



RoHS Compliant and Pb-Free Product  
Package: S20

## Features

- Frequency Range: 5-1800 MHz
- Return Loss: 23 dB typ.
- Insertion Loss: 0.8 dB typ.
- Miniature .150" x .150" SMT Package
- 1:1 Transformer, 75 Ohm Impedance

## Applications

- Broadband / CATV
- Wireless Applications

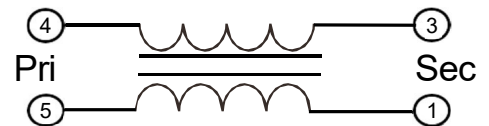
## Product Description

The MRFXF0102 was designed specifically to interface with the QPC-733X product line of voltage-controlled equalizers for both forward and return path applications. The balun offers excellent return loss and low insertion loss for balance to single-ended RF applications. The MRFXF0102 is low-cost, surface mount, lead-free, and RoHS compliant. The balun uses welded-wire construction for increased reliability. S-parameters are available on the web.

## Specifications

Parameter	Specification			Units
	Min	Typ.	Max.	
Operating Frequency Range	5		1800	MHz
Insertion Loss				
5 – 700 MHz		0.3	0.7	dB
700 – 1220 MHz		0.8	1.3	
1220 – 1800 MHz		1.5		
Amplitude Balance:				
5 – 100 MHz		1.2	1.5	dB
100 – 700 MHz		0.4	0.9	
700 – 1220 MHz		0.3	0.6	
1220 – 1800 MHz		0.6		
Phase Balance				
5 – 100 MHz		6	13	Degrees
100 – 700 MHz		6	10	
700 – 1220 MHz		8	10	
1220 – 1800 MHz		7		
Input Return Loss				
5 – 1220 MHz	18	23		dB
1220 – 1800 MHz		15		
Nominal Impedance	75 Ohms			
Impedance Ratio	1:1			
Transformer Type	Unbalanced to Balanced			

## Schematic Diagram



Exceeding any one or a combination of the Absolute Maximum Rating conditions may cause permanent damage to the device. Extended applications of Absolute Maximum Rating conditions to the device may reduce device reliability. Specified typical performance or functional operation of the device under Absolute Maximum Rating conditions not applied.

RoHS Status based on EU Directive 2002/95/EC (at the time of this document revision)

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## Absolute Maximum Ratings

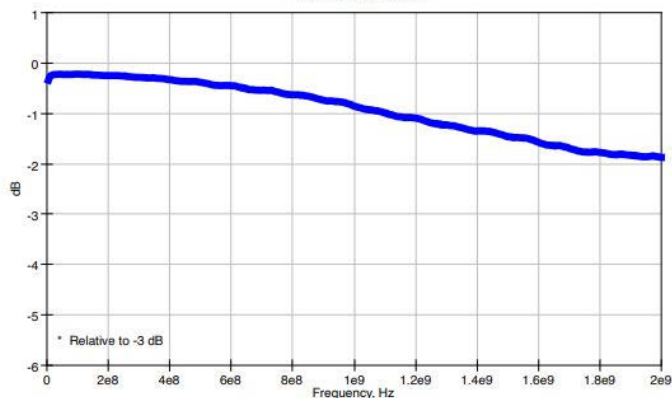
Power Handling	2W
Operating Temp	-40°C to +100°C
Storage Temp	-40°C to +100°C



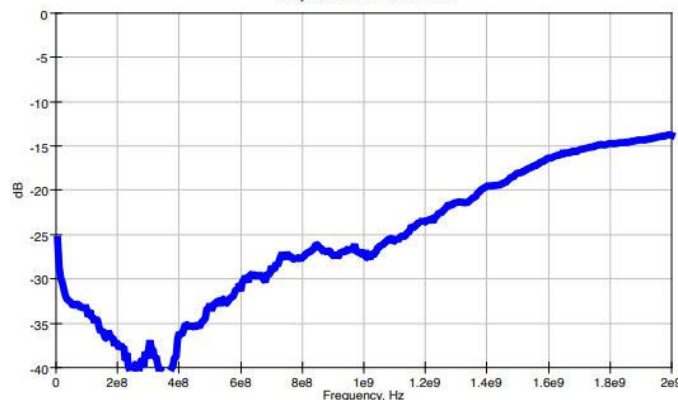
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## Typical Data

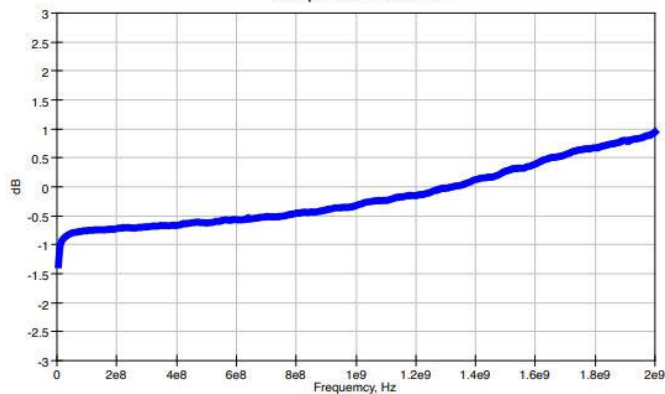
Insertion Loss



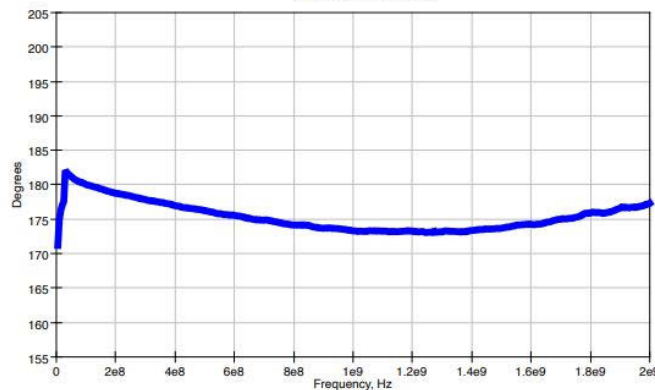
Input Return Loss



Amplitude Balance



Phase Balance





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### Connections

Pin	Function
1	Secondary (Output 2)
2	NC
3	Secondary Dot (Output 1)
4	Primary Dot (Input)
5	Primary (Ground)

### S20 Package Drawing

Dimensions in inches (mm)

