



DESCRIPTION

The DPL Series offers compatibility with OML's MxxHWD harmonic mixer series for external mixer applications. In this popular spectrum analysis scenario, the DPL Series provides external diplexer functionality when integrated capabilities are not available in the destination spectrum analyzer (e.g., Keysight's PSA E444xA Series). As a standalone component, the diplexer is also compatible with Keysight's 11970 waveguide mixers for use with Keysight's PXA N9030A.



HIGHLIGHTS

- LO Range of 3-13 GHz
- LO insertion loss of 0.8 dB typical
- LO-IF isolation > 40 dB
- IF range of DC to 0.8 GHz
- IF insertion loss of 1 dB typical
- SMA interconnects
- Includes adapter, IF cable and RF cable

APPLICATIONS

- Supports many external mixer prerequisites
- Preserves LO power to optimize conversion loss
- Satisfies many signal separation prerequisites
- Compatible with many external mixer prerequisites
- Offers low-loss path that minimizes conversion loss
- Compatible with external mixer connectivity
- Simplifies connection to many spectrum analyzers

ELECTRICAL AND PERFORMANCE SPECIFICATIONS (+25°C)

After a one hour warm-up period, the following specifications are possible. Specifications are subject to change without notice.



Electrical Characteristics	Frequency Range (GHz)	MIN	TYP	MAX
L.O. [High Pass Filter (HPF)] Port				
Pass Band Insertion Loss (dB)	3 to 13		0.8	
Pass Band Return Loss (dB)	3 to 13	10	16	
Stop Band Insertion Loss (dB)	DC to 1	15	30	
I.F. [Low Pass Filter (LPF)] Port				
Pass Band Insertion Loss (dB)	DC to 1		0.8	
Pass Band Return Loss (dB)	DC to 1	8	15	
Stop Band Insertion Loss (dB)	3 to 13	60	75	
Mixer [Common] Port Return Loss				
Low Pass Filter (dB)	DC to 1	8	15	
High Pass Filter (dB)	3 to 13	10	16	
Isolation (dB)				
Low Pass Filter (dB)	DC to 1	15	30	
High Pass Filter (dB)	3 to 13	60	75	
Maximum Input Level (dBm)				+30
Operating Temperature Range		+20 °C	+25 °C	+30 °C
Storage Temperature Range		0 °C		+50 °C

Physical Characteristics	Description
Connector Interfaces ¹	SMA(f/f/f)
Size: Height x Width x Depth	0.25" (6.4 mm) x 1.15" (29.2 mm) x 1.30" (32.5 mm)
Weight	≤ 2 oz (56.7 g)

¹LO (HPF) port - SMA(m) with SMA(m/m) adapter (M00DLP) installed

ORDER INFORMATION

DPL313B²	Diplexer, L.O. 3-13 GHz, I.F. DC to 1 GHz.
DPL313NA	Diplexer, L.O. 3-13 GHz, I.F. DC to 1 GHz.

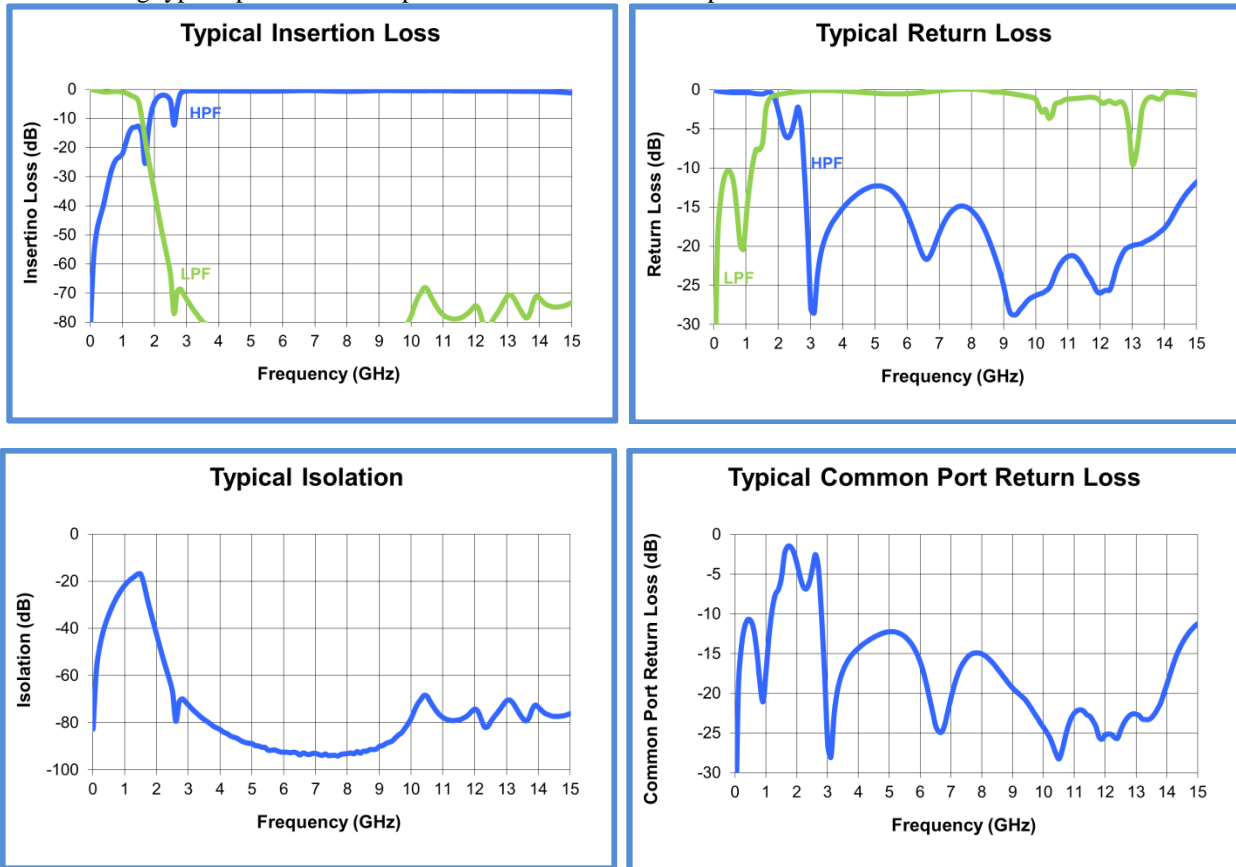
²Model DPL313B includes: RF cable (V00LOIF, 3 ft), IF cable (M00IF, 5") and SMA(m/m) adapter (M00DLP).





TYPICAL PERFORMANCE

The following typical performance is possible with the DPL313 diplexer.



MECHANICAL DIMENSIONS

