

## LEAD-FREE / RoHS-COMPLIANT HIGH ISOLATION POWER COMBINER

**PBR-0003**

### Features

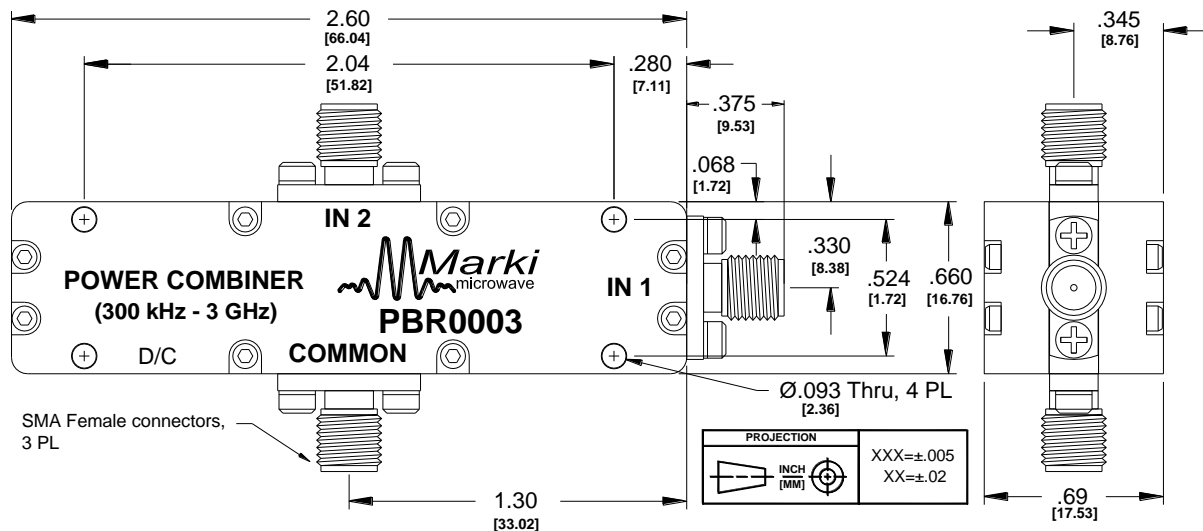
- 300kHz to 3 GHz Power Combiner
- 45 dB Typ Isolation
- Applications: IP3 Measurement and High Isolation Test Set-ups
- [Microwave Power Dividers & Couplers App Note](#)



**Electrical Specifications** - Specifications guaranteed from -55 to +100°C, measured in a 50Ω system.

Parameter	Frequency Range	Min	Typ	Max
Nominal Power Splitting (dB)	300 kHz to 3 GHz		6	
Amplitude Balance (dB)			±0.5	±1
Excess Insertion Loss (dB) <sup>1</sup>			1.25	2.5
Input Port VSWR			1.15	1.45
Common Port VSWR			1.3	1.7
Isolation (dB)	10 MHz to 3 GHz	37	45	
	300 kHz to 10 MHz	15	30	
Power As Divider (W)				1
Power As Combiner (W)				
Weight (g)			38	

<sup>1</sup>Excess Insertion Loss = (Input Port to Common Port Insertion Loss) – 6 dB.



**IP3 measurement using high isolation power combiner**

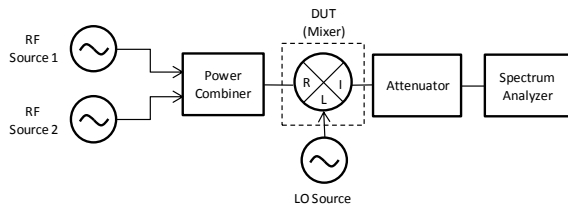


Fig. 1. Mixer IP3 measurement

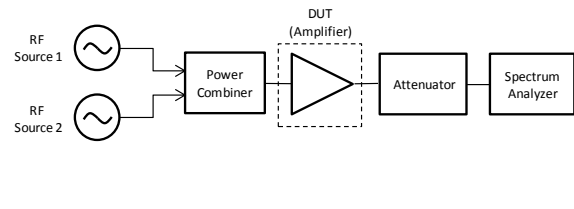


Fig. 2. Amplifier IP3 measurement

**Typical Performance**

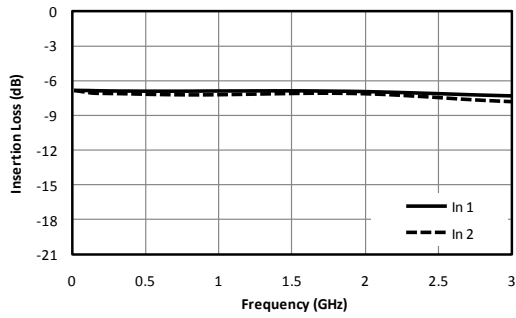


Fig. 3. Input port to common port insertion loss.

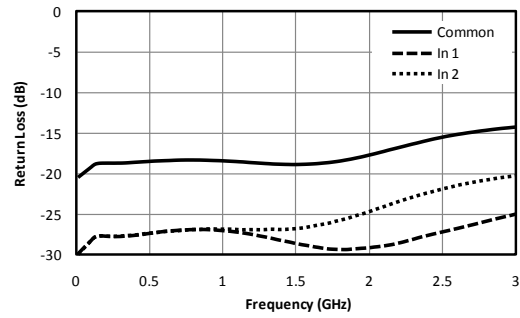


Fig. 4. Return loss for input and common ports.

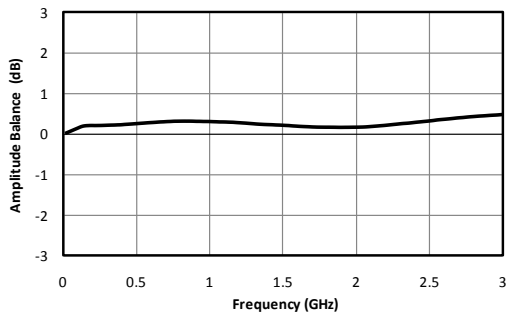


Fig. 5. Amplitude balance between input ports.

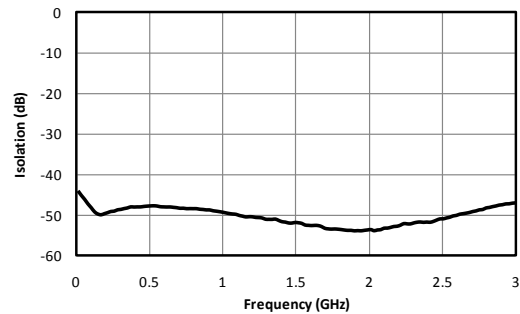


Fig. 6. Isolation between input ports.



Model Number	Description
PBR-0003	300 kHz – 3 GHz Power Combiner with SMA connectors <sup>1</sup> , <b>LEAD-FREE/RoHS COMPLIANT</b>

<sup>1</sup>Default is SMA female connectors. Consult factory for other connector options.

---

#### Revision History

Revision code	Revision Date	Comment
-	October 2011	Initial Datasheet release
A	September 2015	Amplitude balance specs update
B	November 2019	RoHS Compliant Assembly

*Marki Microwave reserves the right to make changes to the product(s) or information contained herein without notice. Marki Microwave makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Marki Microwave assume any liability whatsoever arising out of the use of or application of any product.*