

The TDC4000A20 is a low profile, high performance 20dB 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 200 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:

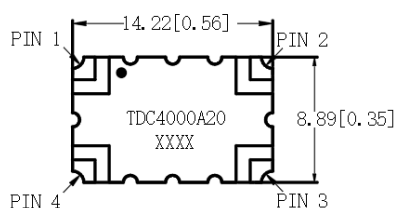
- . 2000–6000 MHz
- . DCS & PCS
- . Low Insertion Loss
- . High Directivity
- . Low VSWR
- . Good Repeatability
- . CTE compatible with FR4, G-10, RF-35, R04350B and polyimide
- . Immersion gold, prevent surface oxidation & scratch
- . RoHS Compliant
- . Tape & Reel Package available

Electrical Specifications

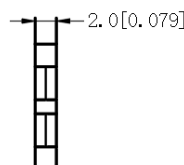
Frequency	Forward Coupled	Insertion Loss	VSWR	Directivity
MHz	dB	dB Max	Max:1	dB Min
2000-6000	21±1.5	0.55	1.4	18.0
Power	Size	Thickness	Operating Temp.	
Avg.CW.Watts	mm	mm	°C	
200	14.22*8.89	2.0	-55 to+105	

Mechanical Outline

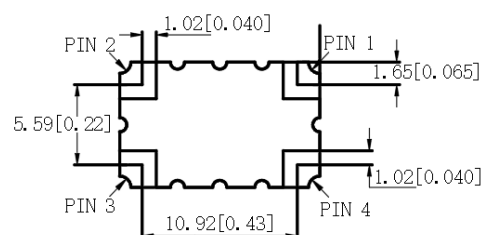
TOP VIEW



SIDE VIEW



BOTTOM VIEW





TDC4000A20

Directional Coupler

Rev A1.0

Hybrid Coupler Pin Configuration

The TDC4000A20 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:

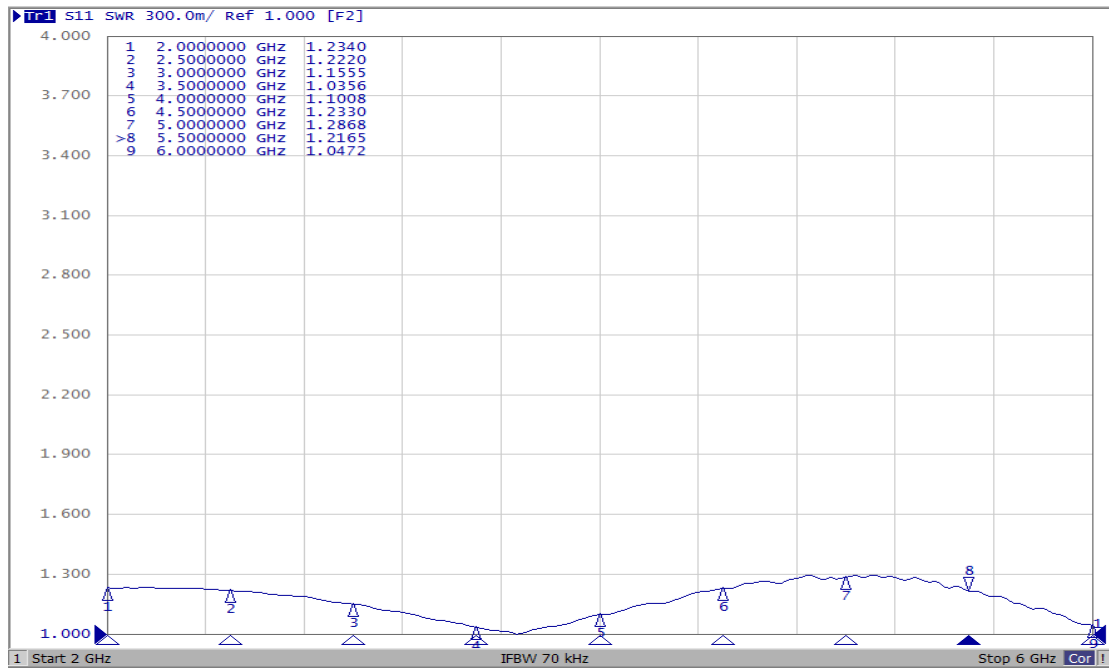


Pin 1	Pin 2	Pin 3	Pin 4
Input	Transmission	Isolate	Coupling
Transmission	Input	Coupling	Isolate

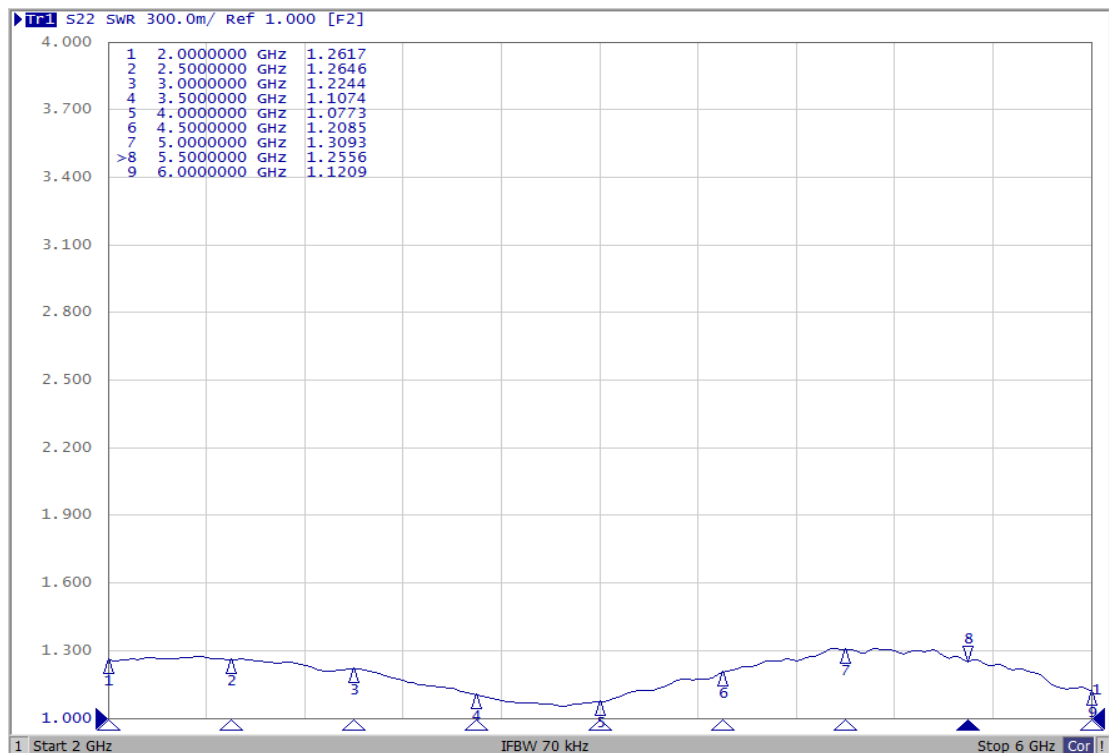
Typical Performance Data

Frequency	MHz	2000	2500	3000	3500	4000	4500	5000	5500	6000
Coupling	dB	-22.35	-21.23	-20.50	-20.17	-20.17	-20.47	-20.85	-21.04	-21.52
Transmission	dB	-0.003	-0.14	-0.14	-0.11	-0.20	-0.43	-0.53	-0.41	-0.24
Insertion Loss	dB	-0.003	-0.14	-0.14	-0.11	-0.20	-0.43	-0.53	-0.41	-0.24
Directivity	dB	-33.65	-30.66	-29.05	-30.10	-38.27	-34.13	-24.39	-20.71	-18.29
VSWR	Input	/	1.23	1.22	1.16	1.04	1.10	1.23	1.29	1.22
	Transmissi on	/	1.26	1.26	1.22	1.11	1.08	1.21	1.31	1.26
	Isolate	/	1.05	1.08	1.09	1.05	1.08	1.25	1.37	1.22
	coupling	/	1.11	1.15	1.15	1.08	1.07	1.27	1.37	1.18

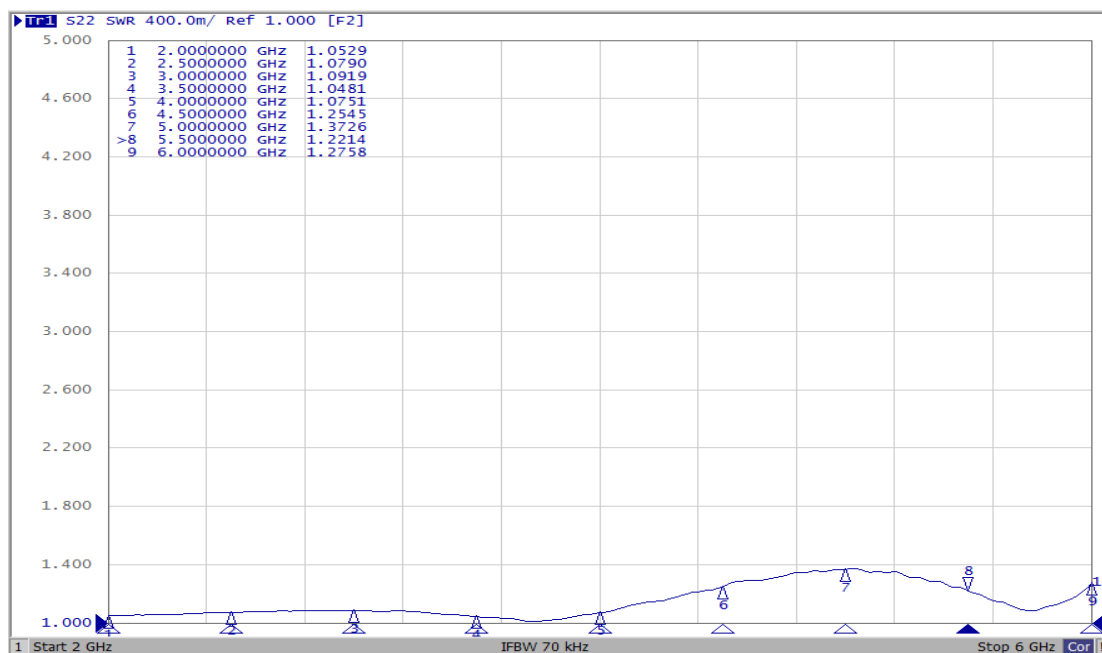
Port 1 驻波:



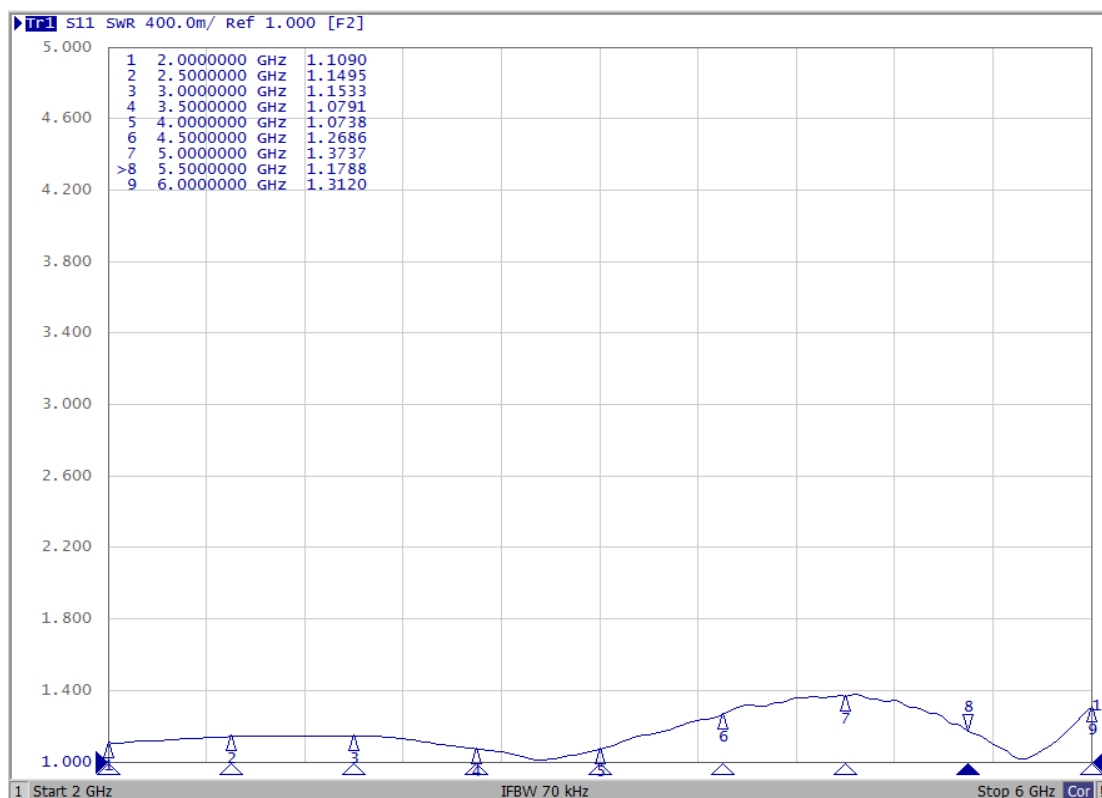
Port 2 驻波:



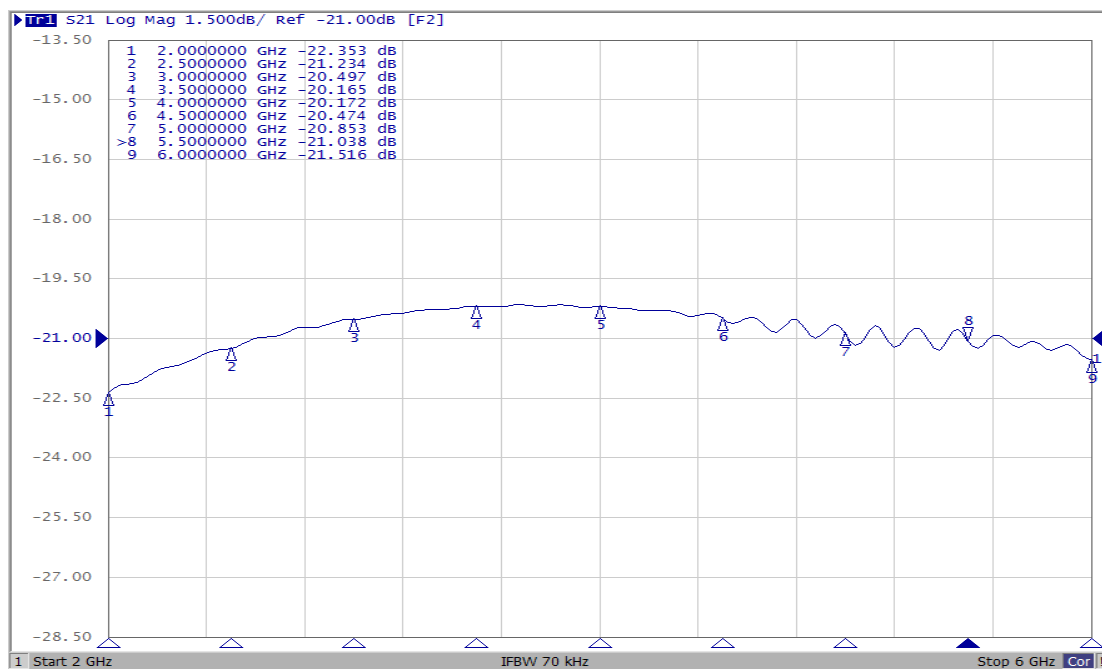
Port 3 驻波:



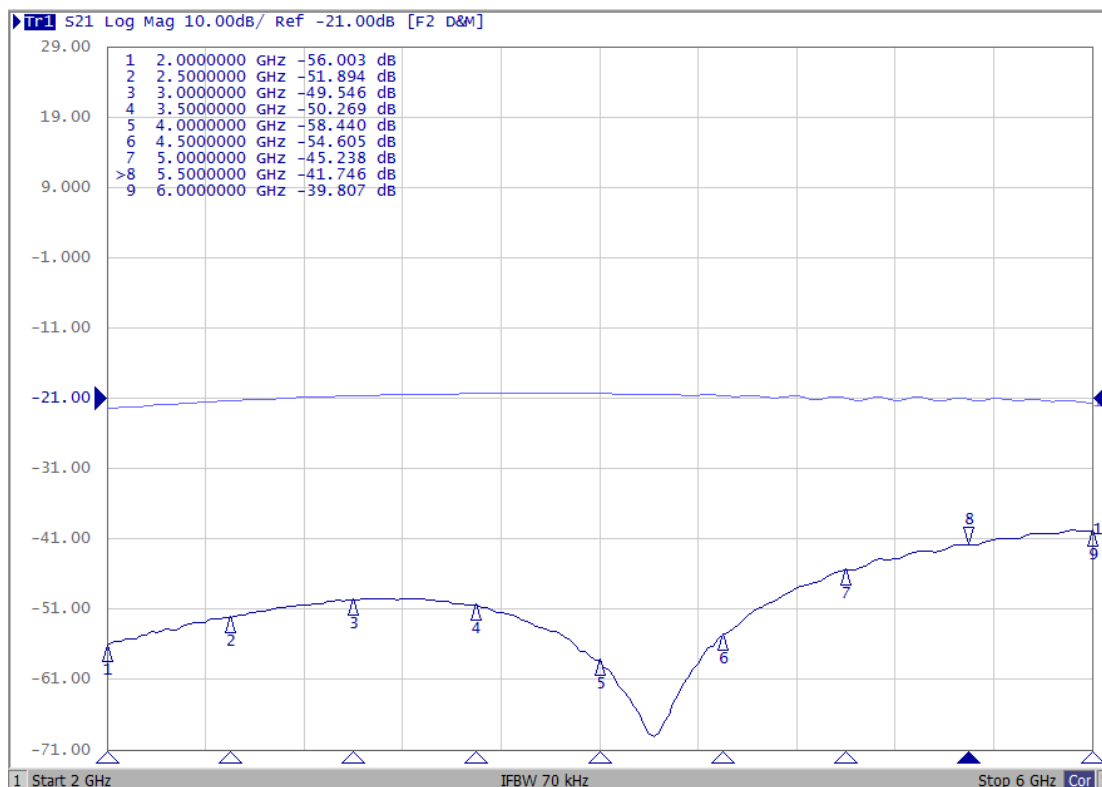
Port 4 驻波:



Coupling(dB):



Isolation (Port 1 feeding):



Transmission (dB):

