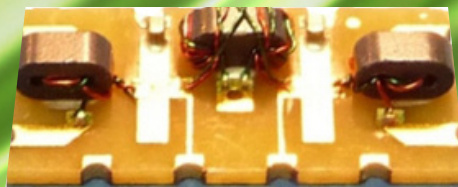




**MiniRF**

# 2016 PRODUCT SELECTION GUIDE





## About MiniRF, Inc.

MiniRF is a new name for a passive component company with over 20 years of design and manufacturing experience. The company was originally formed by PDI (Premier Devices Inc) in the early 1990's, was acquired by Sirenza Microdevices in 2006 which in turn was acquired by RFMD in 2007. MiniRF has returned to its roots, focusing strictly on passive components.

MiniRF is dedicated to providing quality RF passive components at competitive prices for existing and emerging Broadband/CATV and Wireless Communications Systems. MiniRF is a proven leader in supplying high performance surface mount passive components. MiniRF components are found in the products of many of the world's largest suppliers of communications products with nearly a billion units shipped.

**1.2ghz/3.0ghz  
Frequency  
Components  
Available**





**Couplers**  
**Transformers**  
**Splitters**  
**Chokes**

*Global RF Passive Component Provider*

MiniRF designs and manufactures both standard and custom transformers, couplers, splitters, mixers and chokes. We specialize in delivering quality surface mount passive components and devices. A ferrite core is found in almost every MiniRF product. The performance of MiniRF's product depends on the magnetic properties of the core and its interaction with the wire wrapped around it.

Winding cores is a specialized manual process and therefore labor intensive. RF performance will vary with minor differences in how the wire is wound to the core, so careful attention to manufacturing detail is documented from sourcing materials all the way through testing. All MiniRF manufacturing facilities are ISO9001 certified.

The market for wire wrapped ferrite based RF components is very competitive so attention to material cost and tight management of our processes are important. The management team understands this and is committed to deliver volume quality products at competitive prices.



## Global Experience with Local Design Expertise

MiniRF surface mount Couplers, Transformers, Splitters and Chokes are found in global manufacturers of RF communications equipment delivering high performance video , voice and data worldwide.

MiniRF has designed countless models and manufactured hundreds of million devices over its history. Our twenty five years of seasoned experience aids in our ability to develop the right passive solutions for your RF circuit design. What sets us apart from other manufacturers is our ability to provide rapid custom design solutions in volume at a cost not significantly higher than our standard products. Additionally, the team at MiniRF is also easy to work with and our products offer some of the smallest and lowest profiles in the industry!

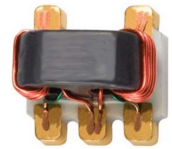
Custom designs are developed locally in the US, and are based on well proven platforms for rapid prototyping and customer feedback. Designs are then transferred to pre-production in our factory for manufacturability of the product. Please contact your local sales representative with your special requirements or contact us directly at: [sales@MiniRF.com](mailto:sales@MiniRF.com)

***Your solution is merely a phone call away!***



# ISO 9001 Manufacturing Operations/100% Testing

MiniRF manufacturing operations are in multiple overseas facilities that have been operating for nearly 25 years. These facilities have been manufacturing passives under the strict guidelines and our mission of Quality without Compromise! The facilities are ISO9001 certified and utilized skilled experienced assembly operators. All products are Lead Free and RHOS compliant.



Every product on the manufacturing line undergoes 100% RF testing before shipment. Calibration schedule of manufacturing and test hardware is strictly adhered to. MiniRF materials and operational management enable our shorter than Industry- lead times. Products are available in 13" tape and reel with 1000pcs standard quantity. For any quantity over 100pcs, we also offer custom quantity tape and reel.



*Global RF Passive Component Provider*



## Couplers

Characteristic Impedance ( $\Omega$ )	Freq Range (Min) (MHz)	Freq Range (Max) (MHz)	Nominal Coupling (dB)	
50	5	500	10.0 $\pm$ 0.5	
50	5	1000	10.0 $\pm$ 0.5	
50	5	1000	6.5 $\pm$ 0.5	
75	5	1000	8.5 $\pm$ 0.3	
75	5	1000	10.0 $\pm$ 0.5	
75	5	1000	16.0 $\pm$ 0.5	
75	5	1000	20.5 $\pm$ 0.5	
75	5	1000	10.0 $\pm$ 0.5	
75	5	1000	16.0 $\pm$ 0.5	
75	5	1000	20.5 $\pm$ 0.5	
75	5	1000	16.0 $\pm$ 0.5	
75	5	1200	10.0 $\pm$ 0.5	
75	5	1200	10.0 $\pm$ 0.5	
75	5	1200	16.0 $\pm$ 0.5	
75	5	1200	16.0 $\pm$ 0.5	
75	5	1200	20.5 $\pm$ 0.5	
<i>New</i>	75	5	1200	7.0 $\pm$ 0.5
<i>New</i>	75	5	1200	10.0 $\pm$ 0.5

## 2-Way Splitters

Characteristic Impedance ( $\Omega$ )	Freq Range (Min) (MHz)	Freq Range (Max) (MHz)	Return Loss (Min) (dB)	
50	1	500	14	
50	1	650	14	
50	5	1000	9.6	
50	5	1200	14	
50	800	980	17.7	
50	1600	2000	11	
50	1700	2500	9.6	
50	1800	2200	11	
75	5	65	20	
<i>New</i>	50	2	2000	15
<i>New</i>	50	1	1000	20
75	5	1000	17.7	
75	30	1000	20	
75	5	1200	12	
<i>New</i>	50	2	2500	28

Coupling Flatness (dB)	Mainline Loss (dB)	Directivity (dB)	Return Loss (Min) (dB)	Package	Part Number
±0.5	0.8	30	15	S06	CPA-0501-510H
±0.5	1.2	25	14	S06	CPA-1001-510H
±0.5	1.9	15	12	S06	CPA-1001-56H
±0.5	1.7	20	14	S06	CPA-1001-708H
±0.5	1.2	14	14	S06	CPA-1001-710H
±0.5	0.6	30	14	S06	CPA-1001-716H
±0.7	0.4	20	17	S06	CPA-1001-720H
±0.5	1.2	25	14	S01	CPK-1001-710H
±0.5	0.6	30	14	S01	CPK-1001-716H
±0.5	0.4	20	17	S01	CPK-1001-720H
±0.75	0.75	22	24	S18	RFCP4792
±0.5	1.5	14	11	S18	RFCP5742
±0.5	1.5	14	14	S20	RFCP5743
±0.5	0.6	20	14	S18	RFCP5762
±0.5	0.8	20	14	S20	RFCP5763
±0.5	0.5	20	17	S20	RFCP5773
±0.5	1.6	18	21	S20	MRFCP0013
±0.5	1.1	18	18	S20	MRFCP0014

Isolation (dB)	Insertion Loss (dB)	Package	Part Number
25	0.4	S06	SPA-0501-25H
25	0.4	S06	SPA-0701-25H
16	0.4	S06	SPA-1002-25H
22	1	S18	RFSP5522
23	0.2	S06	SPA-1001-25H
18	0.4	S10	SPC-2001-25H
24	0.5	S06	SPA-2501-25H
23	0.5	S10	SPC-2201-25H
35	0.2	S06	SPA-0101-27H
22	0.6	S19	MRFSP7525
33	0.6	S19	MRFSP4525
30	0.5	S06	SPA-1002-27H
30	0.5	S06	SPA-1003-27H
28	0.8	S18	RFSP5722
30	0.15	S19	MRFSP8525

## 2-Way Splitters Continued...

	Characteristic Impedance ( $\Omega$ )	Freq Range (Min) (MHz)	Freq Range (Max) (MHz)	Return Loss (Min) (dB)
<i>New</i>	75	5	1002	17
<i>New</i>	75	5	1200	17
<i>New</i>	75	5	1600	17

## 3-Way Splitters

	Characteristic Impedance ( $\Omega$ )	Freq Range (Min) (MHz)	Freq Range (Max) (MHz)	Return Loss (Min) (dB)
	75	5	200	21
	75	20	1200	14

## 4-Way Splitters

	Characteristic Impedance ( $\Omega$ )	Freq Range (Min) (MHz)	Freq Range (Max) (MHz)	Return Loss (Min) (dB)
	75	5	1002	22

## Transformers

Type	Impedance Ratio	Freq Range (Min) (MHz)	Freq Range (Max) (MHz)
Unbalanced to Balanced	1:1	0.3	200
Unbalanced to Balanced	1:2	2	350
Unbalanced to Balanced	1:4	1	350
Unbalanced to Balanced	1:1	5	200
Unbalanced to Balanced	1:4	2	1000
Unbalanced to Balanced	1:1.5	0.5	550
Unbalanced to Balanced	1:1	5	1200
Unbalanced to Balanced	1:1	5	1200
Unbalanced to Balanced	1:1	5	1200
Unbalanced to Balanced	1:1	5	1200
Unbalanced to Balanced	1:4	5	1200
Unbalanced to Balanced	1:1	5	1200
Unbalanced to Balanced	1:1	5	1200
Unbalanced to Balanced	1:1	5	1200
Unbalanced to Balanced	1:4	10	1900
Unbalanced to Balanced	1:4	500	2500
Unbalanced to Balanced	1:1	3	3000
Unbalanced to Balanced	1:1	5	3000
Unbalanced to Unbalanced	1:16	0.165	75



Isolation (dB)	Insertion Loss (dB)	Package	Part Number
30	0.5	S19	MRFSP0014
28	0.5	S19	MRFSP5725
25	0.7	S19	MRFSP6725

Isolation (dB)	Insertion Loss (dB)	Package	Part Number
30	0.35	S04	RFSP2731
25	1.5	S04	RFSP5731

Isolation (dB)	Insertion Loss (dB)	Package	Part Number
25	0.75	S25	MRFSP0012



Package	Part Number
S20	RFXF2513
S20	RFXF2533
S20	RFXF2553
S20	RFXF2713
S20	RFXF3553
S20	RFXF3593
S18	RFXF5702
S20	RFXF5703
S21	RFXF5704
S18	RFXF5712
S20	RFXF5753
S18	RFXF5792
S20	RFXF5793
S21	RFXF5794
S20	RFXF6553
S20	RFXF8553
S20	RFXF9503
S21	RFXF9504
S06	XFA-0101-16UH

MiniRF is dedicated to providing quality RF passive components at competitive prices for existing and emerging Broadband/CATV and Wireless Communications Systems. MiniRF is a proven leader in supplying high performance surface mount passive components.

## Transformers continued...

Type	Impedance Ratio	Freq Range (Min) (MHz)	Freq Range (Max) (MHz)
Balanced to Balanced	1:1	0.008	100
Unbalanced to Unbalanced	1:2.5	0.011	100
Unbalanced to Balanced	1:1	0.006	150
Unbalanced to Balanced	1:8	0.05	125
Unbalanced to Balanced	1:1	0.05	300
Balanced to Balanced	1:4	0.1	240
Unbalanced to Unbalanced	1:4	0.05	220
Unbalanced to Unbalanced	1:1	1	400
Unbalanced to Unbalanced	1:1	40	1000
Unbalanced to Balanced	1:16	13	200
Unbalanced to Balanced	1:4	8	900
Unbalanced to Unbalanced	1:1	40	1000
Unbalanced to Unbalanced	1:1	2.5	2000
Unbalanced to Balanced	1:1	3	200
Unbalanced to Balanced	1:4	3.5	700
Unbalanced to Unbalanced	1:1	15	1003
Unbalanced to Balanced	1:4	1	1000
Unbalanced to Unbalanced	1:1	40	1000
Unbalanced to Unbalanced	1:1	800	1900
Unbalanced to Balanced	1:4	500	2500
Unbalanced to Unbalanced	1:1	5	3000
Unbalanced to Unbalanced	1:1	5	1000
Unbalanced to Balanced	1:4	5	1000
Unbalanced to Balanced	1:1	1	2500
Unbalanced to Balanced	1:16	5	40
Unbalanced to Balanced	1:4	5	1200
Unbalanced to Balanced	1:1.8	5	200
Unbalanced to Balanced	1:1	0.4	500
Unbalanced to Balanced	1:3	5	1200
Unbalanced to Balanced	1:2	5	1200
Unbalanced to Balanced	1:1	5	200
Unbalanced to Balanced	1:1.5	5	100
Unbalanced to Balanced	1:4	5	100
Unbalanced to Balanced	1:2	5	1200
<b>New</b> Unbalanced to Balanced	1:4	5	250
<b>New</b> Unbalanced to Balanced	1:1	5	250
<b>New</b> Unbalanced to Balanced	1:2	5	1200
<b>New</b> Unbalanced to Balanced	1:2	5	1600
<b>New</b> Unbalanced to Balanced	1:2	10	700
<b>New</b> Unbalanced to Balanced	1:2	5	1200
<b>New</b> Unbalanced to Balanced	1:1	45	1200

Package	Part Number
S06	XFA-0101-1BH
S06	XFA-0101-25UH
S06	XFA-0201-1WH
S06	XFA-0201-8WH
S06	XFA-0301-1WH
S06	XFA-0301-4BH
S06	XFA-0301-4UH
S06	XFA-0401-1UH
S06	XFA-1001-1UH
S01	XFK-0201-16WH
S01	XFK-0901-4WH
S01	XFK-1001-1UH
S01	XFK-2001-1UH
S03	XFM-0201-1WH
S03	XFM-0701-4WH
S03	XFM-1001-1UH
S03	XFM-1001-4WH
S03	XFM-1002-1UH
S03	XFM-1901-1UH
S03	XFM-2501-4WH
S03	XFM-3001-1UH
S09	XFP-1001-1UH
S09	XFP-1001-4WH
S09	XFP-2501-1UH
S20	RFXF0573
S20	RFXF5553
S19	RFXF2795
S20	RFXF3513
S20	RFXF5743
S18	RFXF5732
S20C	RFXF0013
S20C	RFXF0014
S20C	RFXF0016
S20	MRFXF5733
S20	MRFXF2753
S20	MRFXF0021
S18	MRFXF5532
S20	MRFXF6533
S20	MRFXF4533
S18D	MRFXF5732-1
S20	MRFXF0025



**1.2ghz/3.0ghz  
Frequency  
Components  
Available**

### Surface Mount Couplers



MiniRF produces miniature couplers designed for applications that require small, low cost, and highly reliable surface mount components. Coupler applications may be found in Broadband/CATV Communications Systems. A number of surface mount packaging options are available including: S06, S18, and S20 packaging styles.

### Surface Mount Splitters

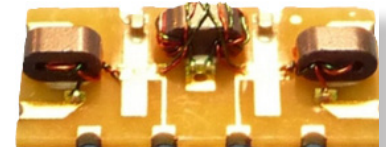
MiniRF produces 1GHz and 4-Way bandwidth miniature 0° two way power splitters designed for both 50Ω and 75Ω applications which require small, low cost and highly reliable surface mount components. Applications include Broadband, CATV, and Wireless communications systems.



### **NEW!** 4-way Passive Splitters

MiniRF announces its latest design and sampling for its 4-way splitter, model MRFSP0012. Covering the common CATV bandwidth of 5 to 1002MHz, the MRFSP0012 replaces three, 2-way splitters commonly used to achieve a 1 to 4 split thus saving board space, reducing part count and offering easier design configuration. Additionally, the MiniRF MRFSP0012 offers a cost savings over comparable performing, multi-splitter topologies.

Mid-band insertion loss is typically 0.75dB with 25dB isolation. Amplitude balance is typically <0.1 dB while phase balance is typically <1 degree with a maximum of 2.0 degrees. A 75 ohm characteristic impedance makes the MiniRF MRFSP0012 ideal for Broadband/CATV applications. The MRFSP0012 comes on a castellated, surface mount board measuring 0.25x0.50x0.07 inches.

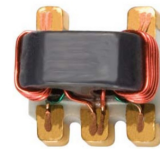


### Chokes



MiniRF also produces miniature RF Chokes for a variety of Broadband/CATV applications. Please contact us with your specific requirements and applications.

### Surface Mount Transformers



MiniRF produces miniature transformers for designs which require small, low cost, and highly reliable surface mount components. Both 50Ω and 75Ω applications are supported in the product offering. Impedance ratios of 1:1, 1:4, 1:8, 1:16 are typical in support of applications in broadband, wireless, and other RF communications systems.

For sales or technical support, contact: [sales@minirf.com](mailto:sales@minirf.com)

Global RF Passive Component Provider



46560 Fremont Blvd. Unit 114  
Fremont, CA 94538

408-228-3533 • [sales@minirf.com](mailto:sales@minirf.com)  
[www.minirf.com](http://www.minirf.com)