Mid-Atlantic RF Systems Inc. P.O. Box 745 Forest Hill, MD 21050 Phone: (410) 893-2430 Fax: (410) 638-5193 Email: Info@Midatlanticrf.com Web: www.midatlanticrf.com

Model No. X214-13

3dB, 90° Hybrid Coupler, Commercial Application

DESCRIPTION

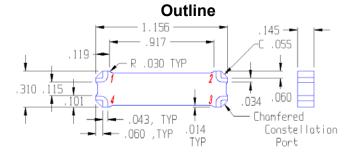
The **X214-13** and the **X214-13HR** (High Reliability) are 3dB, 90° microwave quadrature hybrid couplers in stripline form optimized for the operating frequency range between 2100MHz ~ 2200MHz. Ideal for higher-power amplifier designs for UMTS and other 3G applications.

Key features:

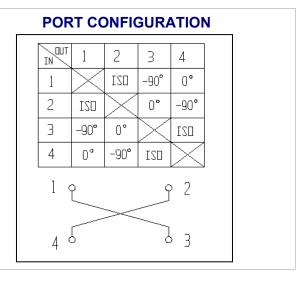
- Improved Impedance Match
 Superior geometrical match of Chamfered Constellation Ports to 50 Ohm transmission lines.
- Extra Low Insertion Loss
- Excellent Solution For UMTS Power Amplifiers
- Space Saving Layout Advantage
 Unique Elongated design compliments power transistor paring applications.
- Cost Effective Solution
 Caseless construction costs are significantly less than other microwave quadrature techniques, i.e. wireline.







PRODUCT SPECIFICATION MATRIX			
NO.	DESCRIPTION	SPECIFICATION	
ELECTRICAL			
1	Frequency Range	2100 to 2200MHz	
2	Isolation	20 dB min	
3	Insertion Loss	<u>≤</u> 0.10	
4	VSWR	1.2:1 max	
5	Amplitude Balance	<u>+</u> 0.10 dB max	
6	Phase Balance	2° max	
7	Average Power	300 Watts CW	
8	Dynamic Range	95 dB min	
9	Output open/shorted	No damage	
10	In/Out Impedance	50 Ω	



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ENVIRONMENTAL			
11	Operating Temperature	-55°C ~ +85°C	
12	Storage Temperature	(Same as above)	
MECHANICAL			
13	Case / Module Size	.310"W x 1.156"L X 0.145"H (see Outline)	
14	Weight	< 3 grams	
15	Construction	Stripline, low loss stable microwave material, laminated under heat and pressure with tin plate (HR = gold plate)	
16	Mounting Method	Surface Mount (See Mounting Footprint)	
17	Automated or manual Assembly Provision	a) Tape & Reel b) Tube (Stick) c) Bulk >for Pick & Place Manufacturing< >for hand assembly<	

Mounting Footprint

