



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

**PBR-0012**

**Features**

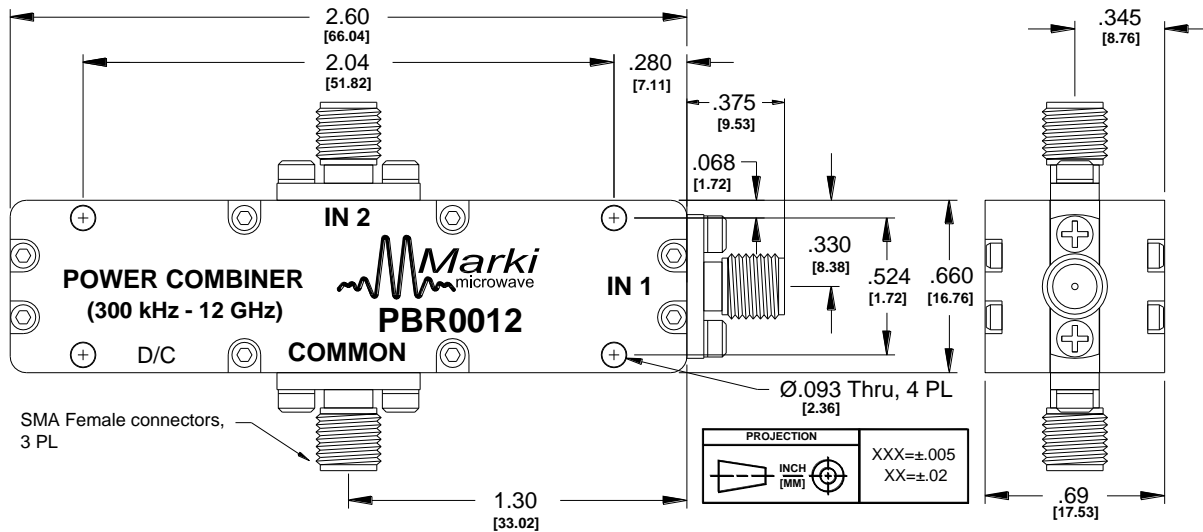
- 300kHz to 12 GHz Power Combiner
- 40 dB Typ Isolation
- Applications: IP3 Measurement and High Isolation Test Set-ups
- [Microwave Power Dividers & Couplers App Note](#)



**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 12 GHz		6	
Amplitude Balance (dB)			±0.6	±1.2
Excess Insertion Loss (dB) <sup>1</sup>			1.5	3
Input and Common Port VSWR			1.4	
Isolation (dB)	10 MHz to 12 GHz	25	35	
	300 kHz to 10 MHz	15	30	
Power (W)				1
Weight (g)			40	

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



**IP3 measurement using high isolation power combiner**

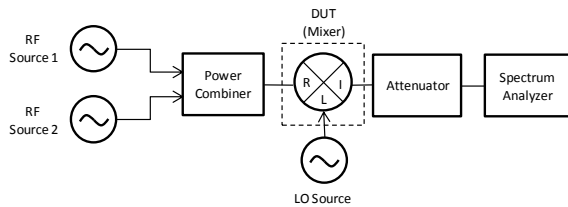


Fig. 1. Mixer IP3 measurement

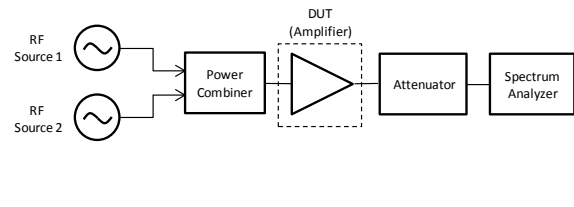


Fig. 2. Amplifier IP3 measurement

**Typical Performance**

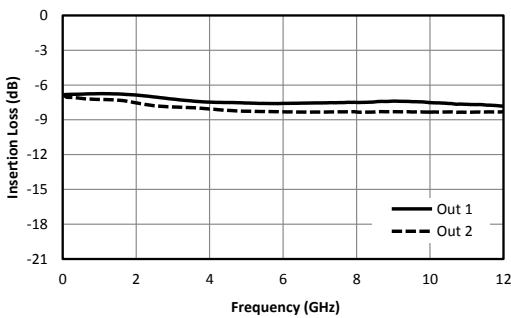


Fig. 3. Input port to common port insertion loss.

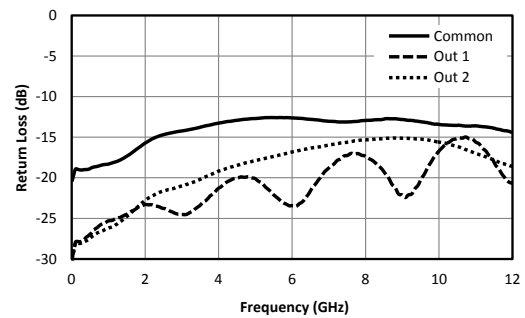


Fig. 4. Return loss for input and common ports.

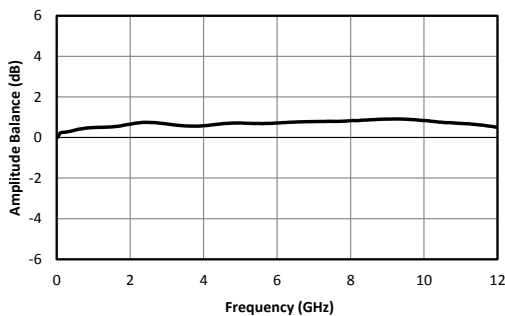


Fig. 5. Amplitude balance between input ports.

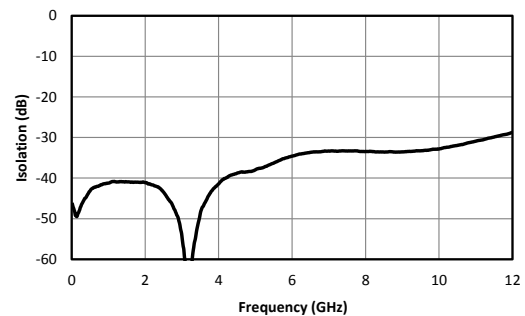


Fig. 6. Isolation between input ports.



Model Number	Description
PBR-0012	300 kHz – 12 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.

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### Revision History

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

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