz. The hybrid is most often used as a power combiner and also can be used as a power divider. All standard models are "cross-over" designs with the inputs, when used as a combiner, are on one side of the hybrid, and the load port and combined output are on the opposite side. The input port opposite the combined output lags the other input by 90 degrees. The hybrid is available with any combination of 1-5/8-inch, 3-1/8-inch, 4-1/16-inch, and 6-1/8-inch flanged fixed male ports (order flange hardware separately). They are constructed of lightweight aluminum. Power handling is dependent on flange selection.

## HY0245/0246/0247 High Band VHF Hybrid Specifications

Coupling:	HY0245	3.01 dB +/- 0.1 dB over channel	
	HY0246	3.98/2.22 dB +/- 0.15 dB over channel	
	HY0247	4.77/1.77 dB +/- 0.20 dB over channel	
Frequency Range:	174 to 240 MHz		
Input VSWR:	1.06 : 1 or better over channel		
Isolation:	30 dB min.		
Maximum Voltage Rating:	5 kV, RMS		
Geometery:	"Cross-over" configuration		
Connector Centerline Spacing:	15.80-inches	(401-mm)	
Dimensions:	Length	26.00-inches	(660-mm)
	Width	8.00-inches	(203-mm)
Flange to Flange Height			
1-5/8-inch to 1-5/8-inch	11.34-inches	(288-mm)	
1-5/8-inch to 3-1/8-inch	10.85-inches	(276-mm)	
3-1/8-inch to 3-1/8-inch	10.37-inches	(263-mm)	
3-1/8-inch to 4-1/16-inch	10.37-inches	(263-mm)	
4-1/16-inch to 4-1/16-inch	10.37-inches	(263-mm)	
3-1/8-inch to 6-1/8-inch	10.50-inches	(267-mm)	
4-1/16-inch to 6-1/8-inch	10.50-inches	(267-mm)	
6-1/8-inch to 6-1/8-inch	10.62-inches	(270-mm)	



**HY0245/HY0246/HY0247 High Band VHF Hybrid. The dimensions shown are inches.**

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# ERI High Band VHF Hybrid Splitter/Combiners

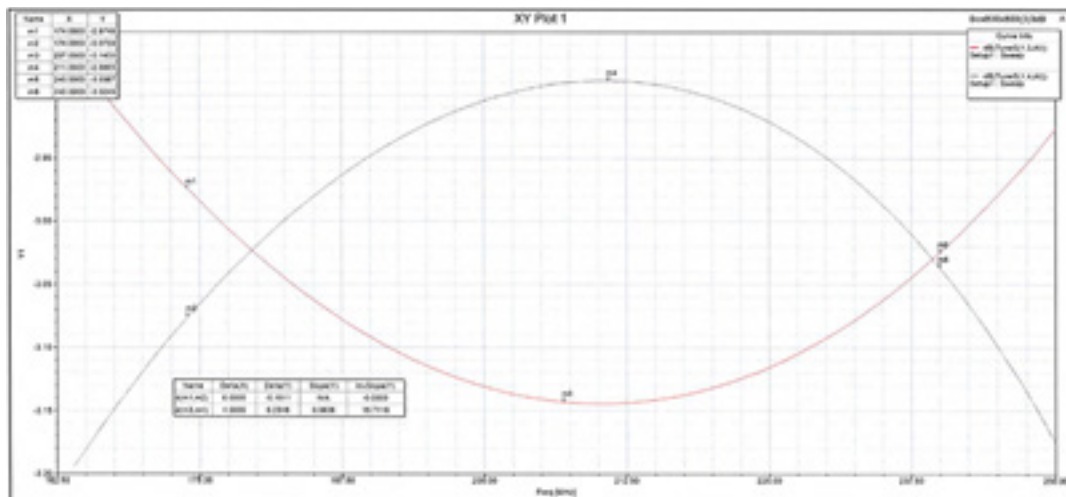
HY0245 High Band VHF 3.0 dB Hybrid Specifications									
	Port 1		Port 2		Port 3		Port 4		Split
Part No.	Size	Type	Size	Type	Size	Type	Size	Type	
HY0245A	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3
HY0245B	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	4-1/16-inch	FL (m)	3
HY0245C	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	6-1/8-inch	EIA (m)	3
HY0245D	1-5/8-inch	EIA (m)	1-5/8-inch	EIA (m)	1-5/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3
HY0245E	1-5/8-inch	EIA (m)	1-5/8-inch	EIA (m)	1-5/8-inch	EIA (m)	1-5/8-inch	EIA (m)	3
HY0245F	1-5/8-inch	EIA (m)	1-5/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3
HY0245G	1-5/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3
HY0245H	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	4-1/16-inch	FL (m)	4-1/16-inch	FL (m)	3
HY0245J	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	4-1/16-inch	FL (m)	6-1/8-inch	EIA (m)	3
HY0245K	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	6-1/8-inch	EIA (m)	6-1/8-inch	EIA (m)	3
HY0245L	3-1/8-inch	EIA (m)	4-1/16-inch	FL (m)	4-1/16-inch	FL (m)	4-1/16-inch	FL (m)	3
HY0245M	4-1/16-inch	FL (m)	4-1/16-inch	FL (m)	4-1/16-inch	FL (m)	4-1/16-inch	FL (m)	3

Part No.	Weight		ATSC 1.0		ATSC 3.0	
			Each Input*	Combined Output**	Each Input*	Combined Output**
HY0245A	41-pounds	(18.6-kg)	14.0-kW	28.0-kW	14.0-kW	28.0-kW
HY0245B	42-pounds	(19.1-kg)	23.0-kW	46.0-kW	22.0-kW	44.0-kW
HY0245C	45-pounds	(20.2-kg)	28.0-kW	56.0-kW	22.0-kW	44.0-kW
HY0245D	43-pounds	(19.5-kg)	8.4-kW	16.8-kW	8.4-kW	16.8-kW
HY0245E	44-pounds	(20.0-kg)	4.2-kW	8.4-kW	4.2-kW	8.4-kW
HY0245F	42-pounds	(19.1-kg)	8.4-kW	16.8-kW	8.4-kW	16.8-kW
HY0245G	41-pounds	(18.6-kg)	14.0-kW	28.0-kW	14.0-kW	28.0-kW
HY0245H	43-pounds	(19.5-kg)	23.0-kW	46.0-kW	22.0-kW	44.0-kW
HY0245J	44-pounds	(20.0-kg)	28.0-kW	56.0-kW	22.0-kW	44.0-kW
HY0245K	48-pounds	(21.8-kg)	28.0-kW	56.0-kW	22.0-kW	44.0-kW
HY0245L	46-pounds	(20.9-kg)	23.0-kW	46.0-kW	22.0-kW	44.0-kW
HY0245M	47-pounds	(21.3-kg)	23.0-kW	46.0-kW	22.0-kW	44.0-kW

Power Ratings shown are average power at 240 MHz for hybrid used as a combiner.

\* Power rating for hybrid outputs when used as a power divider.

\*\* Power rating for hybrid input when used as a power divider.



HY0245 3.0 dB High Band VHF Hybrid 174 to 240 MHz, Coupling Level.

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# ERI High Band VHF Hybrid Splitter/Combiners

## HY0246 High Band VHF 3.98 dB Hybrid Specifications

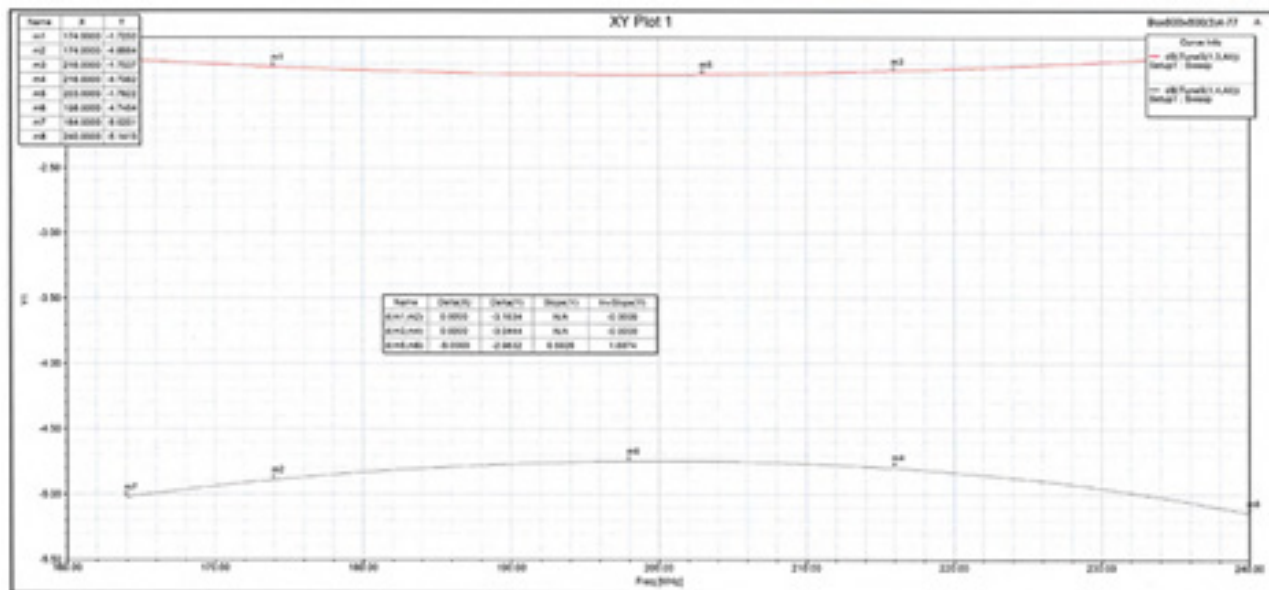
Part No.	Port 1		Port 2		Port 3		Port 4		Split
	Size	Type	Size	Type	Size	Type	Size	Type	
HY0246A	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3.98
HY0246B	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	4-1/16-inch	FL (m)	3.98
HY0246C	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	6-1/8-inch	EIA (m)	3.98
HY0246D	1-5/8-inch	EIA (m)	1-5/8-inch	EIA (m)	1-5/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3.98

Part No.	Weight:		ATSC 1.0		ATSC 3.0	
			Each Input*	Combined Output**	Each Input*	Combined Output**
HY0246A	41-pounds	(18.6-kg)	16.8 kW + 11.2 kW	28.0-kW	16.8 kW + 11.2 kW	28.0-kW
HY0246B	42-pounds	(19.1-kg)	27.6 kW + 18.4 kW	46.0-kW	26.4 kW + 17.6 kW	44.0-kW
HY0246C	45-pounds	(20.2-kg)	27.6 kW + 18.4 kW	46.0-kW	26.4 kW + 17.6 kW	44.0-kW
HY0246D	43-pounds	(19.5-kg)	8.4 kW + 5.6 kW	14.0-kW	8.4 kW + 5.6 kW	14.0-kW

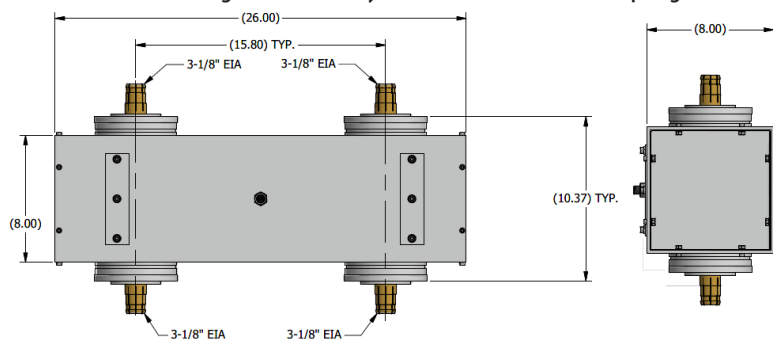
Power Ratings shown are average power at 240 MHz for hybrid used as a combiner.

\* Power rating for hybrid outputs when used as a power divider.

\*\* Power rating for hybrid input when used as a power divider.



HY0247 3.98 dB High Band VHF Hybrid 174 to 240 MHz, Coupling Level.



HY0246 3.98/2.22 dB High Band VHF Hybrid 174 to 240 MHz. The dimensions shown are inches.

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# ERI High Band VHF Hybrid Splitter/Combiners

## HY0247 High Band VHF 4.77 dB Hybrid Specifications

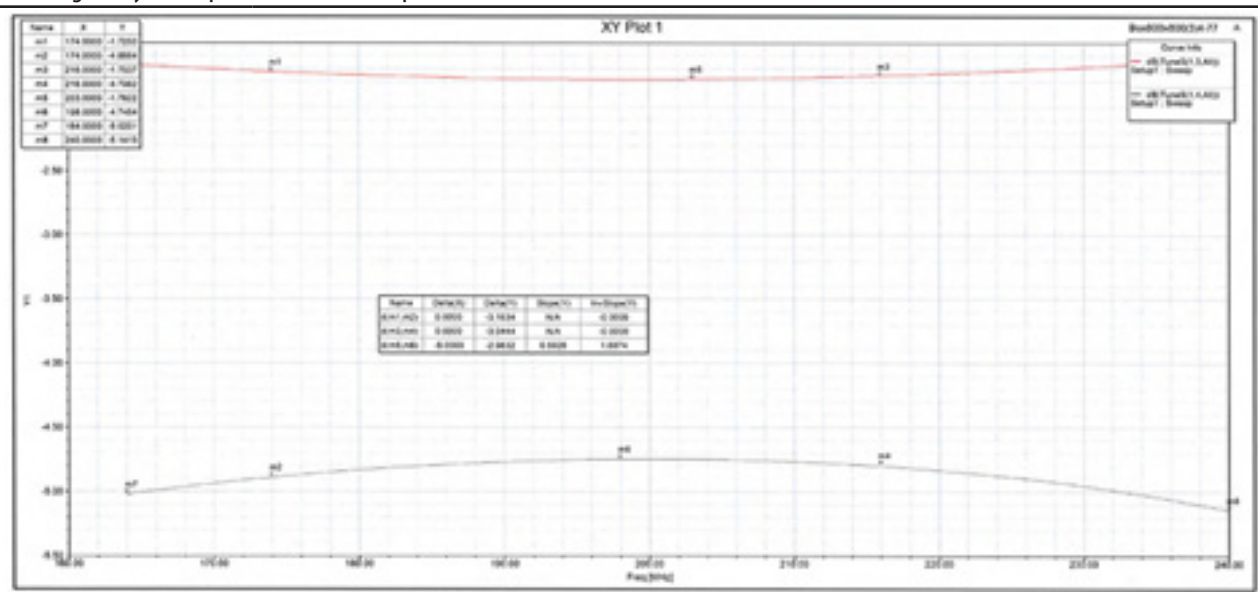
Part No.	Port 1		Port 2		Port 3		Port 4		Split
	Size	Type	Size	Type	Size	Type	Size	Type	
HY0247A	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	4.77
HY0247B	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	4-1/16-inch	FL (m)	4.77
HY0247C	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	3-1/8-inch	EIA (m)	6-1/8-inch	EIA (m)	4.77
HY0247D	1-5/8-inch	EIA (m)	1-5/8-inch	EIA (m)	1-5/8-inch	EIA (m)	3-1/8-inch	EIA (m)	4.77

Part No.	Weight:		ATSC 1.0		ATSC 3.0	
			Each Input*	Combined Output**	Each Input*	Combined Output**
HY0247A	41-pounds	(18.6-kg)	18.7 kW + 9.3 kW	28.0-kW	18.7 kW + 9.3 kW	28.0-kW
HY0247B	42-pounds	(19.1-kg)	28.0 kW + 14.0 kW	42.0-kW	28.0 kW + 14.0 kW	42.0-kW
HY0247C	45-pounds	(20.2-kg)	28.0 kW + 14.0 kW	42.0-kW	28.0 kW + 14.0 kW	42.0-kW
HY0247D	43-pounds	(19.5-kg)	8.4 kW + 4.2 kW	12.6-kW	8.4 kW + 4.2 kW	12.6-kW

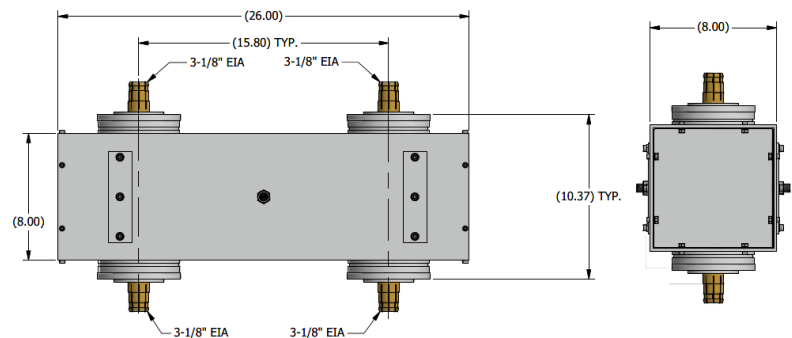
Power Ratings shown are average power at 240 MHz for hybrid used as a combiner.

\* Power rating for hybrid outputs when used as a power divider.

\*\* Power rating for hybrid input when used as a power divider.



HY0247 4.77 dB High Band VHF Hybrid 174 to 240 MHz, Coupling Level.



HY0247 4.77/1.77 dB High Band VHF Hybrid. The dimensions shown are inches.

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