

The TDC1900B25 is a low profile, high performance 25dB directional coupler. It is designed for DCS & PCS applications. This component is suitable for feed-forward amplifier and signal sampling circuits where low insertion loss, high directivity is required. It can be used in power applications up to 150 Watts.

Parts have been subjected to rigorous qualification testing and they are using materials with coefficients of thermal expansion (CTE) compatible with common substrates such as FR4, G-10, RF-35, R04350B and polyimide.

Features:

- . 800-3000 MHz
- . DCS & PCS
- . Low Insertion Loss
- . High Directivity
- . Low VSWR
- . Good Repeatability
- . CTE compatible with FR4, G-10, RF-35, R04350B and polyimide
- . Immersion gold, prevent surface oxidation & scratch
- . RoHS Compliant
- . Tape & Reel Package available

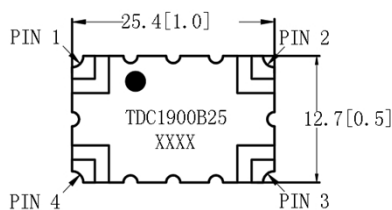
Electrical Specifications

Frequency	Forward Coupled	Insertion Loss	VSWR	Directivity
MHz	dB	dB Max	Max:1	dB Min
800-3000	25±1.0	0.20	1.20	22.0

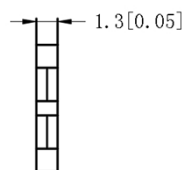
Power	Size	Thickness	Operating Temp.
Avg.CW.Watts	mm	mm	°C
150	25.4*12.7	1.3	-55 to+105

Mechanical Outline

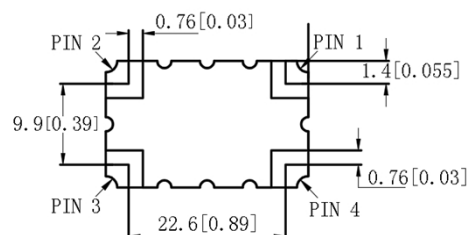
TOP VIEW



SIDE VIEW



BOTTOM VIEW



Hybrid Coupler Pin Configuration

The TDC1900B25 has an orientation marker to denote Pin 1. Once port one has been identified the other ports are known automatically. Please see the chart below for clarification:



Pin 1	Pin 2	Pin 3	Pin 4
Input	Direct	Isolated	Coupled
Direct	Input	Coupled	Isolated
Isolated	Coupled	Input	Direct
Coupled	Isolated	Direct	Input

Typical Performance Data

Frequency	MHz	800	1100	1400	1700	1900	2100	2400	2700	3000
Coupling	dB	-25.45	-24.45	-24.58	-25.39	-25.83	-25.92	-25.37	-24.84	-25.16
Transmission	dB	-0.06	-0.07	-0.06	-0.09	-0.09	-0.08	-0.11	-0.11	-0.15
Insertion Loss	dB	-0.05	-0.06	-0.05	-0.08	-0.08	-0.07	-0.10	-0.10	-0.14
Directivity	dB	-28.84	-28.26	-29.24	-33.52	-39.64	-34.29	-27.78	-25.30	-24.04
VSWR	1	/	1.06	1.09	1.11	1.10	1.07	1.03	1.05	1.12
	2	/	1.06	1.10	1.12	1.10	1.07	1.04	1.06	1.13
	3	/	1.05	1.08	1.09	1.07	1.04	1.00	1.06	1.12
	4	/	1.05	1.07	1.09	1.07	1.05	1.05	1.08	1.13

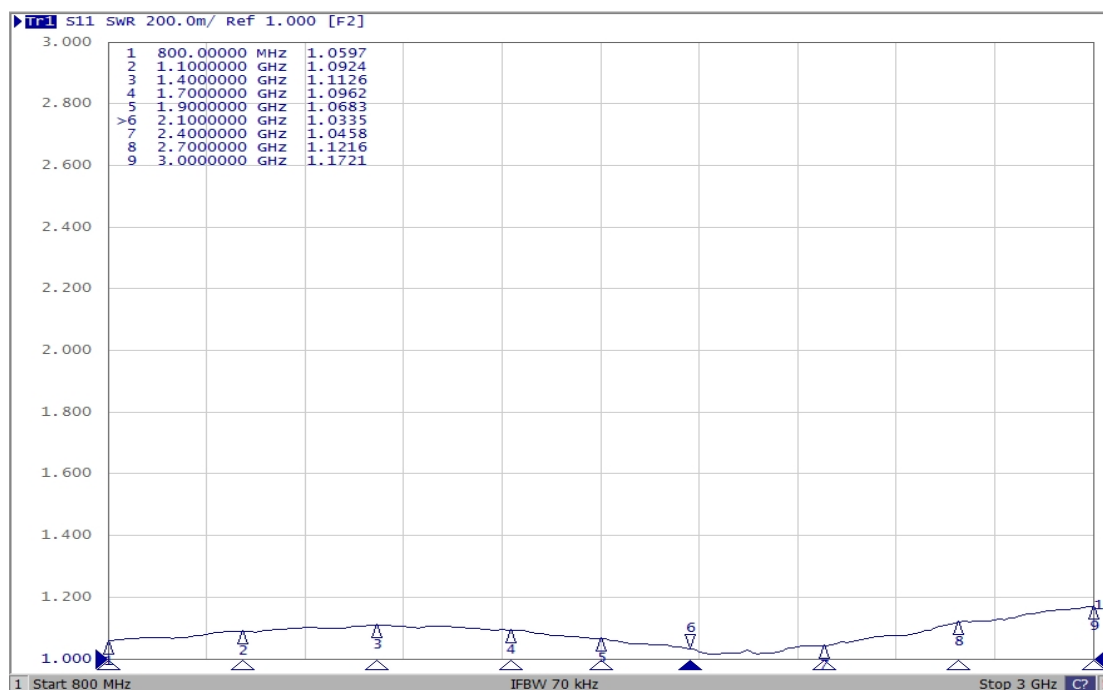


TDC1900B25

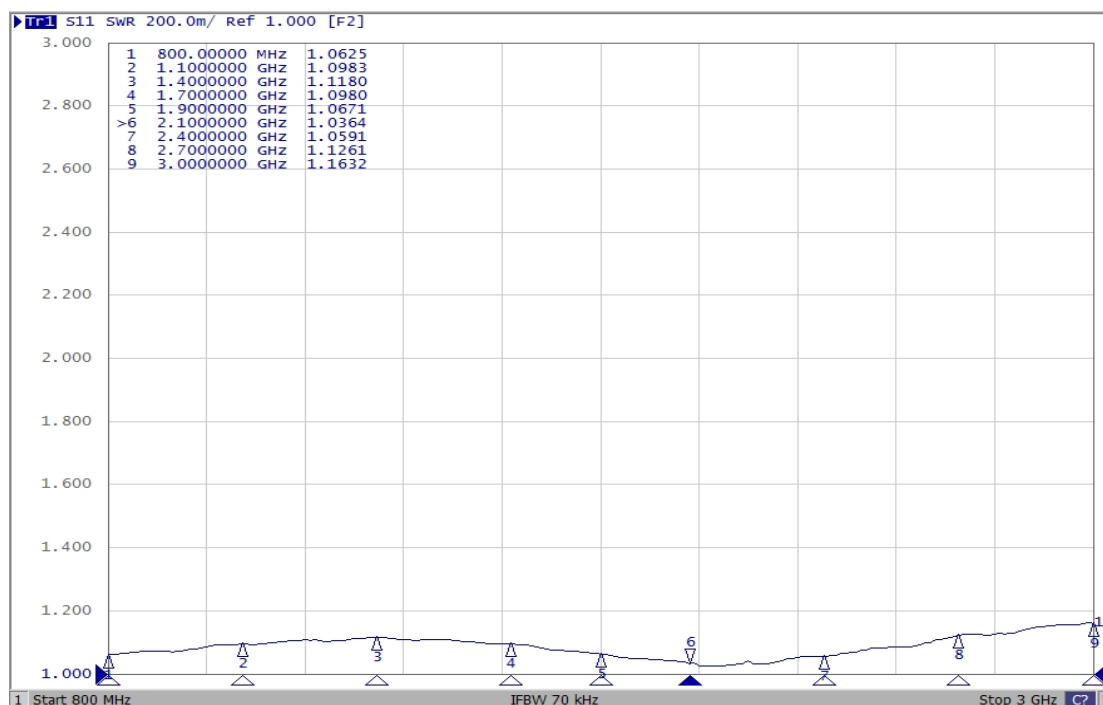
Directional Coupler

Rev A1.0

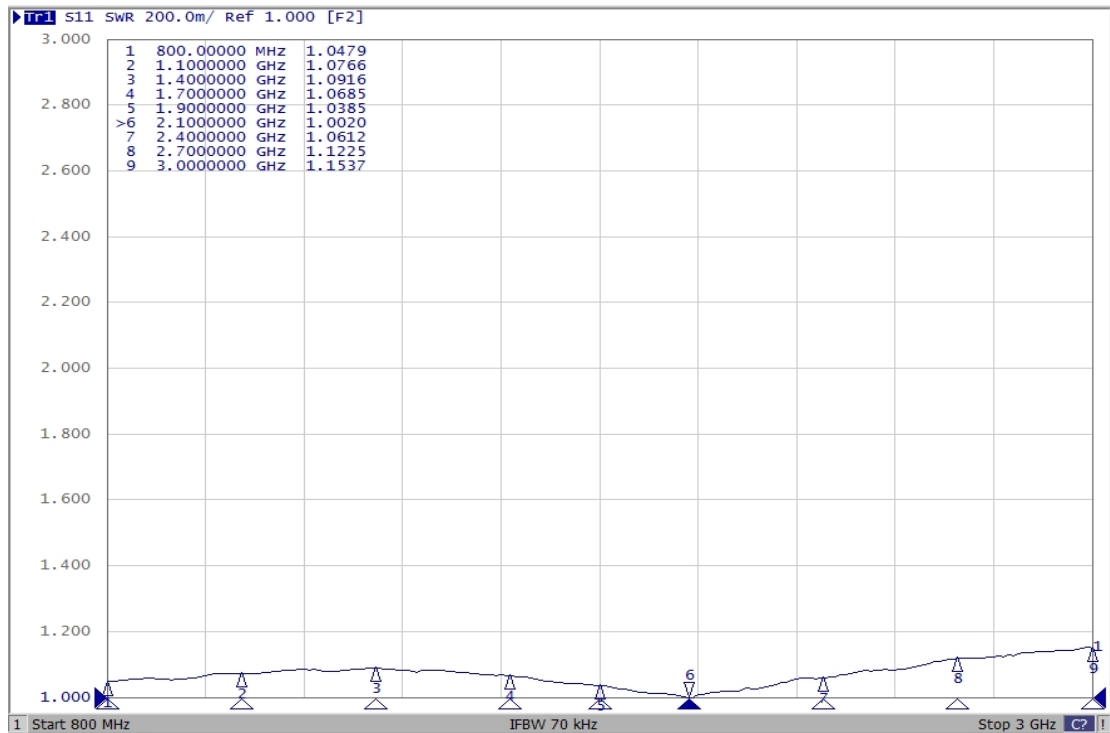
VSWR 1:



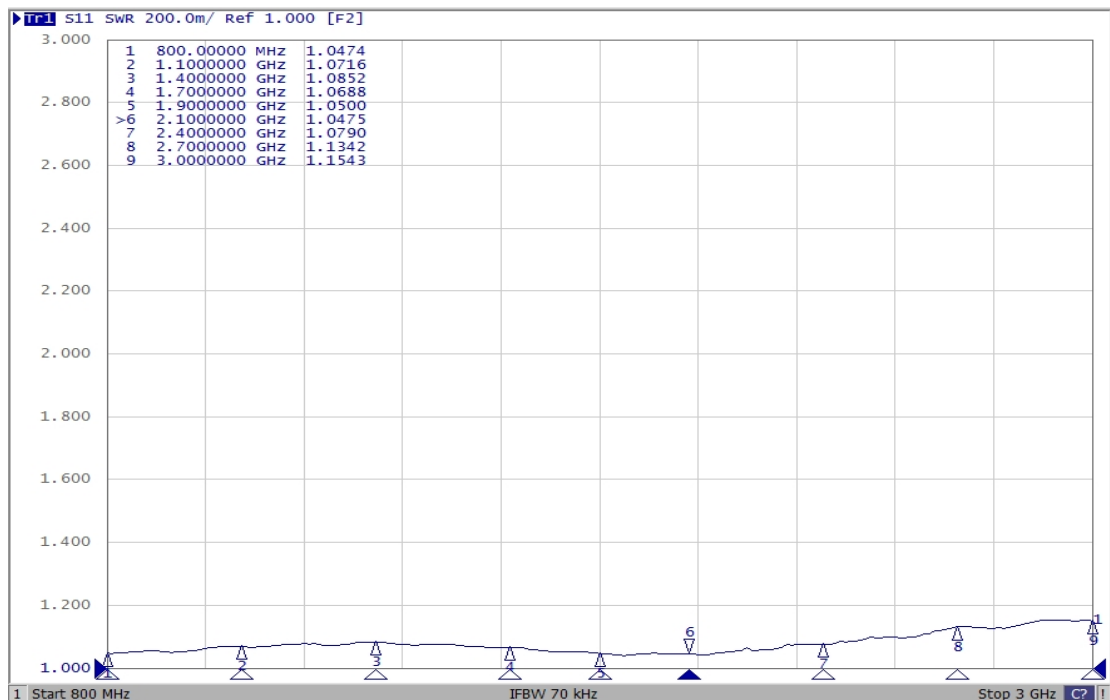
VSWR 2:



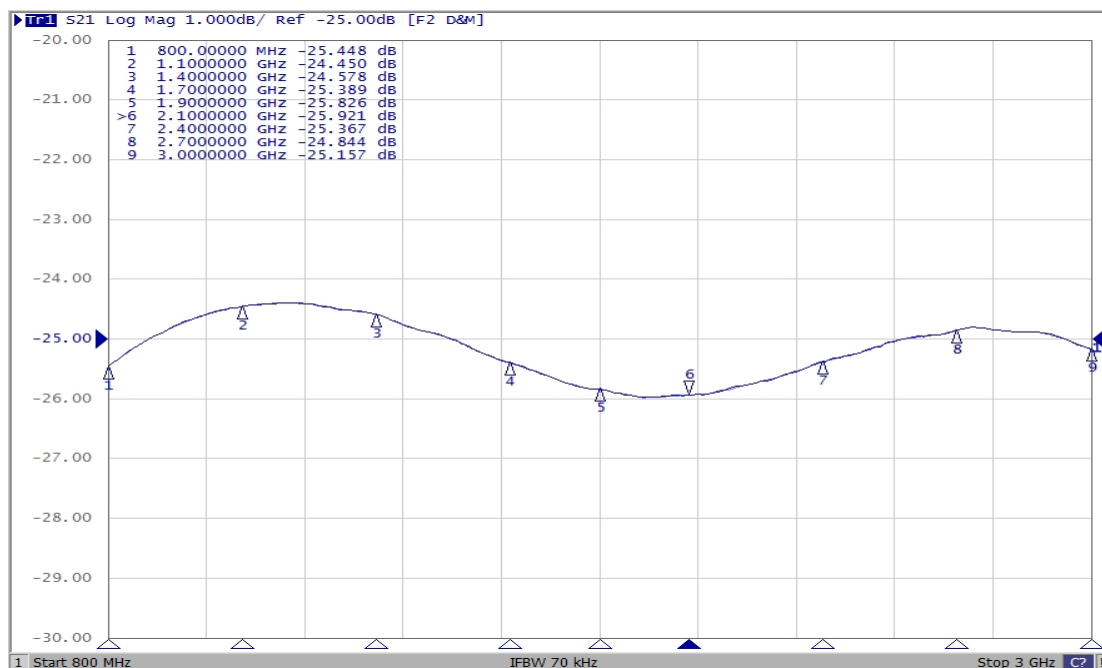
VSWR 3:



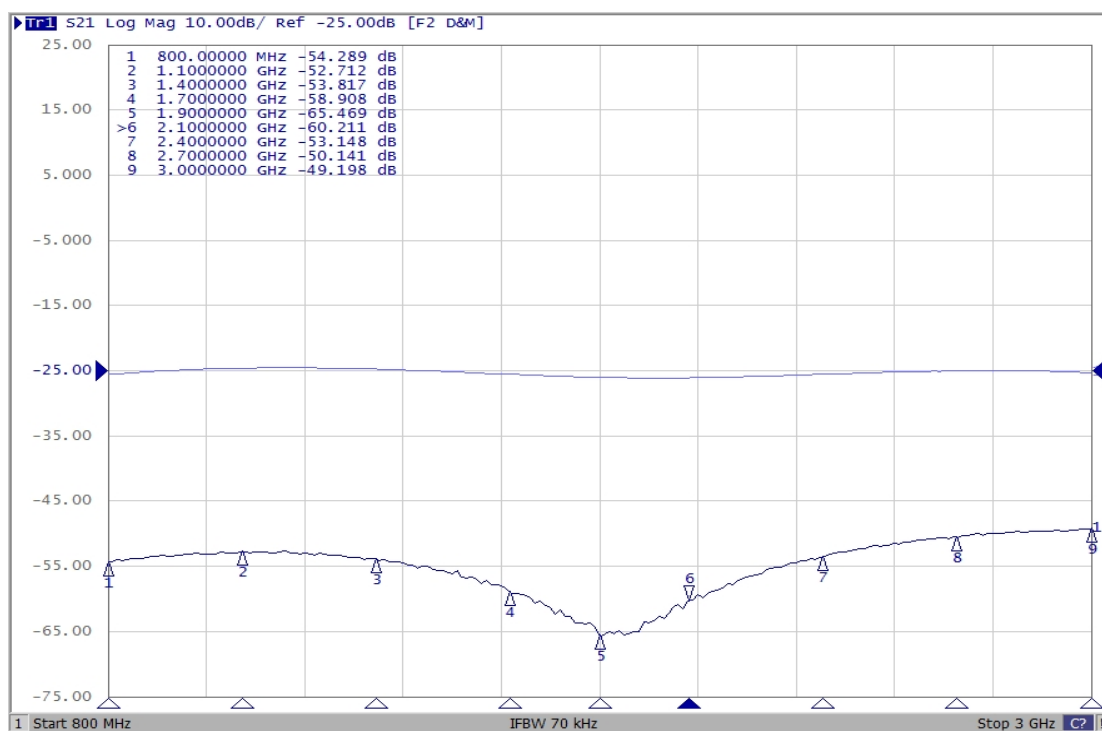
VSWR 4:



Coupling:



Isolation:



Insertion Loss:

