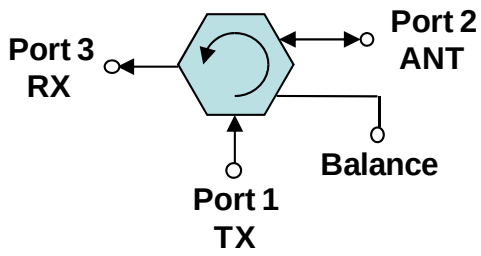
PHOTONICSystems, Inc.®
We Light the Way®

PSI-6600 Series
TIRx™ RF Front-end



Description

The PSI-6600 TIRx™ RF Front-End series of products are patented four-port devices that permits high-isolation routing of transmit and receive signals provided to and retrieved from the bi-directional antenna port, as well as to and from a second, identical, bi-directional port to which the user connects an impedance that replicates the antenna impedance versus frequency. The presence of this second bi-directional port – which is called the "Balance" port – is one important characteristic that distinguishes a TIRx™ from conventional ferrite circulators. At any frequency where the impedance presented to ports 2 and "Balance" equal to one another, the transmit signal at port 1 will be routed to the antenna connected to port 2, and the signal received by the antenna will be routed to port 3, but port 3 will be substantially isolated from port 1 – *i.e.*, the front end will have excellent T/R isolation.

Performance

Parameter		PSI-6600-004G/E		PSI-6600-008G/E		PSI-6600-018G/E	
Operational Bandwidth		0.01 – 4 GHz		0.1 – 8 GHz		2 – 18 GHz	
TX /RX Isolation *(Port 1 to 3)*		< -40 dB		< -30 dB		< -30 dB	
Transmit Path *(Port 1 to 2)*	**TX RF Power** (W)	≤ 2		≤ 2		≤ 2	
	TX Gain (dB)	> -15	> -11	> -15	> -11	> -15	> -11
Receive Path *(Port 2 to 3)*	**RX Gain** (dB)	> -18	> 3	> -18	> 3	> -20	> 0
	RX NF (dB)	< 27	< 10	< 27	< 10	< 30	< 13
	RX SFDR (dB·$Hz^{2/3}$)	> 108	> 120	> 108	> 120	> 108	> 120
Mechanical		19" Rack Mountable					
Power Requirements		AC Supply or +/- 5 V_{DC} and +/- 15 V_{DC}					

Contact

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Ordering Information

PSI Part Number	Description
PSI-6600-004G	Standard performance 4 GHz TIRx
PSI-6600-004GE	Enhanced performance 4 GHz TIRx
PSI-6600-008G	Standard performance 8 GHz TIRx
PSI-6600-008GE	Enhanced performance 8 GHz TIRx
PSI-6600-018G	Standard performance 18GHz TIRx
PSI-6600-018GE	Enhanced performance 18GHz TIRx
Custom versions available, please contact PSI with your application specific requirements	

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