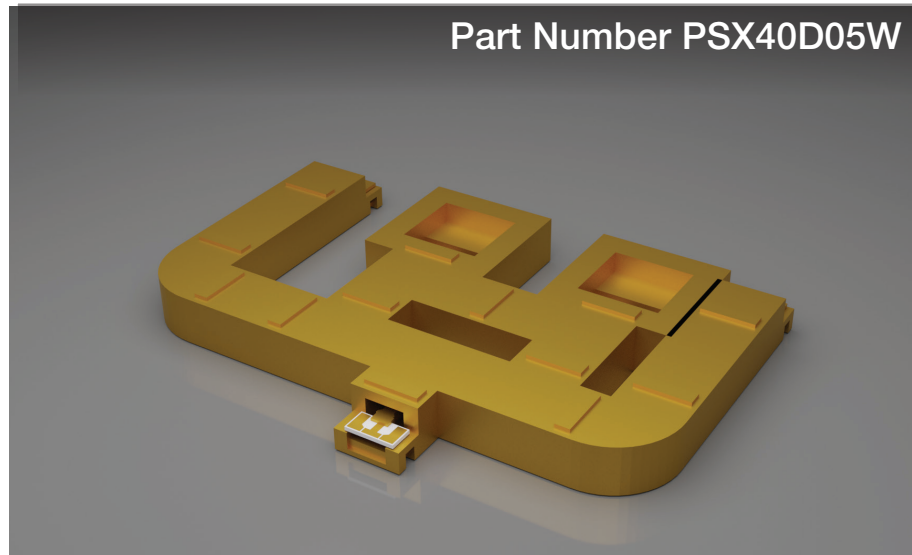## Features and Benefits

- **Small Size and Lightweight**

- **Near Ideal Performance**
  - Low insertion loss
  - Good phase and amplitude balance
  - Gysel architecture provides graceful degradation

- **Precision**
  - Low part-to-part variation

Applications

- **Satellite Communications**

Part Number PSX40D05W

# 37.5-42.5 GHz 2-Way Splitter

High performance 2-way power splitter for Q band applications.

Description

Nuvotronics PolyStrata® Technology provides high performance splitting in a small form factor. This 2-way splitter covers 37.5 - 42.5 GHz with 0.3 dB typical insertion loss. It has two wirebond inputs and a wirebond output. Excellent amplitude and phase balance will result in best system level performance. There is a nominal 90 degree phase difference between the paths which is designed to mate with our PSX40D05V2W combiner. The Gysel architecture provides graceful degradation in the event of an amplifier failure or a mismatch in the combined amplifier stages.

Typical Electrical Performance

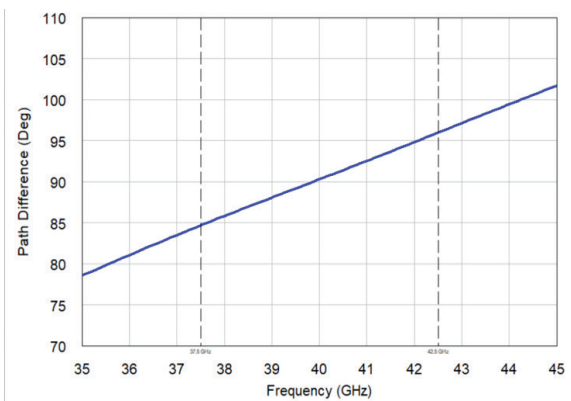| Parameter	Frequency Range (GHz)	Min	Typ	Max
Insertion Loss (dB)		-	0.3	0.5
Return Loss (dB)		15	20	-
Isolation (dB)	37.5 - 42.5	20	25	-
Phase Difference (deg)		83	90	97
Amplitude Balance (dB)		-	+/- 0.05	+/- 0.15

Part Name PSX40D05W
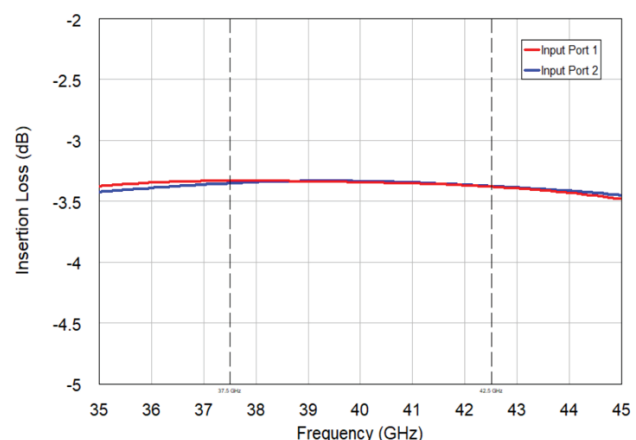
Additional Details

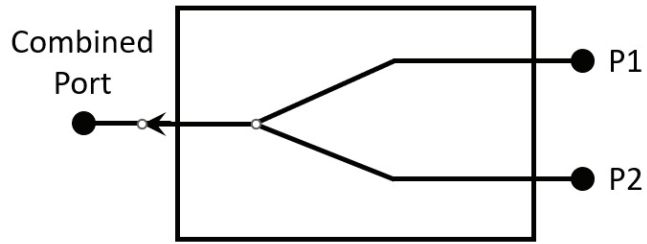| Special Handling / Storage Instructions	
Storage	IAW IPC-4553A
EDS Sensitivity	None
Ordering Information	PSX40D05W
Alternative Packaging Available	Waffle Pack
Component Termination Finish	Immersion Silver, Immersion Gold
Export Certifications	TBA

Absolute Maximum Ratings

Power	Minimum 80W CW (Combined Output)*
Operating Temp	-55°C to 85°C
Solder Reflow	260°C max. for 10 seconds, 3 cycles
Epoxy Attach	150°C max. for 90 minutes

*Power handling will vary depending on balance between the amplifiers and supports one amplifier failing.
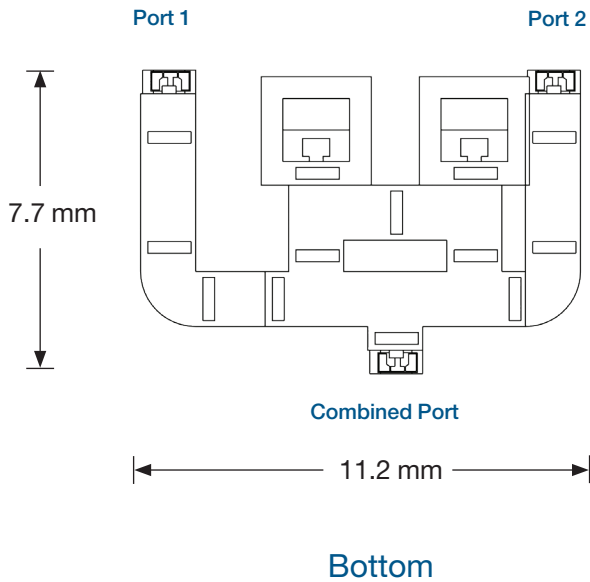
Cubic Mission & Performance Solutions
cubic.com/Nuvotronics

2305 Presidential Drive
Durham, NC 27703

© CMPS-NUVOTRONICS-P/N PSX40D05W
10JUN2023

Part Name PSX40D05W

NUVOTRONICS
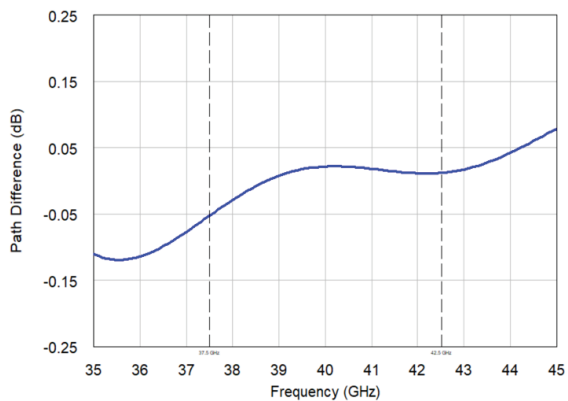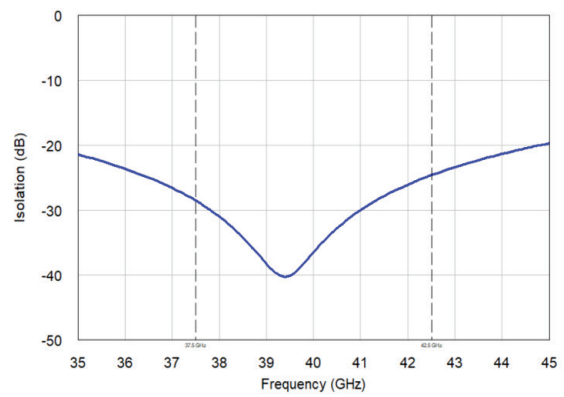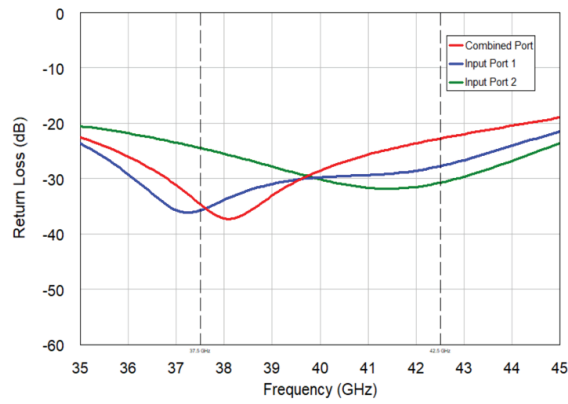
Simplified Block Diagram

Combined Port

P1

P2

Component View

Mechanical Drawing

Port 1

Port 2

7.7 mm

Combined Port

11.2 mm

Bottom

Mechanical Drawing

1 mm

Side

Cubic Mission & Performance Solutions
cubic.com/Nuvotronics

2305 Presidential Drive
Durham, NC 27703

© CMPS-NUVOTRONICS-P/N PSX40D05W
10JUN2023